DRAFT BASIC ASSESSMENT REPORT

for

GREAT BRAK MUNICIPAL SEWER SYSTEM UPGRADES

along

Sandhoogte Road, Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street, Van Rensburg Street, Long Street and Kerk Street, Great Brak River, Mossel Bay Municipal District, Western Cape Province

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as amended) & 2014 Environmental Impact Regulations

Prepared for Applicant:

Mossel Bay Municipality

Date: 16 May 2025

Appointed EAP: Ms Louise-Mari van Zyl
Assisted by Candidate EAP: Ms Mariska Byleveld
Email: louise@cape-eaprac.co.za / mariska@cape-eaprac.co.za
Report Reference: MOS857/06
Department Reference: 16/3/3/1/D6/17/0005/25
Case Officer: Shireen Pullen

Cape EAPrac
Cape Environmental Assessment Practitioners

Tel: +27 44 874 0365 PO Box 2070, George 6530
Fax: +27 44 874 0432 17 Progress Street, George

www.cape-eaprac.co.za

APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER:

Cape EAPrac **Environmental Assessment Practitioners**

PO Box 2070

George

6530

Tel: 044-874 0365

Appointed EAP: Louise-Mari van Zyl (MA Geography & Environmental Science [US]; Registered Environmental Assessment Practitioner with the Environmental Assessment Practitioners of South Africa, EAPSA, Registration Number **2019/1444**. Ms van Zyl has over twenty years' experience as an environmental practitioner.

Assisted by Candidate EAP: Ms Mariska Byleveld (MSc Geology [University of the Free State]) (Candidate EAPASA Registration Number: **2023/6593**).

PURPOSE OF THIS REPORT:
Departmental & Public Review

APPLICANT:
Mossel Bay Municipality

CAPE EAPRAC REFERENCE NO:
MOS857/06

SUBMISSION DATE
17 May 2025

DRAFT BASIC ASSESSMENT REPORT

in terms of the

National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended & Environmental Impact Regulations 2014

GREAT BRAK MUNICIPAL SEWER SYSTEM UPGRADES

Sandhoogte Road, Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street, Van Rensburg Street, Long Street and Kerk Street, Great Brak River, Western Cape Province

Submitted for:

Stakeholder Review & Comment

Report Issued by:
Cape Environmental Assessment Practitioners

Tel: 044 874 0365
Web: www.cape-eaprac.co.za

PO Box 2070
17 Progress Street
George 6530

ORDER OF REPORT

Basic Assessment Report

Appendix A : Maps

- Appendix A1 : Locality Map
- Appendix A2 : Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning
- Appendix A3 : Map with the GPS co-ordinates for linear activities

Appendix B Site Plans

- Appendix B1 : Site development plan(s)
- Appendix B2 : A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas

Appendix C : Photographs

Appendix D : Biodiversity overlay map

Appendix E : Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.

- Appendix E1 : Response from HWC
- ~~Appendix E2 : Copy of comment from Cape Nature~~
- ~~Appendix E3 : Final Comment from BOCMA~~
- ~~Appendix E4 : Comment from the DEA: Oceans and Coast~~
- ~~Appendix E5 : Comment from the DAFF~~
- ~~Appendix E6 : Comment from WCG: Transport and Public Works~~
- ~~Appendix E7 : Comment from WCG: DoA~~
- ~~Appendix E8 : Comment from WCG: DHS~~
- ~~Appendix E9 : Comment from WCG: DoH~~
- ~~AppendixE10 : Comment from DEA&DP: Pollution Management~~
- ~~AppendixE11 : Comment from DEA&DP: Waste Management~~
- ~~AppendixE12 : Comment from DEA&DP: Biodiversity~~
- ~~AppendixE13 : Comment from DEA&DP: Air Quality~~
- ~~AppendixE14 : Comment from DEA&DP: Coastal Management~~

~~AppendixE15 : Comment from the local authority~~

~~AppendixE16 : Confirmation of all services (water, electricity, sewage, solid waste management)~~

~~AppendixE17 : Comment from the District Municipality~~

~~AppendixE18 : Copy of an exemption notice~~

~~AppendixE19 : Pre-approval for the reclamation of land~~

~~AppendixE20 : Proof of agreement/TOR of the specialist studies conducted~~

AppendixE21 : Proof of land use rights/zoning

Appendix F : Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.

Appendix F1 : Registered I&AP List

Appendix F2 : Adverts & Site Notices

Appendix F3 : Stakeholder Notification

~~Appendix F4 : Stakeholder Comment~~

~~Appendix F5 : Comments & Responses Report~~

Appendix G : Specialist & Technical Reports

Appendix H : Environmental Management & Maintenance Programme

Appendix I : Screening tool report

~~Appendix J : The Impact and Risk assessment for each alternative~~ (in BAR)

~~Appendix K : Need and Desirability~~ (in BAR)

TABLE OF CONTENTS

LIST OF FIGURES

Western Cape Government

Department of Environmental Affairs and Development Planning

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

BASIC ASSESSMENT REPORT

THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.

APRIL 2024

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

GENERAL PROJECT DESCRIPTION

(This must Include an overview of the project including the Farm name/Portion/Erf number)

Mossel Bay Municipality, hereafter referred to as the Applicant, proposes to upgrade a portion of their existing sewer reticulation system in Great Brak River, Mossel Bay Municipal District, Western Cape Province (Figure 1).

The proposed upgrades are divided into **three (3) sections** (breakdown provided below, as well as on the next page in greater detail) (Figure 1):

- Section 01: *Replacement* of the **existing 200mm diameter bulk sewer pipeline** with a greater capacity sewer pipeline (new 355mm diameter sewer pipeline) along Sandhoogte Road in the direction of the Waste Water Treatment Works (WWTW), as well as upgrades at the **existing Sandhoogte Pumpstation**.

- Section 02: **New 160mm - 200mm diameter link sewer pipelines** along un-serviced erven in Great Brak River, that are still using conservancy tanks, to link them to the municipal system.

- Section 03: **Upgrade** of the so-called **Cricket Field Pump Station** to accommodate additional flow and address existing challenges. According to Sky High Consulting Engineers, the pump station does not have adequate pumping capacity to pump at a flowrate higher than the inflow of the sewage, especially during wet weather (rainy conditions), thus the pump station floods during wet weather conditions. Furthermore, it was also found that the pump station does not have adequate emergency storage capacity (Technical Report, 2025).

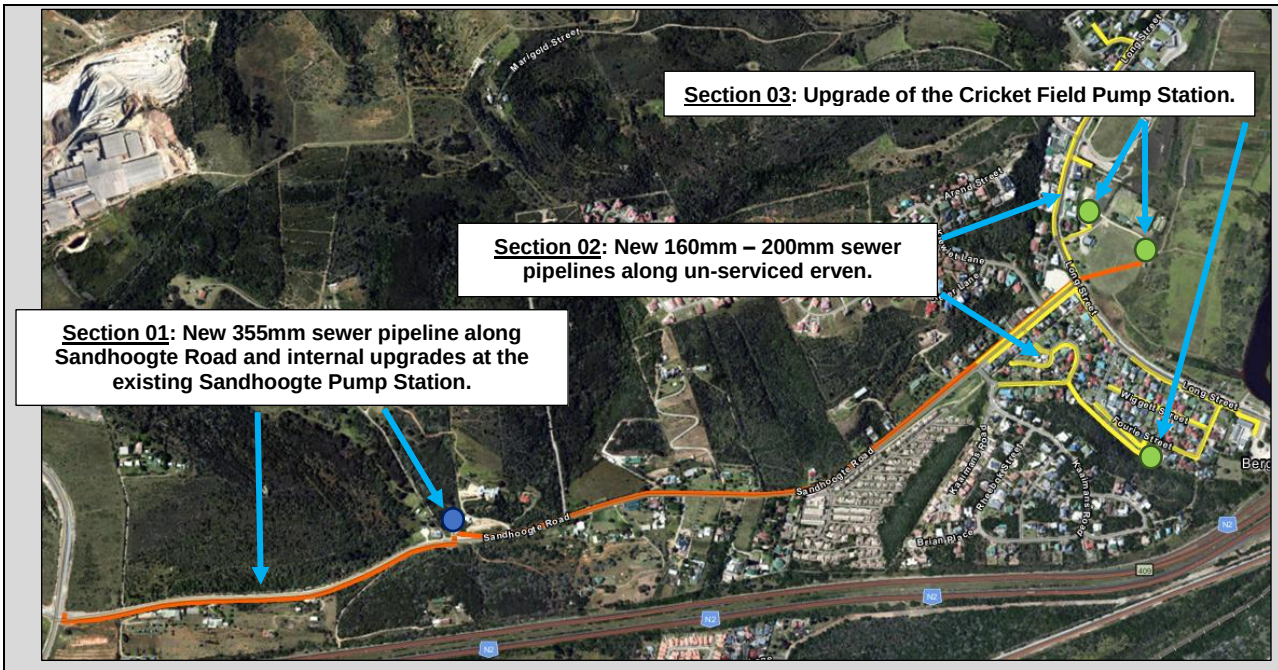


Figure 1: Locality map of the proposed three (3) Great Brak sewer system upgrade sections: (1) new 355mm sewer pipeline along Sandhoogte Road (orange solid line) and internal upgrades at the existing Sandhoogte Pump Station (blue filled circle); (2) new 160mm – 200mm sewer pipelines along un-serviced erven in Great Brak (yellow solid line); and (3) expansion / replacement of the Cricket Field Pump Station (green filled circles).

Section 01

It is proposed to **replace** the existing 200mm bulk diameter sewer pipeline, along Sandhoogte Road, with a greater capacity pipeline (355mm diameter Pumping Main) in order to accommodate future developments in Great Brak River (Figure 2) (Figure 3). This existing bulk sewer line direct raw sewage from Great Brak to the Waste Water Treatment Works West of town.

Because of increase in the flowrate from the pumps at the Cricket Field Pump Station, the flow rate in the line between the Cricket Field Pump Station and the Great Brak Wastewater Treatment Works (WWTW) also increases. If the existing 200mm diameter sewer pipeline is not upgraded, the velocity in the pipeline will exceed the design capacity, hence the need to upgrade the capacity of the line.

The existing sewer pipeline will need to remain in service until the new pipeline is fully operational and also to have in place in case of maintenance of the (new) bulk sewer line.

It is also proposed to **upgrade** the Sandhoogte Pump Station (internal upgrades only) to align with the bulk line upgrade (Figure 4).

Preferred route alternative: New 355mm diameter sewer pipeline to be installed: (a) within Sandhoogte Road reserve[1] from the WWTW, from where it (b) traverse the cricket field to the existing Cricket Field pump station, or along existing road reserves towards the new small pump station on Erf 4808[2] (Figure 2).

Importantly this sewer line (the existing one that runs along Sandhoogte Road reserve) already connects the Cricket Field Pump Station with the existing Great Brak Waste Water Treatment Works (WWTW). Despite the infrastructure upgrades, the WWTW need not be upgraded because it already has sufficient spare capacity (Element Engineers previously involved with upgrades to the WWTW).

The following factors influenced the preferred route alternative:

- Future upgrade of Sandhoogte Road.

- Discussions with the engineers working on the Sandhoogte Road upgrade, indicate that the preferred route for the sewer line would be on the southern side of Sandhoogte Road, especially west of Sandhoogte Pump Station, as this would provide better stability and is aligned with other services within the road reserve.

- Erosion Control Measures.
  - The pipeline will be installed on the fill side of Sandhoogte Road to reduce the likelihood of potential erosion and unnecessary exposure.

- A tributary (i.e., drainage line) located on the northern, downslope side of Sandhoogte Road was formalised and canalised by the Municipality when Sandhoogte Road was originally constructed and albeit not an environmentally sensitive feature, it is a physical structure (canal) that conveys stormwater and therefore must be considered:
  - The sewer pipeline will therefore be installed on the southern, downslope side of Sandhoogte Road, between Great Brak WWTW and Sandhoogte Pump Station, in order to not be in proximity to this canal.

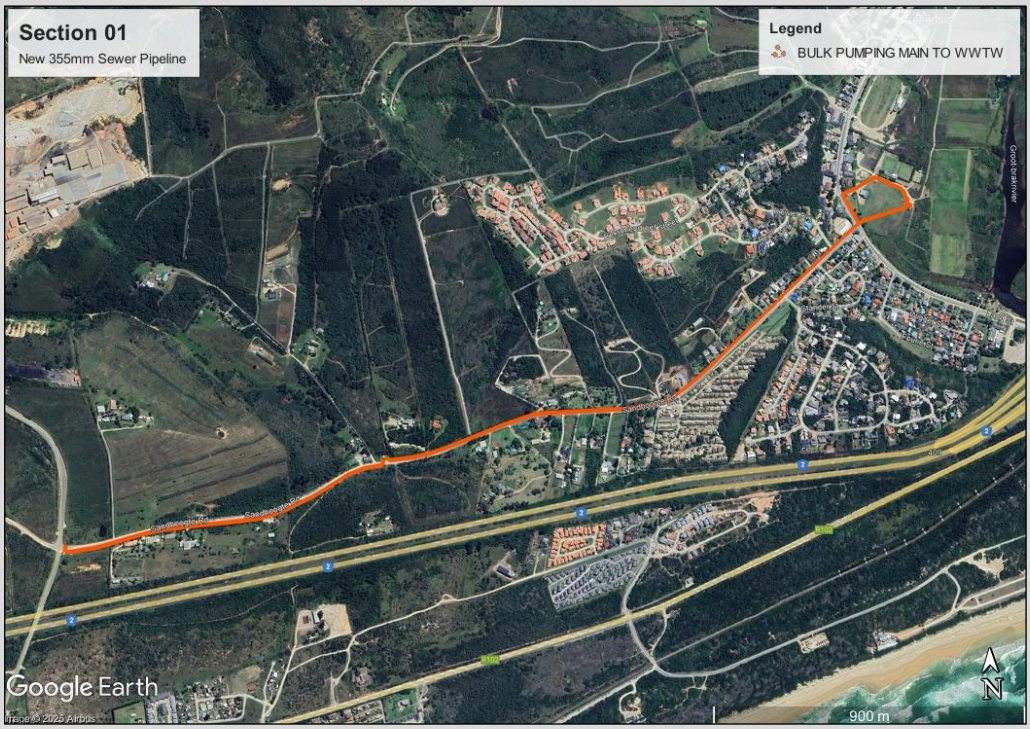


Figure 2: New 355mm sewer pipeline to replace the existing 200mm sewer pipeline (orange solid line). Depending on the locality of the final site selection for the Cricket Field Pump Station (i.e., Section 03), the pipeline will either traverse the cricket field or be installed along the existing roads on Erf 4808.

Section 2

New 160mm – 200mm diameter link sewer pipelines will the installed to replace numerous existing conservancy tanks in existing residential / business areas of Great Brak. The pipeline sections will be installed along Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street, Van Rensburg Street, Long Street and Kerk Street (Figure 5). The Municipality needs to install this pipeline to ensure that these erven can be linked to the Municipal sewer system.

[1] Southern road reserve; between Great Brak WWTW and Sandhoogte Pumpstation,

Northern road reserve; between Sandhoogte and Cricket Field Pumpstations.

[2] Depending on the locality of the final site selection for the Cricket Field Pumpstation (i.e., Section 03).

Figure 3: Sections along Sandhoogte Road where a new 355mm sewer pipeline is proposed.

Figure 4: Existing Sandhoogte Pump Station to be upgraded (internal upgrades only).

Majority of this new sewer line will be installed within existing tar / gravel roads, within road reserves in the township area, and/or beneath paved sidewalks traversing the residential areas, again feeding to the Cricket Pump Station which is the lowest point from where sewage is pumped to the Great Brak WWTW.

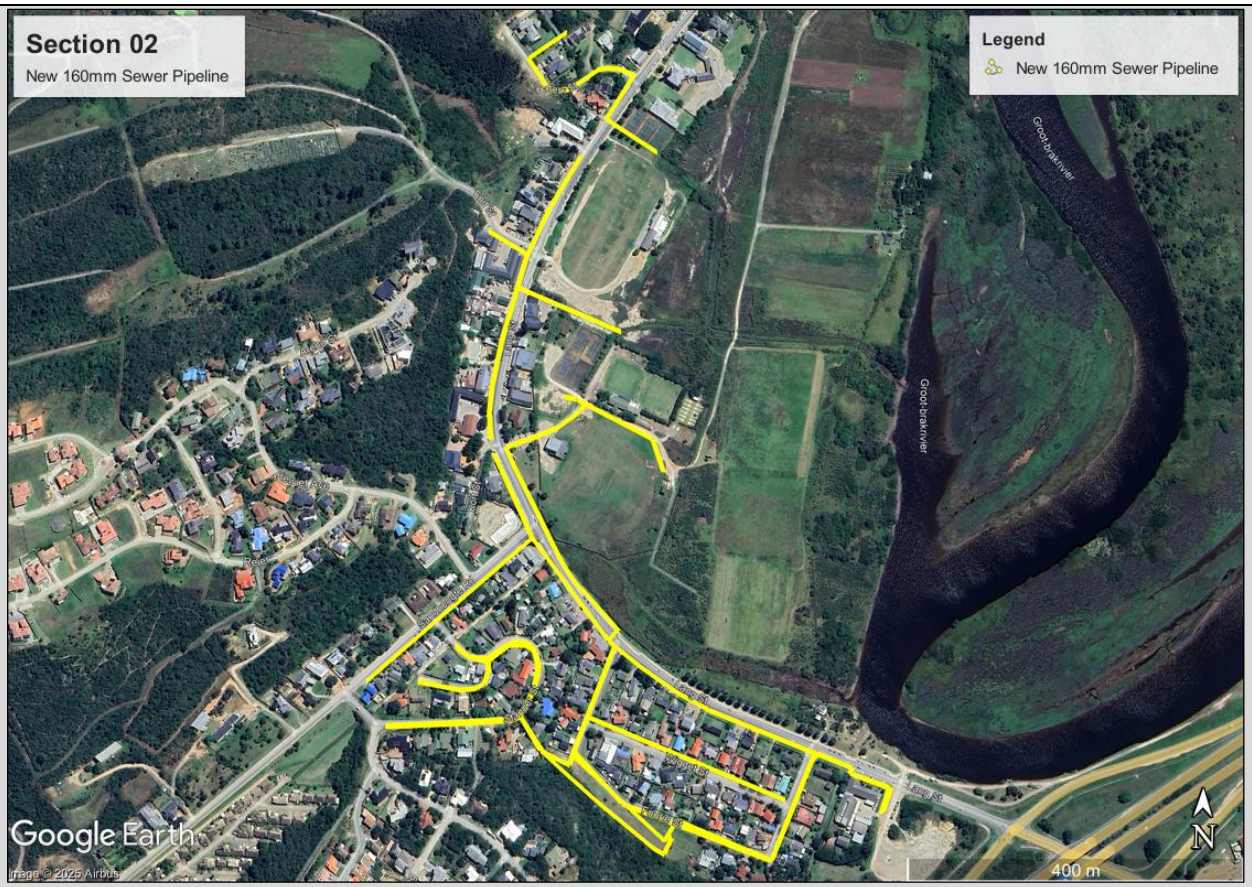


Figure 5: New Ø160mm – Ø200mm sewer pipelines along un-serviced erven in Great Brak River.

Section 03

Following the *Pre-Application Meeting* with the Department of Environmental Affairs & Development Planning (DEA&DP, George) on 25 November 2024, the Applicant investigated three (3) alternatives to be considered for the upgrade of the existing Cricket Field Pump Station (Figure 6).

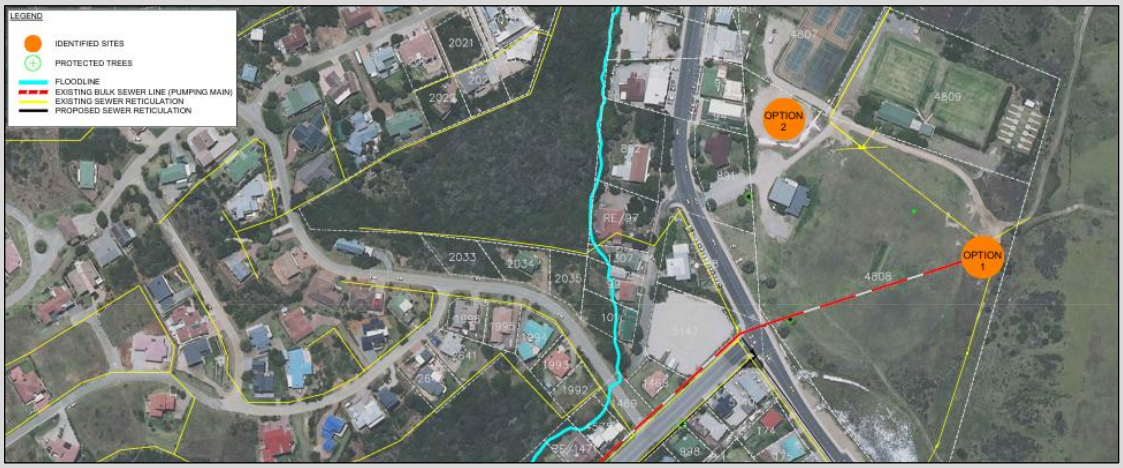


Figure 6: Locality map of the alternatives described below in relation to the 1 in 100m flood line (blue solid line).

Alternative 1a (Least preferred)

The Cricket Field Pumpstation is historically located below the 1:100 year flood line of the Great Brak Estuary (see BLUE LINE in Figure 6) (Figure 7). This pump station overflows on a regular basis (mostly due to unauthorized stormwater discharge into the sewer system, resulting in higher than normal inflow to the pump station during heavy rainfall periods).

Figure 7: Existing Cricket Field Pumpstation on Erf 4808.

The proposal is to **expand** the existing Cricket Field Pump Station on Erf 4808 (Figure 6 – Option 01) (Figure 8), in its current position/location which is deemed a logical alternative, however concern about it being located below the 1:100 year flood line must be taken into account ito potential detrimental environmental impacts should it (continue) to overflow, or get flooded.

Upgrade at the existing location includes the addition of one (1) new submerged sump next to the existing pumpstation and control room (expand the area by ±160m^2) in a northerly direction and internal renovations of the existing sump (Figure 8).

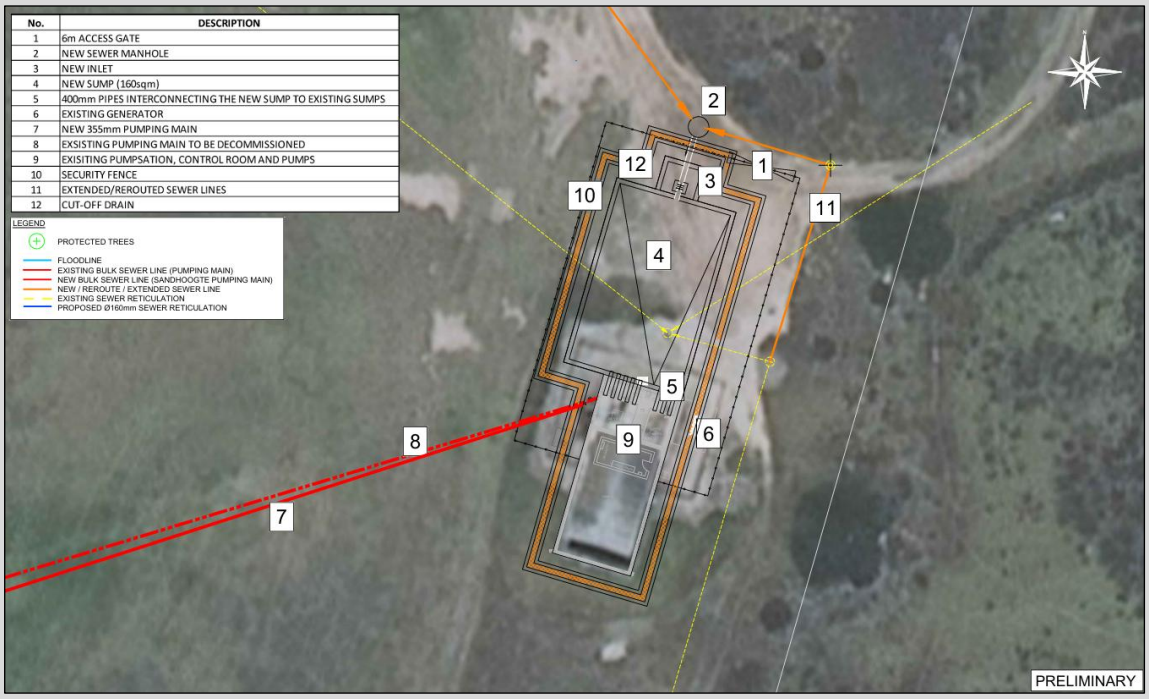


Figure 8: Expansion of the existing Cricket Field Pumpstation in its current location.

- Addition of one (1) smaller pumpstation on Erf 111 next to Fourie Street to pump the sewer from the (currently un-serviced erven) back to the Cricket Field Pump Station (Figure 9) (Figure 10).

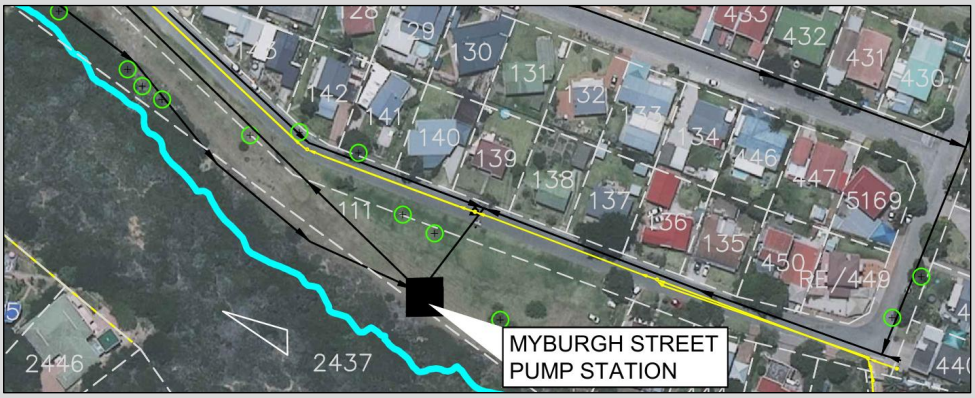


Figure 9: Locality of a new pumpstation on Erf 111 (black box) (BLUE line represents the 1:100 year flood line).

Figure 10: Erf 111 where Myburgh Street Pump Station is proposed.

The expansion of the Cricket Field Pump Station with the addition of a new (Myburgh) Pump Station alternative is **least preferred** for the following key reasons:

- It requires the largest disturbance footprint of all alternatives assessed (including a new route for the link sewer line connection across in-tact thicket).
- Although it will make use of and optimize existing infrastructure i.e., Cricket Field Pump Station, the age and design of the Cricket Field Pump Station is not known to the Municipality due to lack of records, implying potential future challenges when the existing sump reaches its design life span.
- It requires an additional smaller pump station on Erf 111, which will increase the operational cost (the Municipality would like to minimize pump stations where possible). The new smaller pump station will also be located adjacent to a residential neighbourhood that could cause potential odor problems if not maintained well.

- Although not highly sensitive from an environmental point of view, this alternative does require the installation of a new section of sewer line across the Cricket Field to connect the two pump stations (this is an operational cricket facility).
- In this alternative, the Cricket Field Pump Station (location) remains ±270m below the 1:100 year flood line and ±275m from the edge of the Estuary which implies that the status quo of overflowing sewage from the (expanded) pump station remains a risk factor.

Alternative 1b (preferred)

Construction of a new pumpstation adjacent to the existing Cricket Field Pump Station on Erf 4808 (Figure 6 – Option 01) (Figure 11) (Figure 12) and decommissioning of the existing pump station.

- With the installation of a new pumpstation, the existing Cricket Field Pump Station can be decommissioned once the new pump station is fully operational.

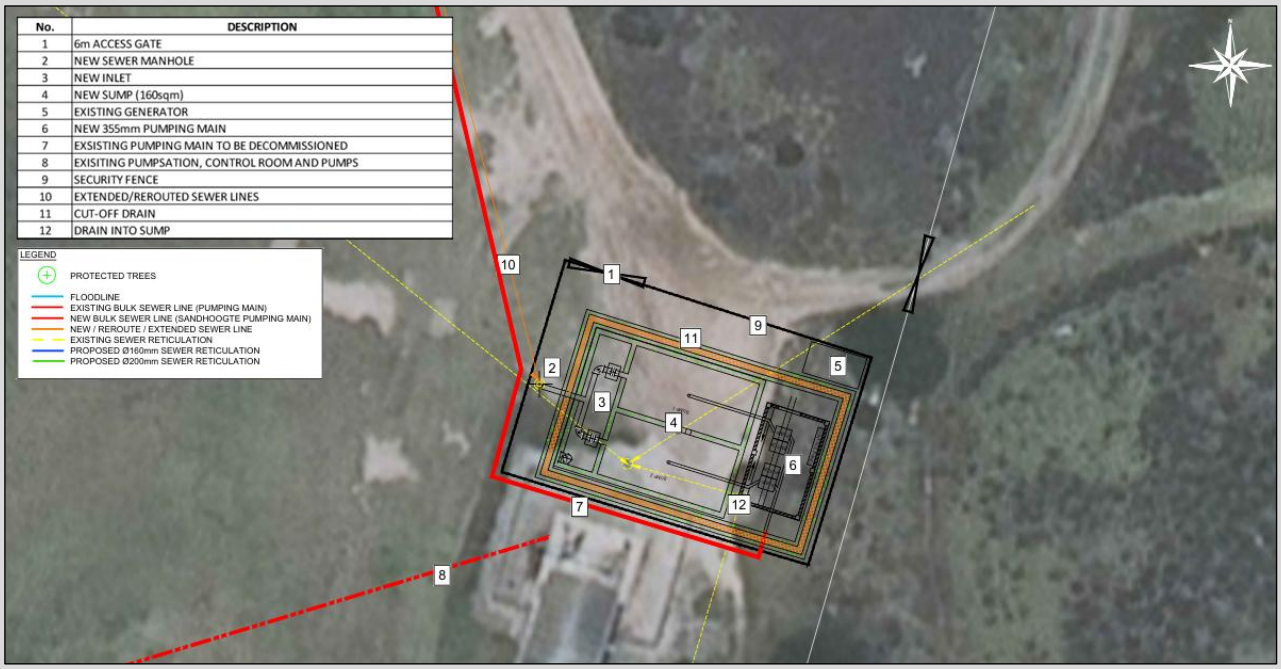


Figure 11: New pumpstation next to the Cricket Field Pumpstation on Erf 4808.

Although **preferred** because of improved design which will reduce the risk of failure/overflow/flooding, the position remains ±270m below the 1:100 year flood line and ±275m from edge of the Estuary which implies a continued risk ito potential spills, although new design features will mitigate the risk more so than Alternative 1a.

With this alternative, there is no need for a second small Myburgh Sewage Pump Station which also reduces the footprint, as well as maintenance costs associated with additional pump stations.

Figure 12: Approximate locality of new pump station next to existing Cricket Field Pumpstation (yellow circle).

Alternative 2 (Most Preferred)

Construction of a new pumpstation, in a new location altogether, next to the Great Brak River Sports Club – Tennis Courts on Erf 4808 (Figure 6 – Option 2) (Figure 13) (Figure 14).

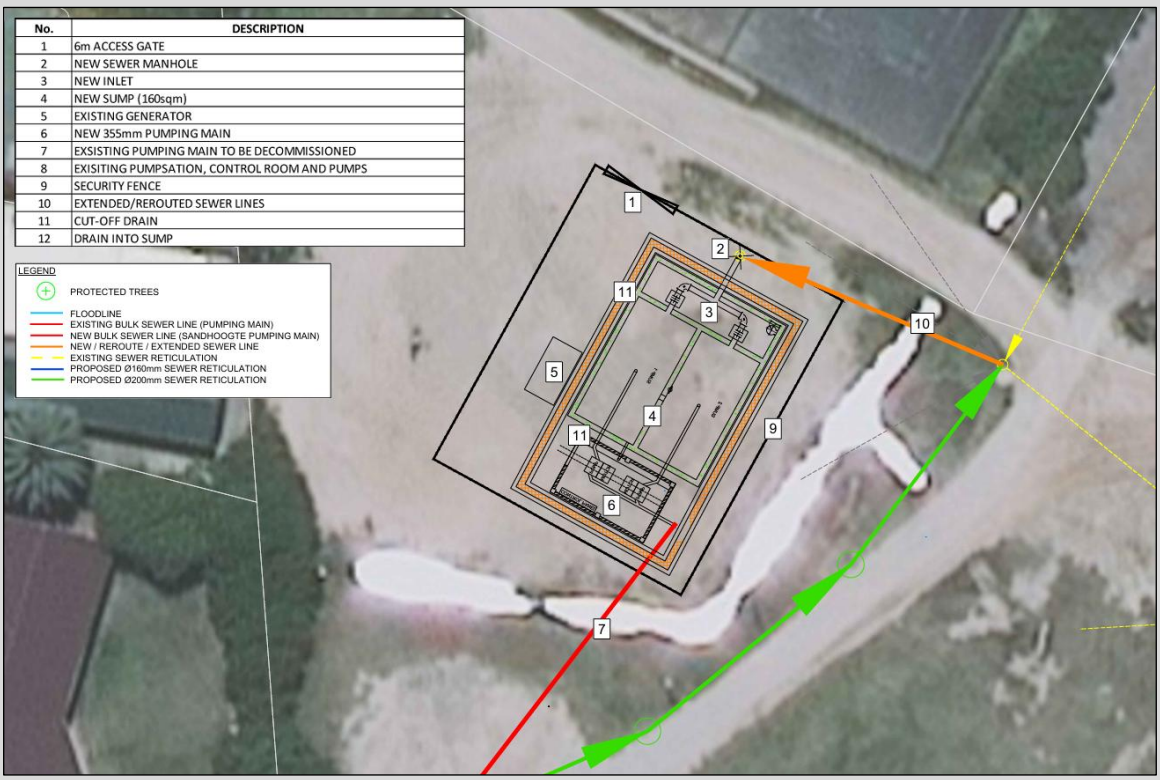


Figure 13: New pump station on Erf 4808, next to the Great Brak River Sports Club.

Figure 14: Locality of new pump station on Erf 4808, next to the Great Brak River Sports Club.

This alternative is **most preferred** for the following reasons:

- It is ±430m away from the edge of the Great Brak Estuary and situated further inland +/-115m below the 1:100 year flood line which is preferred from a risk management perspective.
- It will be constructed on the same property as the Cricket Field Pump Station (municipal albeit in a different location).
- It is located within an already disturbed area outside CBAs and ESAs.
- This alternative does not require the installation of a sewer line through the Cricket Field.
- With this alternative, there is no need for a second small Myburgh Sewage Pump Station which also reduces the footprint, as well as maintenance costs associated with additional pump stations.
- The introduced risk with this location however (similar to the Myburgh Pump Station) is potential odour issues especially to existing facilities in close proximity thereto that can be deemed undesirable especially in the event of unplanned overflows.

Please note that the alignment of certain sections of the sewer pipelines in Section 01 & Section 02 is dependent on the alternatives in Section 03.

SPECIALIST STUDIES:

The following studies have been undertaken and are included in this Draft Basic Assessment Report (DBAR) for review and comment:

1. Botanical / Biodiversity **Compliance Statement**

   The terrestrial biodiversity specialist **disputes** the medium plant species- and very high terrestrial biodiversity sensitivity and **confirms** that it is **LOW**. The proposed sewerage infrastructure is located within areas not representative of threatened ecosystems, CBAs or ESAs. No Plant SCC were found within the Project Area of Influence (PAOI) and have a low likelihood of occurrence.

2. Fauna **Compliance Statement**

   The fauna specialist **disputes** the high fauna sensitivity and **confirms** that it is **LOW**. No fauna SCC were found within the (POAI) and have a low likelihood of occurrence.

3. Aquatic **Impact Assessment**

   Although Alternative 1a (expansion of the existing pump station) fit a low sensitivity / Compliance Statement, construction of a new pump station in the Estuarine Functional Zone (Alternatives 1b & 2) confirms the **HIGH** aquatic sensitivity.

4. Agricultural Compliance Statement

   The agricultural specialist **disputes** the **high** agricultural sensitivity and **confirms** that it is **MEDIUM.**

5. Notice of Intent to Develop (NID)

   A NID was submitted to Heritage Western Cape who confirmed that **no further studies** are required.

In summary:

#	Proposed development	**Alternative 1a (least preferred)**	**Alternative 1b (preferred)**	**Alternative 2 (most preferred)**
		Development Footprint		
1	**New 160mm – Ø200mm sewer pipeline** to connect un-serviced erven.	±3 575m^2	±3 596m^2	±3 489m^2
2	**New 355mm sewer pipeline** along Sandhoogte Road.	±2 727m^2	±2 935m^2	±2 754m^2
3	**Upgrades** at the Sandhoote Pumpstation	Internal Upgrades (within the existing structure)		
4	**Expansion** at the Cricket Field Pumpstation (Alternative 1a)	±430m^2	-	-
5	**New Myburgh pump station** on Erf 111 (Alternative 1a)	±50m^2	-	-
6	**Construction** of a new Pumpstation (Alternative 1b) (Alternative 2)	-	±400m^2	±400m^2
Total		±6 782m^2	±6 931m^2	±6 643m^2

As the budget for this project does not allow for all the upgrades to be done simultaneously, the project will be split into four (4) phases. The phasing of the project will be as follows:

- *Phase 1:* Construction of sewer pipelines along Kerk and Lang Street to connect un-serviced erven.
- *Phase 2:* Construction of the sewer rising main between the pump station and the wastewater treatment works.
- *Phase 3:* Upgrading of Cricket Field Pump Station and Sandhoogte Pump Station.
- *Phase 4:* Sewer Reticulation along Lang street, Sandhoogte Road, Stander Street, Ebenezer Avenue, Wigget Street, Fourie street and Van Rensburg Street.

IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.

2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 19998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".

3. *Submission of documentation, reports and other correspondence:*

   The Department has adopted a digital format for corresponding with proponents/applicants or the general public. If there is a conflict between this approach and any provision in the legislation, then the provisions in the legislation prevail. If there is any uncertainty about the requirements or arrangements, the relevant Competent Authority must be consulted.

   The Directorate: Development Management has created generic e-mail addresses for the respective Regions, to centralise their administration. Please make use of the relevant general administration e-mail address below when submitting documents:

   DEADPEIAAdmin@westerncape.gov.za
   Directorate: Development Management (Region 1):
   City of Cape Town; West Coast District Municipal area;
   Cape Winelands District Municipal area and Overberg District Municipal area.

   DEADPEIAAdmin.George@westerncape.gov.za
   Directorate: Development Management (Region 3):
   Garden Route District Municipal area and Central Karoo District Municipal area

   General queries must be submitted via the general administration e-mail for EIA related queries. Where a case-officer of DEA&DP has been assigned, correspondence may be directed to such official and copied to the relevant general administration e-mail for record purposes.

   All correspondence, comments, requests and decisions in terms of applications, will be issued to either the applicant/requester in a digital format via email, with digital signatures, and copied to the Environmental Assessment Practitioner ("EAP") (where applicable).

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.

5. All applicable sections of this BAR must be completed.

6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.

7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at http://www.westerncape.gov.za to check for the latest version of this BAR.

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations

when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.

11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.

12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.

13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.

14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link https://screening.environment.gov.za/screeningtool to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-
    Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

    Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

DEPARTMENTAL DETAILS	
~~**CAPE TOWN OFFICE:**~~ ~~**DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)**~~ ~~(City of Cape Town, West Coast District,~~ ~~Cape Winelands District & Overberg District)~~	**GEORGE REGIONAL OFFICE:** **DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)** (Central Karoo District & Garden Route District)
~~The completed Form must be sent via electronic mail to:~~ ~~DEADPEIAAdmin@westerncape.gov.za~~ ~~Queries should be directed to the Directorate: Development Management (Region 1) at:~~ ~~E-mail: DEADPEIAAdmin@westerncape.gov.za~~ ~~Tel: (021) 483-5829~~ ~~Western Cape Government~~ ~~Department of Environmental Affairs and Development Planning~~ ~~Attention: Directorate: Development Management (Region 1)~~ ~~Private Bag X 9086~~ ~~Cape Town,~~ ~~8000~~	The completed Form must be sent via electronic mail to: DEADPEIAAdmin.George@westerncape.gov.za Queries should be directed to the Directorate: Development Management (Region 3) at: E-mail: DEADPEIAAdmin.George@westerncape.gov.za Tel: (044) 814-2006 Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development **must** be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to):

	○ Watercourses / Rivers / Wetlands ○ Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable); ○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"): ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as **Appendix C**. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.
Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as **Appendix D**.
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**.

ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

ATTACHMENTS

Note: The Appendices must be attached to the BAR as per the list below. Please use a ✓ **(**tick) or a **x** (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			**✓ (Tick) or x (cross)**
Appendix A:	**Maps**		
	Appendix A1:	**Locality Map**	✓
	Appendix A2:	**Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning**	✓
	Appendix A3:	**Map with the GPS co-ordinates for linear activities**	✓
Appendix B:	**Appendix B1:**	**Site development plan(s)**	✓
	Appendix B2	**A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;**	✓
Appendix C:	**Photographs**		✓
Appendix D:	**Biodiversity overlay map**		✓
Appendix E:	**Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.**		
	Appendix E1:	**Final comment/ROD from HWC**	✓
	Appendix E2:	**Copy of comment from Cape Nature**	X
	Appendix E3:	**Final Comment from the DWS**	X
	Appendix E4:	**Comment from the DEA: Oceans and Coast**	X
	Appendix E5:	**Comment from the DAFF**	X
	Appendix E6:	**Comment from WCG: Transport and Public Works**	X
	Appendix E7:	**Comment from WCG: DoA**	X
	Appendix E8:	**Comment from WCG: DHS**	X

	Appendix E9:	**Comment from WCG: DoH**	X
	Appendix E10:	**Comment from DEA&DP: Pollution Management**	X
	Appendix E11:	**Comment from DEA&DP: Waste Management**	X
	Appendix E12:	**Comment from DEA&DP: Biodiversity**	X
	Appendix E13:	**Comment from DEA&DP: Air Quality**	X
	Appendix E14:	**Comment from DEA&DP: Coastal Management**	X
	Appendix E15:	**Comment from the local authority**	X
	Appendix E16:	**Confirmation of all services (water, electricity, sewage, solid waste management)**	X
	Appendix E17:	**Comment from the District Municipality**	X
	Appendix E18:	**Copy of an exemption notice**	X
	Appendix E19	**Pre-approval for the reclamation of land**	X
	Appendix E20:	**Proof of agreement/TOR of the specialist studies conducted.**	X
	Appendix E21:	**Proof of land use rights**	✓
	Appendix E22:	**Proof of public participation agreement for linear activities**	X
Appendix F:	**Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.**		✓
Appendix G:	**Specialist Report(s)**		✓
Appendix H:	**EMPr**		✓
Appendix I:	**Screening tool report**		✓
Appendix J:	**The impact and risk assessment for each alternative**		✓
Appendix K:	**Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline**		X (in BAR)

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	~~CAPE TOWN OFFICE: REGION 1~~		GEORGE OFFICE: BEGION 3
	~~(City of Cape Town, West Coast District~~	~~(Cape Winelands District & Overberg District)~~	(Central Karoo District & Garden Route District)
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent:	Mossel Bay Municipality		
Name of contact person for Applicant/Proponent (if other):	Eric Louw (contact person) Dick Naidoo (signatory)		
Company/ Trading name/State Department/Organ of State:			
Company Registration Number:			
Postal address:	101 Marsh Street		
	Mossel Bay	Postal code: 6500	
Telephone:	044 606 5255	Cell:	
E-mail:	elouw@mosselbay.gov.za	Fax: ( )	
Company of EAP:	Cape Environmental Assessment Practitioners (Cape EAPrac)		
EAP name:	Louise-Mari van Zyl (Appointed EAP) / Mariska Byleveld (Candidate EAP)		
Postal address:	PO Box 2070		
	George	Postal code: 6530	
Telephone:	044 874 0365	Cell: 071 603 4132 / 084 5036 587	
E-mail:	louise@cape-eaprac.co.za mariska@cape-eaprac.co.za	Fax: ( )	
Qualifications:	Louise-Mari van Zyl: MA Geography [US] | Mariska Byleveld: MSc Geology [UFS]		
EAP registration no:	Louise-Mari van Zyl: 2019/1444 | Mariska Byleveld: 2023/6593		
Duplicate this section where there is more than one landowner Name of landowner:	Mossel Bay Municipality		
Name of contact person for landowner (if other):	Eric Louw (contact person) Dick Naidoo (signatory)		
Postal address:	101 Marsh Street		
	Mossel Bay	Postal code: 6500	
Telephone:	044 606 5255	Cell:	
E-mail:	elouw@mosselbay.gov.za	Fax: ( )	
Duplicate this section where there is more than one landowner Name of landowner:	Landowner of Erf 189		
Name of contact person for landowner (if other):			
Postal address:		Postal code:	
		Cell:	
Telephone: E-mail:		Fax: ( )	
Duplicate this section where there is more than one landowner Name of landowner:	Landowner of Erf 731		
Name of contact person for landowner (if other):			
Postal address:		Postal code:	
		Cell:	
Telephone: E-mail:		Fax: ( )	

Duplicate this section where there is more than one landowner	Landowner of Erf 769	
Name of landowner:		Postal code:
Name of contact person for landowner (if other):		Cell:
Postal address:		Fax: ( )
Telephone:		
E-mail:		
Duplicate this section where there is more than one landowner	Landowner of Erf 770	
Name of landowner:		
Name of contact person for landowner (if other):		Postal code:
Postal address:		Cell:
Telephone:		Fax: ( )
E-mail		
Duplicate this section where there is more than one landowner	Landowner of Erf 887	
Name of landowner:		
Name of contact person for landowner (if other):		Postal code:
Postal address:		Cell:
Telephone:		Fax: ( )
E-mail		
Duplicate this section where there is more than one landowner	Landowner of RE/4812	
Name of landowner:		
Name of contact person for landowner (if other):		Postal code:
Postal address:		Cell:
Telephone:		Fax: ( )
E-mail		
Name of Person in control of the land:	Same as above.	
Name of contact person for person in control of the land:		
Postal address:		
		Postal code:
Telephone:		Cell:
E-mail:		Fax: ( )

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall:	Mossel Bay Municipality	
Contact person:	Eric Louw (contact person) Dick Naidoo (signatory)	
Postal address:	101 Marsh Street	
	Mossel Bay	Postal code: 6500
Telephone	044 606 5255	Cell:
E-mail:	elouw@mosselbay.gov.za	Fax: ( )

SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INCLUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New	✓	~~Expansion~~	
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				

The sewer pipeline infrastructure (either new or upgrades) will be installed within existing gravel and tar roads / paved sidewalks / already disturbed road reserves / within building lines of private properties within Great Brak township.

Potential new pump stations will be constructed in transformed areas and /or expansion of existing structures within transformed areas.

3.	**For Linear activities or developments (sewer pipelines)**
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:

Section 01: 355mm sewer line (pumping main) along Sandhoogte Road.

Erf / Farm #	Locality of Sewer line
RE/139	**Road Reserve of Sandhoogte Road.**
RE/25/129	
RE/53/129	
19/129	
RE/93/129	
45/129	
46/219	
44/29	
RE/2833	
RE/48/129	
124/129	
87/129	
RE/5098	
5138	
5097	
5/138	
RE/4752	
RE/4739	
RE/1/138	
RE/4637	
4/138	
RE/2/138	
RE/4638	
3/138	
RE/4768	
4770	
4771	
4772	
RE/4722	Street Parcel (Sandhoogte Road)
4808	Cricket Field Pumpstation

Section 02: 160mm – 200mm sewer line to connect un-serviced erven in Great Brak River.

Erf / Farm #	Locality of Sewer line
RE/198	Stander Street
1687	Ebenezer Avenue
Erf 189	Private Property
Erf 111	Public Place
1/275	Fourie Street & Wiggett Street
RE/275	Van Rensburg Street
RE/4766	Road Reserve of Long Street (underneath sidewalks)
Erf 5101	Road Reserve of Long Street (underneath sidewalks)
Erf 4788	Private Property
Erf 4787	Great Brak Police Station
RE/4722	Sandhoogte Road Reserve
RE/4812	Road Reserve of Long Street (underneath sidewalks)
Erf 769	Private Property
Erf 768	Private Property

	RE/4812	Church Street & Long Street
	Erf 770	Private Property
	RE/4806	End Street
	Erf 871	Road Reserve of Long Street (underneath sidewalks)
	Erf 887	Private Property
	RE/4811	Road Reserve of Long Street (underneath sidewalks)
	Erf 89	Private Properties (Road Reserve of Long Street)
	Erf 90	Private Properties (Road Reserve of Long Street)
	Erf 91	
	Erf 95	
	Erf 96	

3.2.	Development footprint of the proposed development for all alternatives.	Alternative 1a: ±6302m^2 Alternative 1b: ± 6531m^2 Alternative 2: ±6243m^2
3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.	

Section 01

To accommodate future developments in Great Brak, it is proposed to **replace** the existing 200mm diameter sewer pipeline with a greater capacity pipeline (355mm diameter pumping main) (Figure 15).

The existing pipeline will need to remain in service until the new pipeline is fully operational.

Preferred route alternative: The 355mm sewer pipeline to be installed: (a) within Sandhoogte Road reserve[3], from where it (b) traverses the cricket field to the existing pumpstation, or along the existing roads on Erf 4808[4].

Importantly this sewer line (the existing one that runs along Sandhoogte Road reserve) already connects the Cricket Field Pump Station, with the existing Great Brak Waste Water Treatment Works (WWTW). Despite the infrastructure upgrades, the WWTW need not be upgraded (Element Engineers previously involved with upgrades to the WWTW).

The following factors influenced the preferred route alternative:

- Future upgrade of Sandhoogte Road.
    - Discussions with the engineers working on the Sandhoogte Road upgrade, indicate that the preferred route for the sewer line would be on the southern side of Sandhoogte Road, especially west of Sandhoogte Pumpstation, as this would provide better stability and is aligned with other services within the road reserve.
- Erosion Control Measures.
    - The pipeline will be installed on the fill side of Sandhoogte Road to reduce the likelihood of potential erosion and unnecessary exposure.

[3] Southern road reserve; between Great Brak WWTW and Sandhoogte Pumpstation,

Northern road reserve; between Sandhoogte and Cricket Field Pumpstations.

[4] Depending on the locality of the final site selection for the Cricket Field Pumpstation (i.e., Section 03).

- A watercourse (i.e., drainage line) located on the northern, downslope side of Sandhoogte Road was formalised and canalised when Sandhoogte Road was originally constructed.

    - The sewer pipeline will therefore be installed on the southern, downslope side of Sandhoogte Road, between Great Brak WWTW and Sandhoogte Pumpstation, in order to not be in proximity to this canal.

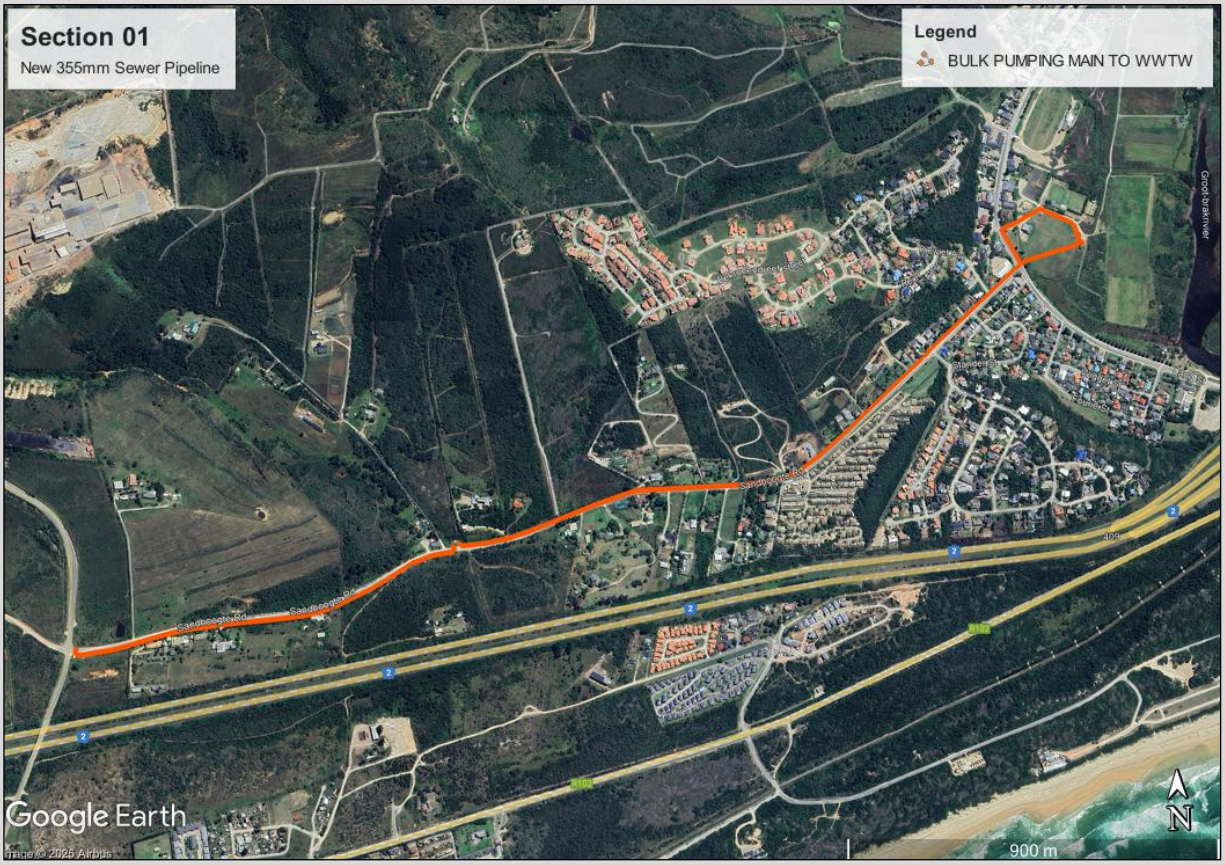


Figure 15: New Ø355mm sewer pipeline to replace the existing Ø200mm sewer pipeline (orange solid line).

Section 2

New 160mm – 200mm sewer pipelines will the installed to replace numerous existing conservancy tanks in existing residential / business areas of Great Brak. The pipeline will be installed along Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street, Van Rensburg Street, Long Street and Kerk Street (Figure 16). The Municipality needs to install this pipeline to ensure that these erven can be linked to the Municipal sewer system.

Majority of this new sewer line will be installed within existing tar / gravel roads, within road reserves, and/or beneath paved sidewalks traversing the residential area, again feeding to the Cricket Pump Station which is the lowest point from where sewage is pumped to the Great Brak WWTW.

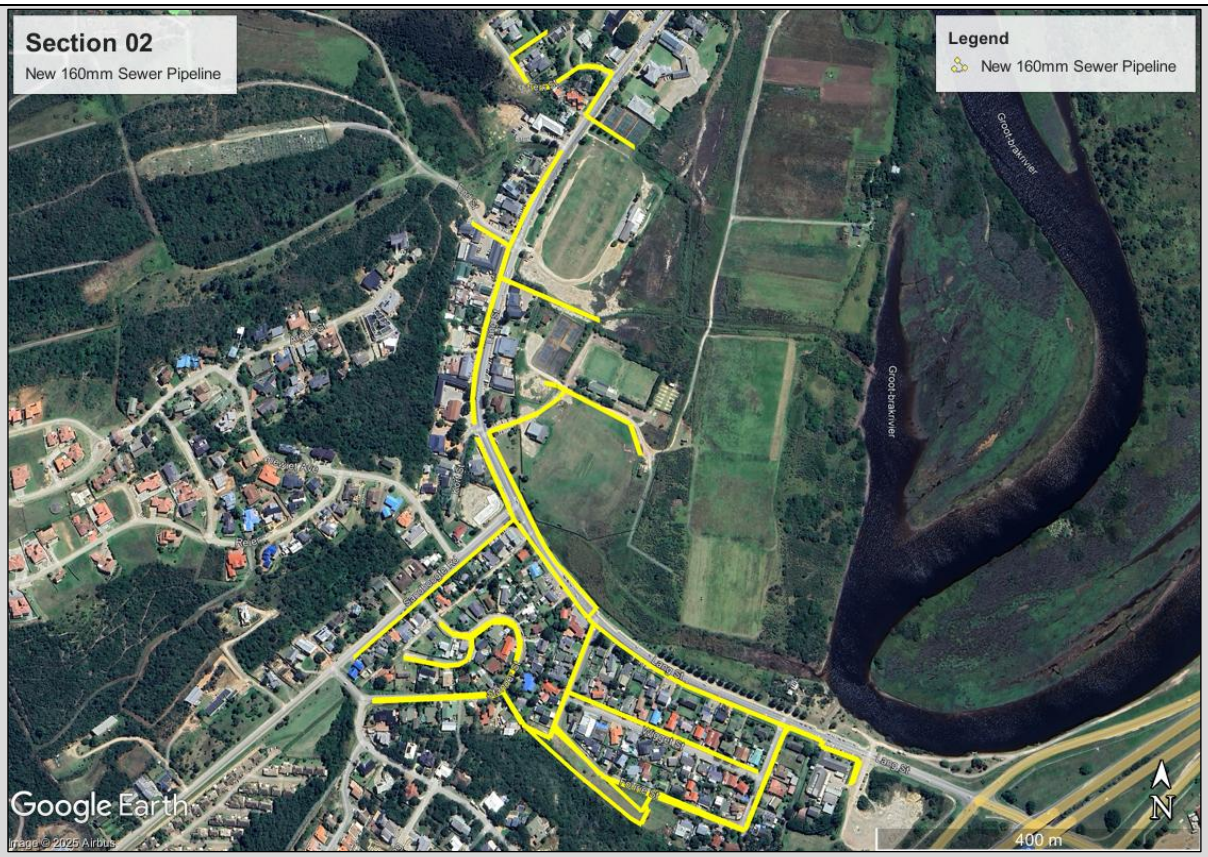


Figure 16: New 160mm – 200mm sewer pipelines along un-serviced erven in Great Brak River.

In summary:

#	Proposed development	Alternative 1a (least preferred)	Alternative 1b (preferred)	Alternative 2 (most preferred)
		Development Footprint		
1	**New 160mm – 200mm sewer pipeline** to connect un-serviced erven.	±3 575m²	±3 596m²	±3 489m²
2	**New 355mm sewer pipeline** along Sandhoogte Road.	±2 727m²	±2 935m²	±2 754m²

3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.

Main access will be directly off the R102, and the Municipality will rehabilitate the affected work areas post-construction of each section.

3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives **<u>Section 01:</u>** New 355mm sewer pipeline along Sandhoogte Road and to decommission the existing 200mm sewer pipeline.	C 0 5 1 0 0 0 0 0 0 0 0 0 1 3 9 0 0 0 0 0 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 2 5 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 5 3 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 1 9 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 9 3 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 4 5 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 4 6 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 4 4 C 0 5 1 0 0 0 0 3 0 0 0 0 2 8 3 3 0 0 0 0 0 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 4 8 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 1 2 4 C 0 5 1 0 0 0 0 0 0 0 0 0 1 2 9 0 0 0 8 7 C 0 5 1 0 0 0 0 3 0 0 0 0 5 0 9 8 0 0 0 0 0 C 0 5 1 0 0 0 0 0 0 0 0 0 1 3 8 0 0 0 0 5 C 0 5 1 0 0 0 0 3 0 0 0 0 4 7 5 2 0 0 0 0 0 C 0 5 1 0 0 0 0 3 0 0 0 0 4 7 3 9 0 0 0 0 0 C 0 5 1 0 0 0 0 0 0 0 0 0 0 1 3 8 0 0 0 0 1 C 0 5 1 0 0 0 0 3 0 0 0 0 4 6 3 7 0 0 0 0 0

		C	0	5	1	0	0	0	0	0	0	0	0	0	1	3	8	0	0	0	0	4
		C	0	5	1	0	0	0	0	0	0	0	0	0	1	3	8	0	0	0	0	2
		C	0	5	1	0	0	0	3	0	0	0	0	4	6	3	8	0	0	0	0	0
		C	0	5	1	0	0	0	0	0	0	0	0	0	1	3	8	0	0	0	0	3
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	6	8	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	7	0	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	7	1	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	7	7	2	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	2	2	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	8	0	8	0	0	0	0	0
3.5.	**Section 02:** New 160mm – 200mm sewer pipeline to connect un-serviced erven along Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street, Van Rensburg Street, Long Street and Kerk Street to the existing municipal sewer network.	C	0	5	1	0	0	0	3	0	0	0	0	0	1	9	8	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	1	6	8	7	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	1	8	9	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	1	1	1	0	0	0	0	0
		C	0	5	1	0	0	0	0	0	0	0	0	0	2	7	5	0	0	0	0	1
		C	0	5	1	0	0	0	0	0	0	0	0	0	2	7	5	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	6	6	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	5	1	0	1	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	8	8	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	7	8	7	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	8	1	2	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	7	6	9	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	7	6	8	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	8	1	2	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	4	8	0	6	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	8	7	1	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	0	8	9	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	0	9	0	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	0	9	1	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	0	9	5	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	0	9	6	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	7	7	0	0	0	0	0	0
		C	0	5	1	0	0	0	3	0	0	0	0	0	8	8	7	0	0	0	0	0

3.6.	~~**Starting point co-ordinates for all alternatives (Preferred & Non-Preferred Alternatives)**~~			
	~~Latitude (S)~~			
	~~Longitude (E)~~			
	~~**Middle-point co-ordinates for all alternatives (Preferred & Non-Preferred Alternatives)**~~			
	~~Latitude (S)~~			
	~~Longitude (E)~~			
	~~**End point co-ordinates for all alternatives (Non-Preferred Alternative: Tie-in Option 02)**~~			
	~~Latitude (S)~~			
	~~Longitude (E)~~			

Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.

4.	**Other developments - Upgrades of the Cricket Field Pump Station**	
4.1.	Property size(s) of all proposed site(s):	±86200 m^2
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):	
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:	Alternative 1a : ±480m^2 Alternative 1b: ±400m^2 Alternative 2: ±400m^2
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).	

Section 03

Following a *Pre-Application Meeting* with the Department of Environmental Affairs & Development Planning (DEA&DP, George) on 25 November 2024, the Applicant investigated three (3) alternatives to be considered for the upgrade of the existing Cricket Field Pump Station (Figure 17).

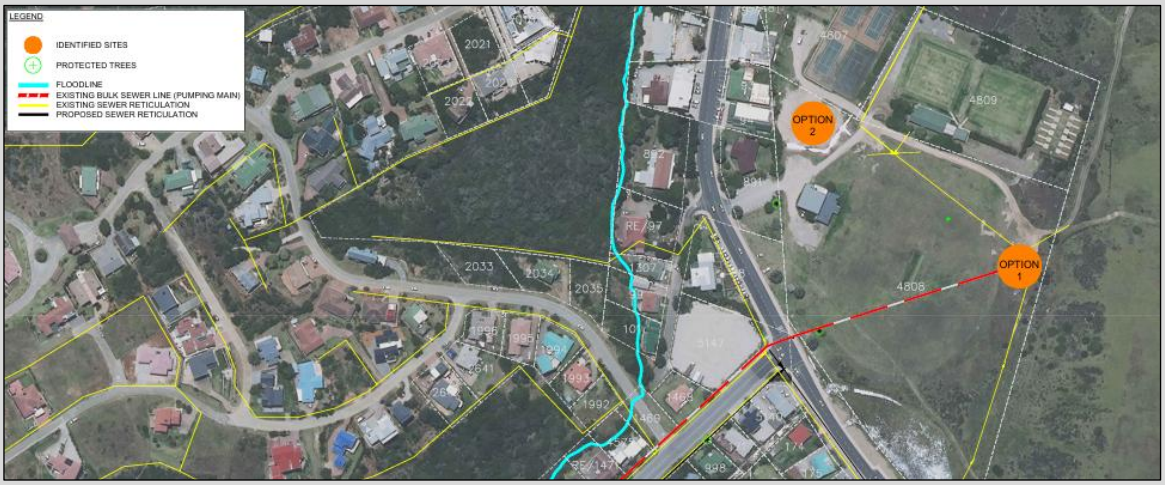


Figure 17: Locality map of the alternatives described below in relation to the 1 in 100m flood line (blue solid line).

Alternative 1a (Least preferred)

The Cricket Field Pump Station is located below the 1:100 year flood line of the Great Brak Estuary (see BLUE LINE in Figure 17) (Figure 18). This pump station overflows on a regular basis (mostly due to unauthorized stormwater discharge into the sewer lines resulting in higher than normal inflow to the pump station during heavy rainfall periods).

Figure 18: Existing Cricket Field Pump Station on Erf 4808.

Proposal is to **expand** the existing Cricket Field Pump Station on Erf 4808 (Figure 17 – Option 01) (Figure 19), in its current position/location which is deemed a logical alternative, however concern about it being located below the 1:100 year flood line needed to be considered.

The upgrade at the existing location includes the addition of one (1) new submerged sump next to the existing pump station and control room (expand the area by ±160m²) in a northerly direction and internal renovations of the existing sump (Figure 19).

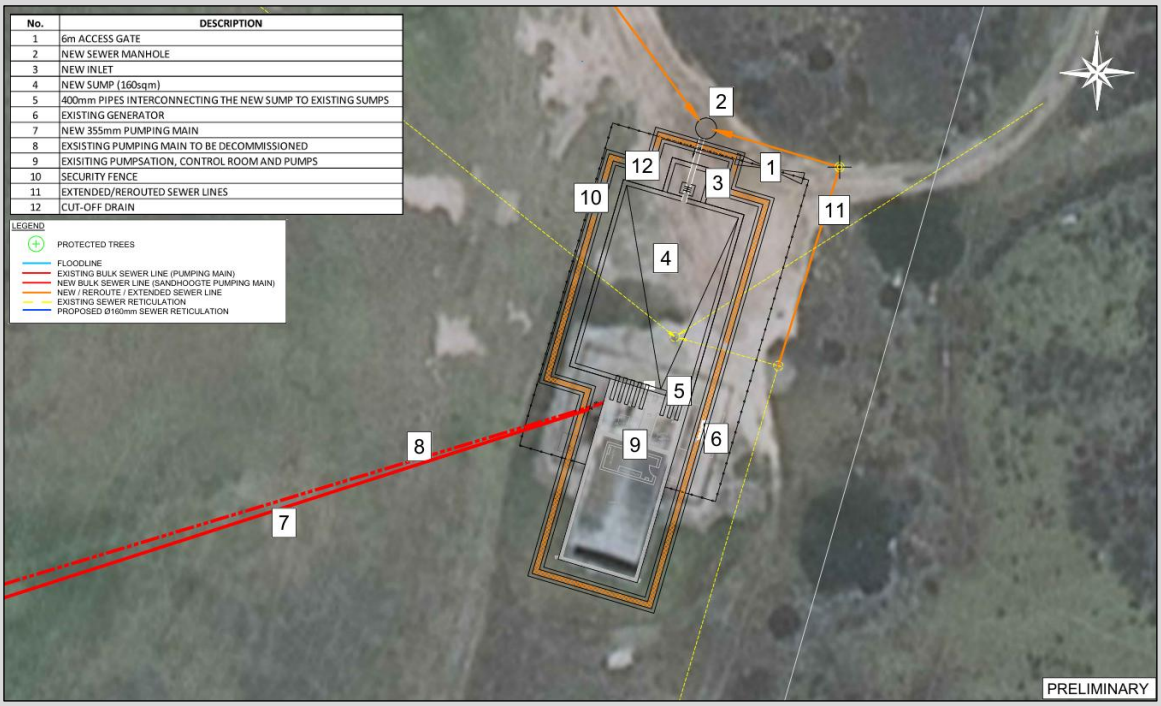


Figure 19: Expansion of the existing Cricket Field Pump Station in its current location.

- Addition of one (1) smaller pump station on Erf 111 next to Fourie Street to pump the sewer from the (currently un-serviced erven) back to the Cricket Field Pump Station (Figure 20) (Figure 21).

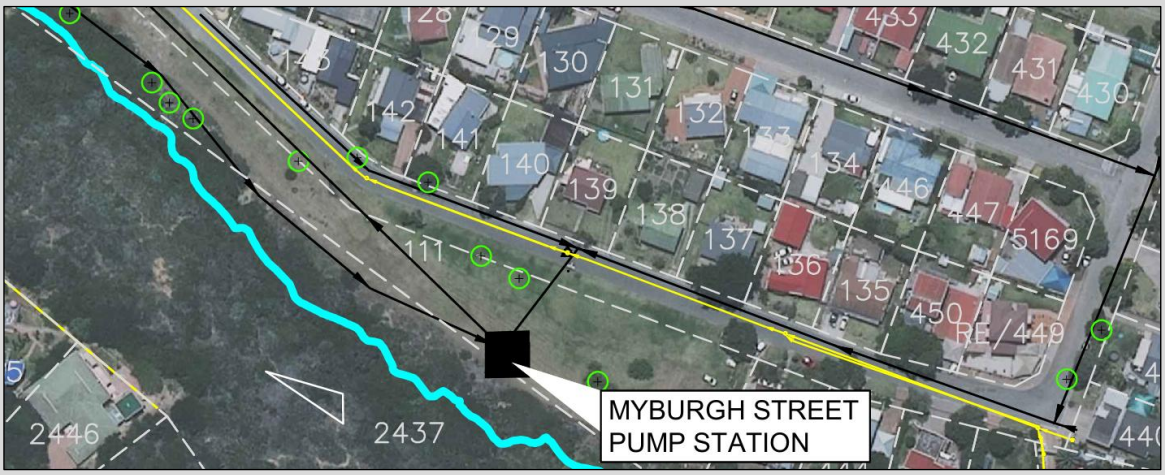


Figure 20: Locality of new pump station on Erf 111 (black box) (BLUE line represents the 1:100 year flood line).

Figure 21: Erf 111 where Mayburgh Street Pump Station is proposed.

The expansion of the Cricket Field Pump Station with the addition of a new (Myburgh) Pump Station alternative is **least preferred** for the following key reasons:

- It requires the largest disturbance footprint of all alternatives assessed.
- Although it will make use of and optimize existing infrastructure i.e. Cricket Field Pump Station, the age and design of the Cricket Field Pump Station is not known to the Municipality due to lack of records, implying potential future challenges when the existing sump reaches its design life span.
- It requires an additional smaller pump station on Erf 111, which will increase the operational cost (the Municipality would like to minimize pump stations where possible). The new smaller pump station will also be located adjacent to a residential neighbourhood that could cause potential odor problems if not maintained well.
- Although not highly sensitive from an environmental point of view, this alternative does require the installation of a new section of sewer line across the Cricket Field to connect the two pump stations (this is an operational cricket facility).
- In this alternative, the Cricket Field Pump Station (location) remains ±270m below the 1:100 year flood line and ±275m from the edge of the Estuary which implies that the status quo of overflowing sewage from the (expanded) pump station remains a risk factor.

Alternative 1b (preferred)

Construction of a new pumpstation adjacent to the existing Cricket Field Pump Station on Erf 4808 (Figure 17 – Option 01) (Figure 22) (Figure 23) and decommissioning of the existing pump station.

- With the installation of a new pumpstation, the existing Cricket Field Pump Station can be decommissioned once the new pump station is operational.

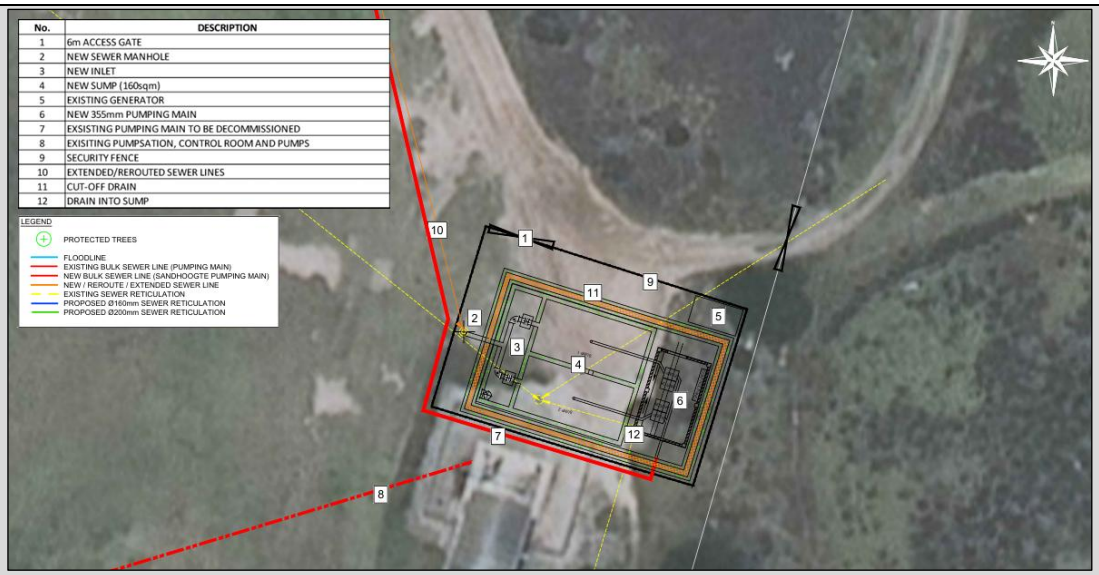


Figure 22: New pumpstation next to the Cricket Field Pump Station.

Although **preferred**, it remains ±270m below the 1:100 year flood line and ±275m from edge of the Estuary which implies a continued risk ito sewage spills, although new design features will mitigate the risk more so than Alternative 1a.

With this alternative, there is no need for a second small Myburgh Sewage Pump Station which also reduces the footprint, as well as maintenance costs associated with additional pump stations.

Figure 23: Approximate locality of new pump station next to existing Cricket Field Pump Station (yellow circle).

Alternative 2 (Most Preferred)

Construction of a new pump station, in a new location altogether, next to the Great Brak River Sports Club – Tennis Courts on Erf 4808 (Figure 17 – Option 2) (Figure 24) (Figure 25).

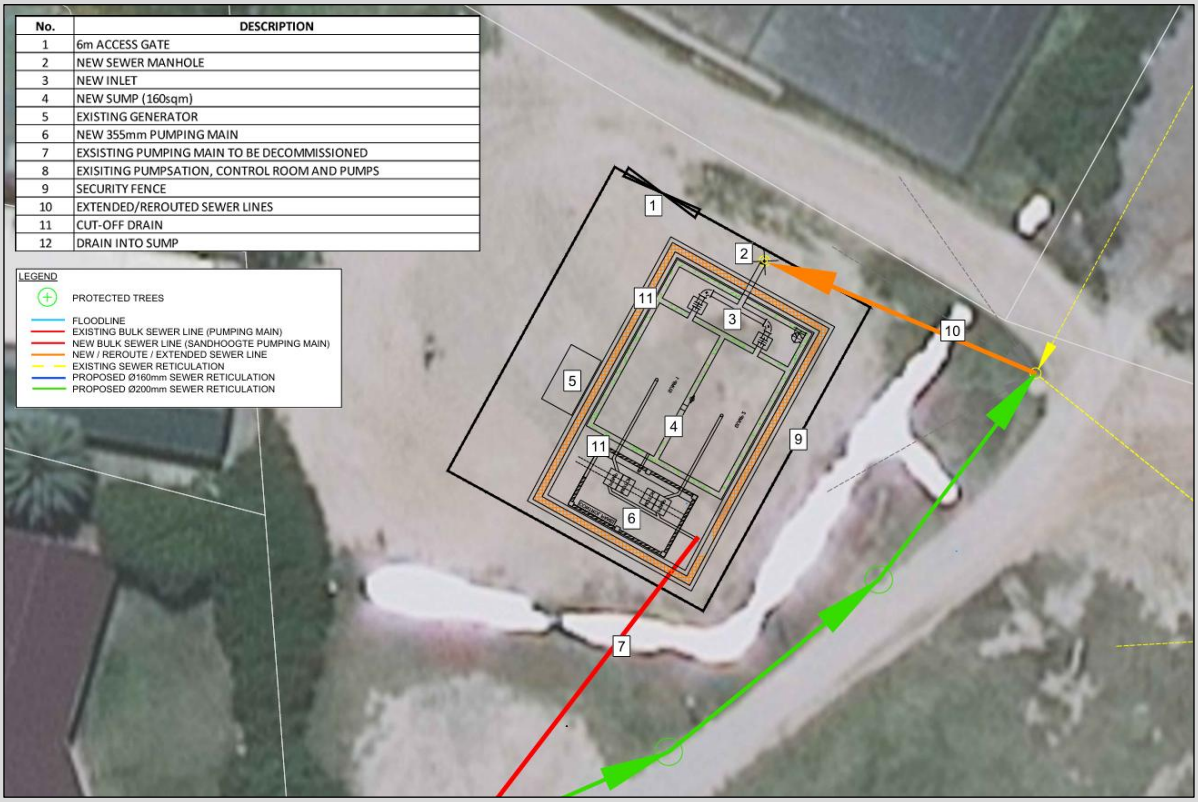


Figure 24: New pump station on Erf 4808, next to the Great Brak River Sports Club.

Figure 25: Locality of new pump station on Erf 4808, next to the Great Brak River Sports Club.

This alternative **is preferred** for the following reasons:

- It is ±430m away from the edge of the Great Brak Estuary and situated further inland +/-115m below the 1:100 year flood line which is preferred from a risk management perspective.

- It will be constructed on the same property as the Cricket Field Pump Station (municipal albeit in a different location).
- It is located within an already disturbed area outside CBAs and ESAs.
- This alternative does not require the installation of a sewer line through the Cricket Field.
- With this alternative, there is no need for a second small Myburgh Sewage Pump Station which also reduces the footprint, as well as maintenance costs associated with additional pump stations.
- The risk with this location however (similar to the Myburgh Pump Station) is odour related since it is located closer to existing businesses.

Please note that the alignment of certain sections of the sewer pipelines in Section 01 & Section 02 is dependent on the alternatives in Section 03.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.				
Access will be via Long Street / Sandhoogte Road and existing internal gravel roads.					
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C05100030000480800000			
4.7.	Coordinates of the proposed site(s) for all alternatives:				
	Alternative 1a & 1b				
	Latitude (S)	34°	03′	03.70″	
	Longitude (E)	22°	12′	59.88″	
	Alternative 2				
	Latitude (S)	34°	03′	01.12″	
	Longitude (E)	22°	12′	54.12″	

SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	~~YES~~	NO

2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	~~YES~~	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	~~NO~~
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	~~YES~~	NO
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	~~YES~~	NO
The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	~~YES~~	NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	~~YES~~	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	~~YES~~	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	~~YES~~	NO

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.

National Forest Act (Act 84 of 1998)

Four protected tree species were observed at various locations along the sides of the roads where the upgrades will be taking place, however all the yellowwood trees (2 species) are cultivated, and all the Milkwood (*Sideroxylon inerme inerme*) and Cheesewood (*Pittosporum viridiflorum*) trees can be avoided by the proposed upgrades. If there is any reason why some of these trees might be impacted by the sewerage infrastructure upgrades, an appropriate licence must be applied for from the Department of Forestry, Fisheries and the Environment (DFFE).

Although the need for such permit is not predicted at this point in time, it is noted that construction may be delayed for various reasons and existing trees may be larger, or new trees may have seeded depending on when construction will commence.

Forestry Permit can take 4 – 5 months to obtain once building/services plans are approved. Applications must therefore be submitted well in advance of when a tree must be trimmed/removed to ensure compliance.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

Western Cape PSDF (2014)

The Western Cape Provincial Spatial Development Framework (WCPSDF) was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that "communicates the provinces spatial planning agenda".

The proposed activity aligns with:

Policy R1 - Protect Biodiversity and Ecosystem Services.

All alternatives are within areas of low fauna, botanical and biodiversity sensitivity.

- The project area is mostly comprised of transformed habitat.
- The project area will not impact on CBA and ESA.

- No remaining Garden Route Granite Fynbos, Hartenbos Dune Thicket or Great Brak Dune Strandveld exist in the project area.
- The vegetation within the project area is not consistent with any Red Listed Ecosystem.
- The project area will not impact on any natural watercourses.

According to the agricultural specialist, no agricultural land is permanently lost and therefore the proposed development are assessed as being of LOW agricultural significance.

Policy E3 – Revitalise and strengthen urban space-economies as the engine of growth.

The proposed activity strengthens the Municipality's ability to provide services to its residents and businesses as part of its service delivery mandate.

Eden Spatial Development Framework (2017)

The Eden District Spatial Development Framework was approved in 2017 and aims to establish a strong strategic direction and vision, towards increasing levels of detail in the spatial recommendations that are directive rather than prescriptive and providing guidance to local municipalities in the district regarding future spatial planning, strategic decision making and regional integration.

The proposed activity complies with the District's Strategic Objective (SO4): Environmental management and public safety and their associated strategies (supported by Policy 1.1.):

- Protect and conserve important terrestrial, aquatic (rivers, wetlands, and estuaries) and marine habitats as identified through Critical Biodiversity Area (CBA) mapping exercise or similar conservation planning process.
    - It is proposed to implement Horizontal Direction Drilling in certain areas where conventional open trenching will cause unnecessary disturbance.

5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.

Guideline on Need and Desirability (March 2013)

Need & Desirability refers to the temporal and spatial need of an area for a specific development. This Guideline was used to define the requirements and implications of Need & Desirability. Refer to section E12 for a detailed Need & Desirability project description.

Guideline on Alternatives (March 2013)

Three (3) different alternatives for the upgrades of the Cricket Field Pump Station were assessed.

Although assessed, the No-Go option would result in no pipeline upgrade and would therefore limit development in Great Brak River.

Guideline for Environmental Management Plans (June 2005)

The EMMPr has been included with this Draft Basic Assessment Report to provide practical and implementable actions to ensure that the development maintains sustainability and minimise impacts through all its phases. The document is finalised as per the Guidelines and requirements of NEMA and covers both the construction as well as future maintenance work.

Guideline on generic terms of Reference for EAPs and Project Schedules (March 2013)

Followed guidance on:

- Generic Requirements for EAPS (what an EAP must manage).
- General Requirements for persons compiling a specialist report.
- Scope of Work (project description, primary responsibility, anticipated inputs etc.).

Guideline for determining the scope of specialist involvement in the EIA process, June 2005

This Guideline was used to determine the timing, scope and quality of specialist inputs in the EIA process.

Circular EADP 0028/2014: One Environmental Management System

This Circular provided guidance in terms of best practice (timeframes, public participation, notifications to I&APs, availability of report for comment, comments & responses etc.).

6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form

According to the DEADP series of guidelines for the involvement of specialists in the EIA process (2005), one of the underpinning generic principles is to **eliminate the unnecessary specialist involvement** through proactive project planning and design to avoid or sufficiently reduce negative impacts.

Another is to **maximise the use of existing relevant information** prior to involving a specialist. This includes the input from the EAP and specialists, in the form of site photographs and site inspections. These principles apply to the specialist studies that have been identified in the screening tool and motivated as not necessary in this report.

The Screening Tool identified the following studies as potentially being applicable to the proposed development:

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme	X			
Civil Aviation Theme			X	
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Agricultural Theme

The Screening Tool identifies the agricultural sensitivity theme as "high".

The Agricultural Site Sensitivity Verification, compiled by a SACNASP registered Agricultural Specialist (Reg. # 400268/12) **disputes** the **high** sensitivity rating and **confirms** that it is **MEDIUM** for the following reasons:

- Although the climate, terrain, and soil suitability may allow for viable crop production, other factors constrain the potential of the site to practically deliver agricultural produce and therefore limit its agricultural production potential. These factors include:
    - Its location, which has been transformed by expanding urbanization, leaves it surrounded largely by non-agricultural land uses.
    - The fact that most of the land is within a road reserve negates its potential for agricultural production.
- An agricultural impact must by definition cause a change to the future agricultural production potential of land. Because the site has no current agricultural production potential due to its location, the occupation of the site by the development cannot change its agricultural production potential. Therefore, the development will have **no agricultural impact**.

An **Agricultural Compliance Statement** is submitted with the Draft BAR (Appendix G1).

The **Western Cape Department of Agriculture** has been approached for comment on the DBAR.

Animal Species Theme

The screening tool identified the sensitivity for animal species (fauna) as "high" for the following species:

Sensitivity	Feature(s)
High	Aves-Bradypterus sylvaticus
High	Aves-Circus ranivorus
High	Aves-Hydroprogne caspia
High	Aves-Neotis denhami
High	Aves-Polemaetus bellicosus
Medium	Insecta-Aloeides thyra orientis
Medium	Insecta-Lepidochrysops littoralis
Medium	Sensitive species 8
Medium	Invertebrate-Aneuryphymus montanus

The Fauna Site Sensitivity Verification, compiled by a SACNASP registered specialist (Reg. # 162841), confirmed the following:

- No Fauna SCC were observed on site and their likelihood of occurrence is low.
- A distance of 50m was designated for outlining habitat types as an estimate for the distance of potential noise disturbance by the construction phase of the upgrades. However, since the upgrades will take place along a busy road noise is an existing disturbance. This also applies for Sandhoogte road which, despite being surrounded with largely private lands used as pasture, is increasingly used to access the town of Groot Brak and the road itself is being upgraded in the near future.
- The direct disturbance footprint of the upgrade to the sewer lines/ pump stations, addition of new sewer lines, is minimal and occur along a modified landscape.

Considering the above, the fauna specialist **disputes** the high fauna sensitivity and **confirms** that it is **LOW.**

A **Terrestrial Animal Compliance Statement** is submitted with the Draft BAR (Appendix G2).

CapeNature has been approached for comment on the Draft BAR.

Aquatic Biodiversity Theme

The screening tool identified the aquatic biodiversity theme as "very high" for the following reasons:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	CBA 1: Aquatic
Very High	Estuary_Groot Brak
Very High	Wetlands_(Estuary)
Very High	Wetlands_Albany Thicket (Seep)

The aquatic specialist **confirms** the **VERY HIGH** aquatic sensitivity.

An **Aquatic Impact Assessment** is submitted with the BAR (Appendix G3).

BOCMA has been approached for comment on the DBAR.

Archaeological & Cultural Heritage Theme

The screening tool identified this theme as being "**LOW**".

The proposed development triggers the following activity set out in Section 38(1) of the National Heritage Resources Act:

38. (1)(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length.

Perception Planning submitted a Notice of Intent to Develop to Heritage Western Cape who confirmed that **no additional studies are required**.

The Final Background Information Document & NID are attached as Appendix G4 to this DBAR.

HWC has been approached for comment on the DBAR.

Plant Species Theme & Terrestrial Biodiversity Theme

The screening tool identified this theme as "Medium" for the following list of species:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Lampranthus fergusoniae
Medium	Lampranthus pauciflorus
Medium	Lebeckia gracilis
Medium	Leucospermum praecox
Medium	Wahlenbergia polyantha
Medium	Selago villicaulis
Medium	Freesia fergusoniae
Medium	Erica unicolor subsp. mutica
Medium	Erica glandulosa subsp. fourcadei
Medium	Hermannia lavandulifolia
Medium	Sensitive species 153
Medium	Sensitive species 633
Medium	Sensitive species 268
Medium	Duvalia immaculata
Medium	Sensitive species 1024
Medium	Cotula myriophylloides
Medium	Agathosma eriantha
Medium	Agathosma muirii
Medium	Euchaetis albertiniana
Medium	Muraltia knysnaensis
Medium	Sensitive species 516
Medium	Sensitive species 800
Medium	Sensitive species 500
Medium	Sensitive species 654
Medium	Diosma passerinoides
Medium	Agathosma microcarpa
Medium	Zostera capensis

The Botanical Specialist (Reg # 141757) confirmed that the proposed sewerage infrastructure upgrade in Great Brak is located within transformed areas with planted grasses and sidewalks. No Plant SCC were observed within the Project Area of Influence and their likelihood of occurrence is low. Four protected tree species were observed at various locations along the sides of the roads

where the upgrades will be taking place, however all the yellowwood trees (2 species) are cultivated, and all the Milkwood (Sideroxylon inerme inerme) and Cheesewood (Pittosporum viridiflorum) trees will be avoided by the proposed upgrades.

If there is any reason why some of these trees might be impacted by the sewerage infrastructure upgrades, an appropriate licence must be applied for from the Department of Forestry, Fisheries and the Environment (DFFE).

Considering the above, the specialist **disputes** the **medium** sensitivity and **confirms** that it is **LOW**.

A **Botanical Compliance Statement** is submitted with the Basic Assessment Report (Appendix G5).

CapeNature has been approached for comment on the DBAR.

SACAA & Defence Themes

The sensitivity rating for both themes are refuted, and the EAP is of the opinion that the theme is not applicable to this application. **SACAA** has been approached for comment on the DBAR.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 1**	Describe the portion of the proposed development to which the applicable listed activity relates.
10	The development and related operation of infrastructure of infrastructure exceeding 1000 metres in length for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes – (i) with an internal diameter of 0.36 metres or more; (ii) with a peak throughput of 120 litres per second or more; Excluding where- (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slime inside a road reserve or railway line; or (b) where such development will occur within an urban area.	<u>Applicable to Section 01</u> Development and related operation of a bulk sewer pipeline exceeding 1000m in length for the bulk transportation of sewage. The pipeline will be approximately 3000m in length with a diameter of 355mm (0.355m). As development increases along Sandhoogte Road, the peak throughput will increase to 120 litres per second. Most of the pipeline will be within the road reserve of Sandhoogte Road. However, there is a section that will be installed outside the road reserve, across the Cricket Field and / or within existing gravel roads on Erf 4808. A section of the pipeline will be outside the urban area. <u>Not Applicable to Section 02</u> It is the opinion of the EAP that Section 02 is not applicable since the approximate 4000m long sewer pipeline (160mm in diameter) will be installed along un-serviced erven in Great Brak River (Kerk street, Lang Street, Sandhoogte, Stander Street, Ebenezer Avenue, Wigget Street, Fourie Street and Van Rensburg Street) which are considered within an urban area. The peak throughput will be less than 120 litres per second. <u>Not Applicable to Section 03</u> It is the opinion of the EAP that Section 03 is not applicable as it involves upgrades of the Cricket Field Pumpstation and not the development of infrastructure exceeding 1000m in length.
12	The development of – (ii) infrastructure or structures with a physical footprint of 100 square metres or more; Where such development occurs – (a) within a watercourse;	<u>Applicable to all Sections (Sections 01 – 03)</u> According to the specialist, the proposed sewer line upgrades take place outside any natural remaining watercourses as they have been almost completely transformed from their natural condition through channelling and straightening. They are

	(b) in front of a development setback; or (c) if no development setback exist, within 32 metres of a watercourse, measured from the edge of a watercourse – Excluding – (dd) where such development occurs within an urban area; (ee) where such development occurs within existing roads, road reserves or railway lines.	essentially operating as stormwater channels. However, sections of the proposed sewer line upgrades and pumpstation upgrades are within an Estuarine Functional Zone and within 32m from a mapped wetland.
17	The development – ~~(i) in the sea;~~ (ii) in an estuary; ~~(iii) within the littoral active zone~~ ~~(iv) in front of a development setback; or~~ (v) if no development setback exist, within a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater. In respect of – ~~(a) fixed or floating jetties and slipways;~~ ~~(b) tidal pools;~~ ~~(c) embankments;~~ ~~(d) rock revetments of stabilising structures including stabilising walls; or~~ (e) infrastructure or structures with a development footprint of 50 square metres or more –	<u>Applicable to all Sections (01 – 03)</u> According to the aquatic specialist, the edge of the Great Brak estuary has been seriously modified through urban development, with high density residential, commercial, education, roads and sporting facilities all accounting for transformation of this habitat. The sewer lines & upgrade of the Cricket Field Pumpstation are located within this transformed urban area (i.e., transformed Estuary Functional Zone).
19	**<u>Listing Notice 1 Activity 19</u>** 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 of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;	<u>Applicable to all Sections (01 – 03)</u> According to the specialist, the proposed sewer line upgrades take place outside any natural remaining watercourses as they have been almost completely transformed from their natural condition through channelling and straightening. They are essentially operating as stormwater channels. However, sections of the proposed sewer line upgrades and pumpstation upgrades are within an Estuarine Functional Zone.

	(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.	
19A	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from— ~~(i) the seashore;~~ (ii) the littoral active zone, **an estuary** or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater; or ~~(iii) the sea; — but excluding where such infilling, depositing, dredging, excavation, removal or moving—~~ ~~a) will occur behind a development setback;~~ ~~b) is for maintenance purposes undertaken in accordance with a maintenance management plan;~~ ~~c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;~~ ~~d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or~~ ~~e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.~~	<u>Applicable to all Sections (01 – 03)</u> The proposed pipeline will result in the infilling or depositing material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from an estuary (i.e., transformed Estuarine Functional Zone).
48	The expansion of – (i)Infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or ~~(ii)dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;~~ Where such expansion occurs – (a)within a watercourse; (b) in front of a development setback; or	<u>Applicable to Section 03 Alternative 1a</u> Expansion of the Cricket Field Pumpstation by ±160 square metres. According to the specialist, the Cricket Field Pumpstation is located within an Estuarine Functional Zone and within 32m from a mapped wetland.

	(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.	
54	**Listing Notice 1 Activity 54** The expansion of facilities – ~~(i) in the sea;~~ (ii) in an estuary; ~~(iii) within the littoral active zone;~~ (iv) in front of a development setback; or (v) if no development setback exist, within a distance 100 metres inland of the high-water mark of the sea or an estuary, whichever is the greater; In respect of – ~~(a) Fixed or floating jetties and slipways~~ ~~(b) Tidal pools;~~ ~~(c) Embankments;~~ ~~(d) Rock revetments or stabilising structures including stabilising walls; or~~ Infrastructure or structures where the development footprint is expanded by 50 square metres or more.	Applicable to Section 03 Alternative 1a Expansion of the Cricket Field Pumpstation by ±160 square metres. According to the specialist, the Cricket Field Pumpstation is located within a transformed Estuarine Functional Zone.
Activity No(s):	Provide the relevant **Basic Assessment Activity(ies)** as set out in **Listing Notice 3**	Describe the portion of the proposed development to which the applicable listed activity relates.
12	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. i. Western Cape 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;	Applicable to all Sections (01 – 03) According to CapeFarmMapper, sections of the proposed sewer pipeline are within: (i) CR (Groot Brak Dune Strandveld) & EN (Hartenbos Dune Thicket) ecosystems, (ii) Critical Biodiversity Areas and (iii) Estuarine Functional Zone. The following sections are applicable: (i) CR – Section 01 and Section 03 (ii) EN – Section 02 (iii) CBA – Section 01 & 02, Section 03 (iii) EFZ – Section 03

	ii. Within critical biodiversity areas identified in bioregional plans; iii. ~~Within the littoral active zone or~~ 100 metres inland from 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; ~~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~~ ~~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.~~	According to the terrestrial biodiversity specialist, the proposed sewerage infrastructure is located within areas not representative of threatened ecosystems, CBAs or ESAs. However, sections of the proposed infrastructure is located within a transformed Estuarine Functional Zone.
14	The development of— ~~(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or~~ (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour. I Western Cape i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;	<u>Applicable to all Sections (Sections 01 – 03)</u> According to the specialist, the proposed sewer line upgrades take place outside any natural remaining watercourses as they have been almost completely transformed from their natural condition through channelling and straightening. They are essentially operating as stormwater channels. However, sections of the proposed sewer line upgrades and pumpstation upgrades are located within and Estuarine Functional Zone and within 32m of a mapped wetland.

	(ee) Sites or areas listed in terms of an international convention; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (gg) Core areas in biosphere reserves; or (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined.	
23	The expansion of – (i) dams or weirs where the dam or weir is expanded by 10m^2 or more; or (ii) infrastructure or structures where the physical footprint is expanded by 10m^2 or more; Where such expansion occurs – (a) within a watercourse; (b) in front of a development setback adopted in the prescribed manner; or (c) if no development setback has been adopted, within 32m of a watercourse, measured from the edge of a watercourse; Excluding the expansion of infrastructure or structures within exiting ports or harbours that will not increase the development footprint of the port or harbour. i. Outside urban areas; ~~(aa) A protected area identified in terms of NEMPAA, excluding conservancies;~~ ~~(bb) National Protected Area Expansion Strategy Focus areas;~~	<u>Applicable to Section 03 Alternative 1a</u> Expansion of the Cricket Field Pumpstation by ±160 square metres. According to the specialist, the Cricket Field Pumpstation is located within an Estuarine Functional Zone and within 32m from a mapped wetland.

	~~(cc) World Heritage Sites;~~ ~~(dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;~~ ~~(ee) Sites or areas listed in terms of an international convention;~~ (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by bioregional plans; ~~(gg) Core areas in biosphere reserves; or~~ (hh) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such development setback line has been determined.	

Note:

- The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.
- Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.

~~List the applicable waste management listed activities in terms of the NEM:WA~~

~~Activity No(s):~~	~~Provide the relevant **Basic Assessment Activity(ies)** as set out in **Category A**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

~~List the applicable listed activities in terms of the NEM:AQA~~

~~Activity No(s):~~	~~Provide the relevant **Listed Activity(ies)**~~	~~Describe the portion of the proposed development to which the applicable listed activity relates.~~

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.

Preferred Activities

Mossel Bay Municipality, hereafter referred to as the Applicant, proposes to **upgrade** a portion of their existing sewer reticulation system in Great Brak River, Mossel Bay Municipal District, Western Cape Province (Figure 26).

The proposed upgrades are divided into **three (3) sections** (breakdown provided below) (Figure 1):

- Section 01: Replace an existing 200mm diameter sewer pipeline with a new 355mm diameter sewer pipeline along Sandhoogte Road, and internal upgrades at the existing Sandhoogte Pumpstation.

- Section 02: New 160mm - 200mm diameter sewer pipelines along un-serviced erven in Great Brak River, that are still using conservancy tanks, to link them to the municipal system.

- Section 03: Upgrade of the so-called Cricket Field Pump Station to accommodate additional flow and address existing challenges. According to Sky High Consulting Engineers, the pump station does not have adequate pumping capacity to pump at a flowrate higher than the inflow of the sewage during wet weather (rainy conditions), thus the pump station floods during wet weather conditions. Furthermore, it was also found that the pump station does not have adequate emergency storage capacity (Technical Report, 2025).

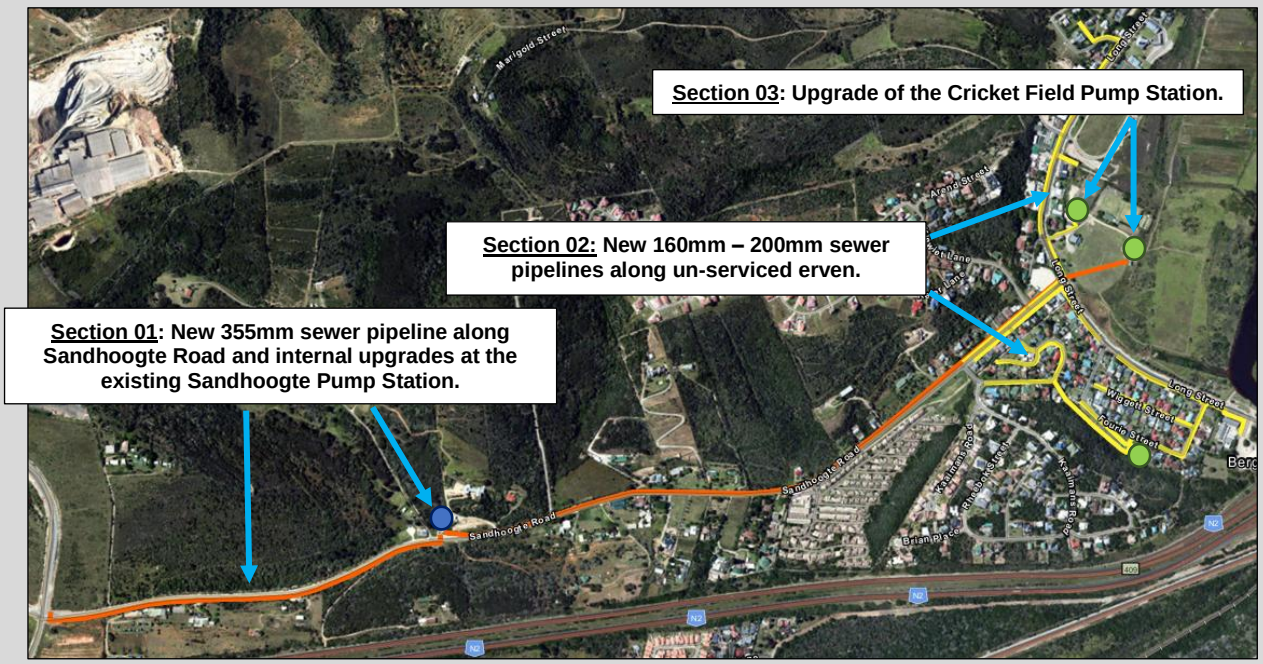


Figure 26: Locality map of the proposed three (3) Great Brak sewer system upgrade sections: (1) new 355mm sewer pipeline along Sandhoogte Road (orange solid line) and internal upgrades at the existing Sandhoogte Pump Station (blue filled circle); (2) new 160mm – 200mm sewer pipelines along un-serviced erven in Great Brak (yellow solid line); and (3) expansion / replacement of the Cricket Field Pump Station (green filled circles).

Preferred Routes/Localities

Section 01: 355mm diameter sewer pipeline to be installed: (a) within Sandhoogte Road reserve[5], from where it will (b) traverse the cricket field to the existing pump station, or along the existing roads on Erf 4808[6] (Figure 27).

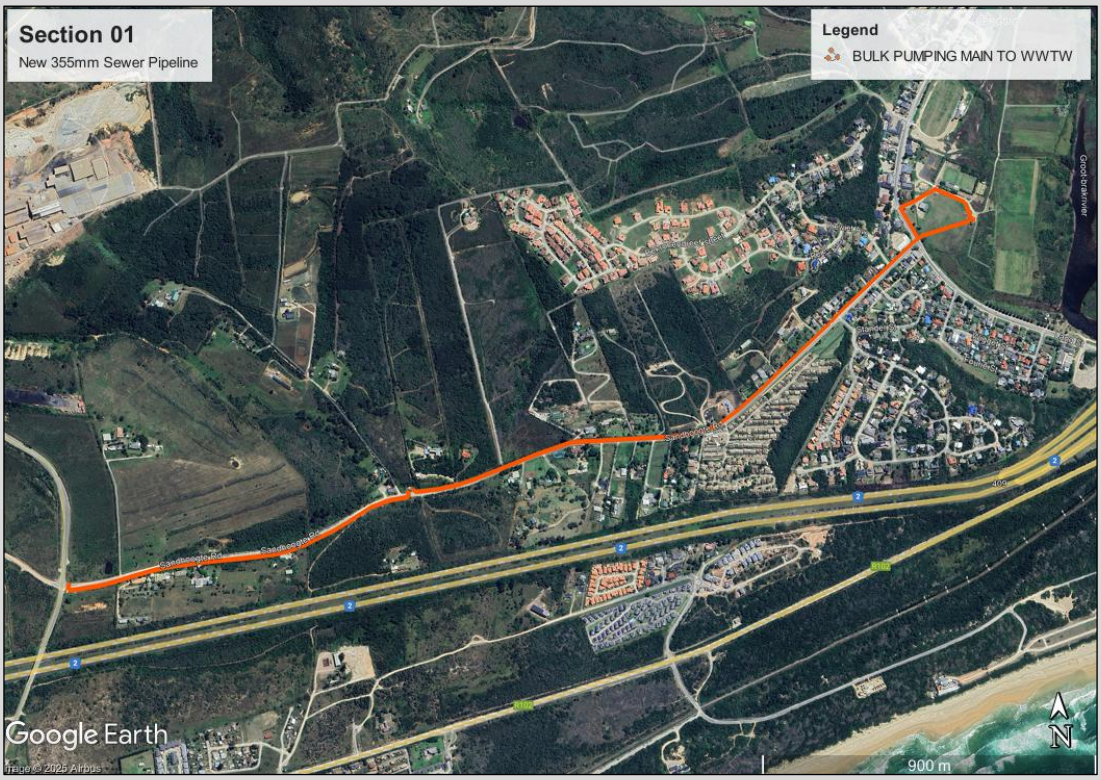


Figure 27: New 355mm sewer pipeline to replace the existing 200mm sewer pipeline (orange solid line). Depending on the locality of the final site selection for the Cricket Field Pumpstation (i.e., Section 03), the pipeline will either traverse the cricket field or be installed along the existing gravel roads on Erf 4808.

Section 02: New 160mm – 2000mm diameter sewer pipelines to be installed along un-serviced erven in Great Brak River (Figure 28).

[5] Southrn road reserve; between Great Brak WWTW and Sandhoogte Pumpstation,

Northern road reserve; between Sandhoogte and Cricket Field Pumpstations.

[6] Depending on the locality of the final site selection for the Cricket Field Pumpstation (i.e., Section 03).

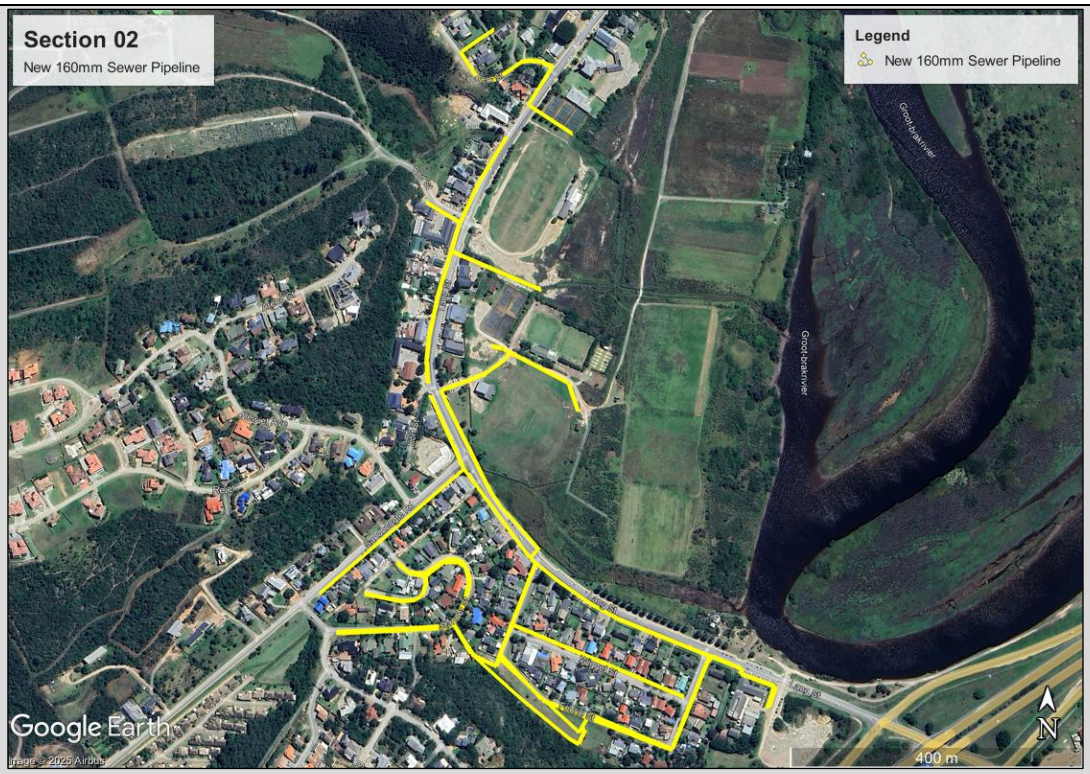


Figure 28: New 160mm – 200mm sewer pipelines along un-serviced erven in Great Brak River.

Section 03: Upgrade of the so-called Cricket Field Pump Station to accommodate additional flow and address existing challenges (Erf 4808).

The Applicant investigated three (3) alternatives to be considered for the upgrade of the existing Cricket Field Pump Station (Figure 29).

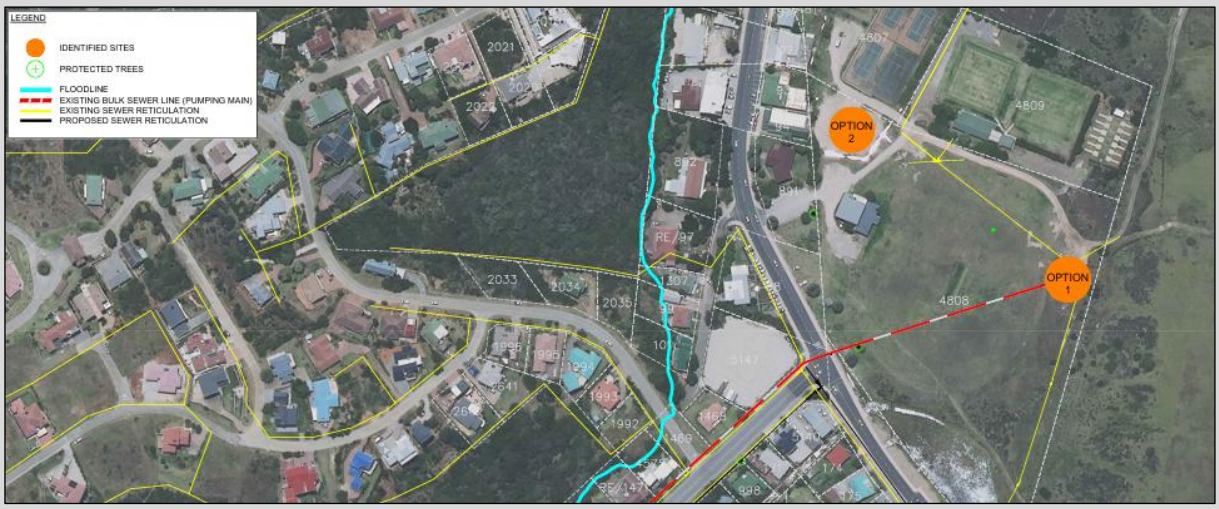


Figure 29: Locality map of the alternatives described below in relation to the 1 in 100m flood line (blue solid line).

Alternative 1a

- Expansion of the existing Cricket Field Pump Station on Erf 4808.
  - Addition of one (1) new submerged sump next to the existing pump station (expand by ±160m²).
  - Internal renovations of the existing sump.
  - Addition of one (1) smaller pump station on Erf 111 next to Fourie Street.

Alternative 1b: New pump station adjacent to the Cricket Field Pump Station on Erf4808.

Alternative 2: New pump station adjacent to the Great Brak River Sports Club on Erf4808.

Preferred Installing Methods

1. Trenching by using an excavator

   Open a trench to install the pipeline and cover the pipeline again with the excavated material

2. Horizontal Direction Drilling

   To avoid and/or mitigate anticipated impacts, a few sections will be installed by using a technique called **Horizontal Direction Drilling (HDD)**[7].

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.

The proposed pipelines are proposed within road reserves, underneath paved sidewalks, within existing streets, cricket field and within building lines of adjacent private properties that specifically makes provision for the installation of services like this.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.

Existing approvals: Not to the knowledge of the EAP.

Potential conflict: Not applicable.

4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.

The Western Cape Provincial Spatial Development Framework (WCPSDF) was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that "communicates the provinces spatial planning agenda".

The proposed activity aligns with:

Policy R1 - Protect Biodiversity and Ecosystem Services.

All route alternatives are within areas with a low fauna, botanical and biodiversity sensitivity.

- The project area is mostly comprised of transformed habitat.
- The project area will not impact on CBA and ESA.
- No remaining Garden Route Granite Fynbos, Hartenbos Dune Thicket or Dune Strandveld exist in the project area.
- The vegetation within the project area is not consistent with any Red Listed Ecosystem.
- The proposed development will not impact on any natural watercourses.

Policy E3 – Revitalise and strengthen urban space-economies as the engine of growth.

The proposed activity strengthens the Municipality's ability to provide services to its residents and businesses as part of its service delivery mandate.

4.2	The Integrated Development Plan of the local municipality.

[7] HDD is a construction technique whereby a tunnel is drilled under a watercourse or other designated area, and a pipeline or other utility is pulled through the drilled underground tunnel. Excavations are necessary at the entry/exit position of the section to enable machinery to access at the correct level under natural ground level.

The installation of new sewer pipelines & upgrading of existing pumpstations does not conflict with the 2022 – 2027 IDP of the municipality.	
4.3.	The Spatial Development Framework of the local municipality.
The upgrading of a portion of the Great Brak Sewer System is in line with the Mossel Bay SDF.	
4.4.	The Environmental Management Framework applicable to the area.
Not applicable.	
5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
Comments received during the public participation process from relevant authorities and/or specialists will be included in the Final BAR.	
6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.

The Western Cape Biodiversity Spatial Plan indicated the following biodiversity priority areas adjacent to the sewerage infrastructure and surrounding areas;

- An aquatic and terrestrial Critical Biodiversity Area 1 (CBA1),
- An aquatic Ecological Support Area 1 (ESA1),
- An Ecological Support Area 2 (ESA2).

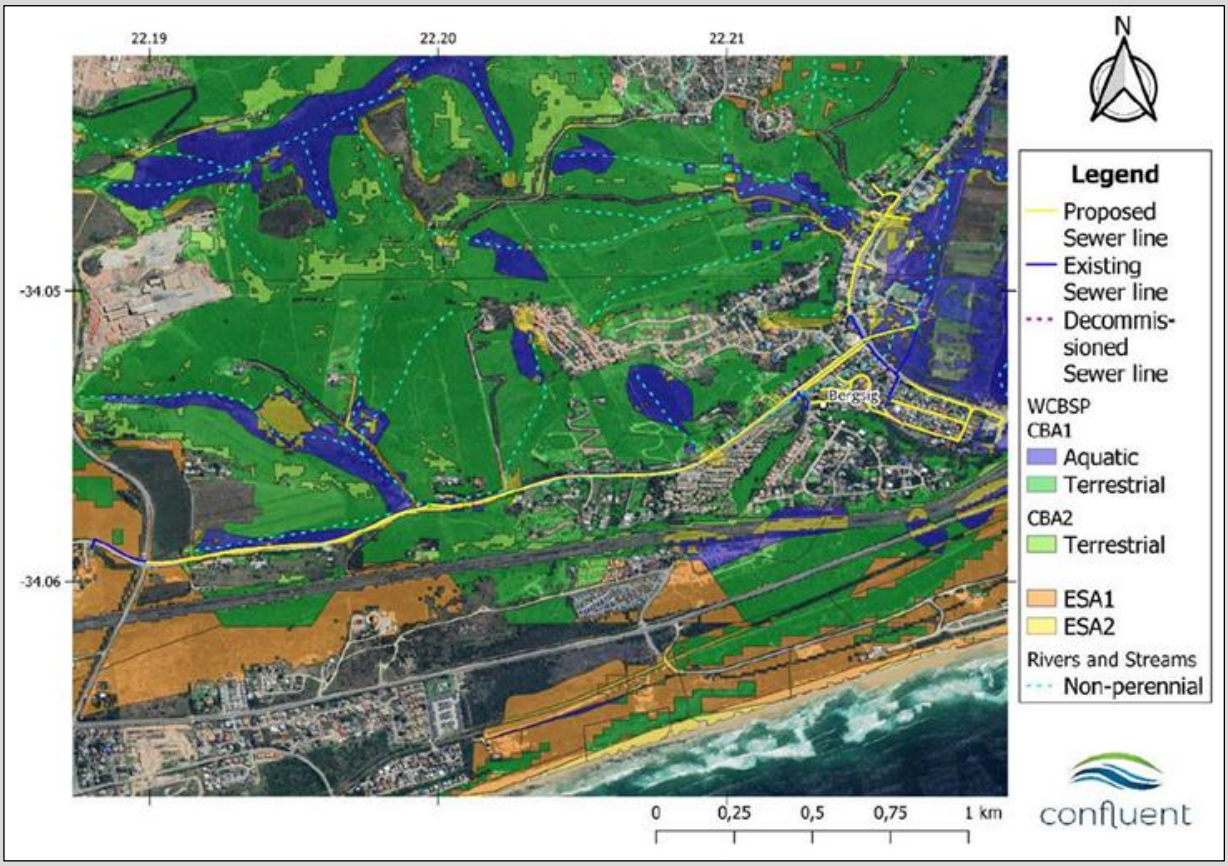


Figure 30: Mapped Western Cape Biodiversity Spatial Plan (source: Confluent).

WCBSP Category	Definition	Management Objectives
CBA1	Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a natural or near-natural state, with no further loss of natural habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.
ESA1	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.	Maintain in a functional, near-natural state. Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised.
ESA2	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.	Restore and/or manage to minimize impact on ecological processes and ecological infrastructure functioning, especially soil and water-related services, and to allow for faunal movement.

The WC-BSP has influenced the proposed development as follows:

- Majority of te proposed 355mm diameter sewer pipeline has been placed on the southern side of Sandhoogte Road Reserve in order to be located outside of the regulated area of a natural drainage line and associated riparian zone (i.e., Aquatic CBA1).
- The project area will not impact on CBA1, ESA1 or ESA2.
- No remaining Garden Route Granite Fynbos, Hartenbos Dune Thicket and Dune Strandveld exist in the project area.
- The vegetation within the project area is not consistent with any Red Listed Ecosystem.
- No natural watercourses will be impacted by the proposal.

7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.

A portion of Section 01 and Sections 02 & 03 are located within the 1:100 year flood line, Coastal Protection Zone & Coastal Management Line.

Due to the proximity of the pump station to the Great Brak River estuary special considerations must be given to the environmental impacts. Flooding of the pump station and thus any potential sewerage spills, from such flooding, into the estuary will be the main environmental concern.

To limit the potential of spillage, two (2) pumps each capable of pumping the peak wet weather flow rate will be installed in a duty and standby configuration. Thus, should the duty pump fail the standby pump will take over. To limit the effects of flooding on the pumps and motors they will be placed on top of the sump which is 300 mm above the natural ground level. The motors will be installed an additional 1 meter from the top of the sump thus the water level would have to rise at a minimum 1.3 meters before the motors will be affected. By the time the water has risen to such a level the majority of the Great Brak River will be flooded and thus the sewer inflow into the pump station will be even lower.

All manholes will also be raised to have a cover level higher than that of the pumpstation sumps soffit level so that any potential spillage will occur at the pumpstation and not along the sewer lines.

Any water used when cleaning the pumps will be directed to flow into the sump.

8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.

The screening tool has not changed. It is still the same screening tool submitted with the application form.

9.	Explain how the proposed development will optimise vacant land available within an urban area.

Not applicable. The proposed development is not on vacant land.

10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.

The proposed development will be use of existing sewer pipelines.

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
To be included in the Final BAR.	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.

Need', as defined by DEADP refers to the timing of the proposal and the 'Desirability' refers to the 'placing' of the proposed development.

Questions to be engaged with when considering need & desirability

How will this development impact on the ecological integrity of the area?

- According to the fauna specialist, there is very little natural vegetation and habitat and there is a low likelihood of occurrence of terrestrial animal SCC within the project footprint for all alternatives. No animal SCC were found on the site. Therefore, the proposed development will **not impact on any fauna SCC**.
- The aquatic specialist most of the proposed infrastructure are within areas that are either terrestrial or have no natural aquatic habitat that could be considered as a watercourse (i.e., low aquatic sensitivity). The exception area is the area where the proposed cricket field pump station will be upgraded and associated sewer pipelines connecting to Bergsig Suburb being located within the Estuarine Functional Zone within the 1:50 and 1:100 year floodline (i.e., high aquatic sensitivity). However, the significance of impact can be mitigated from moderate to negligible provided that the mitigation measures recommended be implemented.
- The botanical/biodiversity specialist confirmed that no plant SCC were observed within the project area of influence for all alternatives. They also have a low probability of occurring. According to the specialist, the Terrestrial Biodiversity for the proposed infrastructure is Low for the following reasons:
    - The proposed infrastructure does not negatively affect ESA1, ESA2 and CBA1.
    - The vegetation is not consistent with any Red Listed ecosystem.

How will this development enhance ecosystems and/or result in the loss or protection of biological diversity? What measures were explored to avoid negative impacts and enhance positive impacts?

All specialists (agricultural, fauna, botany, biodiversity, aquatic, heritage and archaeology) provided a list of mitigation measures to avoid any negative impacts on the surrounding environment. These mitigation measures are included in the Environmental Management Programme (EMPr). An Environmental Control Officer (ECO) will be appointed to monitor compliance with the EMPr.

How will this development pollute and/or degrade the biophysical environment? What measures were explored to avoid or minimise these impacts.

An experienced and suitably qualified Environmental Control Officer will be appointed to oversee as-so-far-as the construction phase of the proposed pipeline to ensure that the biophysical environment will not be polluted by construction activities.

What waste will be generated by this development? Measures to avoid waste.

Construction waste will be generated during the construction phase and operational phase (maintenance / repair work). All waste must either be within a designated / demarcated area to be taken away at the end of the day or a skip. Additional measures are provided by the aquatic specialist to avoid any impacts on the watercourse crossings (included in the EMPr).

Normal waste will also be generated when construction staff bring their lunch (food, chip packets, cans, plastic bottles). The contractor must provide bins and toilets when working on site. Ensure that there are enough bins on-site at each working locality and enough toilets (1 per 15 people).

How will the **ecological impacts** result from this development impact on people's environmental right in terms of the following:

NEGATIVE: Temporary noise during construction, however the development footprint areas are so isolated that it is unlikely to impact negatively on any receptors in the nearby areas – refer to EMPr for mitigation measures.

POSITIVE: The Cricket Field Pump Station does not have adequate pumping capacity to pump at a flowrate higher than the inflow of the sewage during wet weather (rainy) conditions, thus the pumpstation floods during wet weather conditions. Furthermore, it was found that the pumpstation does not have adequate emergency storage capacity. The new pump station or expansion of the existing will reduce the risk of floods during rainy conditions.

SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

(a)	fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of -			
(i)	the site where the activity to which the application relates is or is to be undertaken; and		YES	~~EXEMPTION~~
(ii)	any alternative site.		YES	~~EXEMPTION~~
(b)	giving written notice, in any manner provided for in section 47D of the NEMA, to –			
(i)	the occupiers of the site and, if the applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;		~~YES~~	~~EXEMPTION~~
(ii)	owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;		YES	~~EXEMPTION~~
(iii)	the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;		YES	~~EXEMPTION~~
(iv)	the municipality (Local and District Municipality) which has jurisdiction in the area;		YES	~~EXEMPTION~~
(v)	any organ of state having jurisdiction in respect of any aspect of the activity; and		YES	~~EXEMPTION~~
(vi)	any other party as required by the competent authority;	~~N/A~~	YES	~~EXEMPTION~~
(c)	placing an advertisement in -			
(i)	one local newspaper; or		YES	~~EXEMPTION~~
(ii)	any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	N/A	~~YES~~	~~EXEMPTION~~
(d)	placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken.	N/A	~~YES~~	~~EXEMPTION~~
(e)	using reasonable alternative methods, as agreed to by the Department, in those instances where a person is desirous of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	~~N/A~~	YES	~~EXEMPTION~~

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

The Public Participation Plan as indicated in the application form has been complied with:

- Affected / Neighbouring property owners were identified using CapeFarmMapper,
- Select property owners were compiled into a list sent to the George Municipality for confirmation of contact details,
- Key Authorities were identified according to whether they have a mandated interest in the area/site,
- Local Councillor was verified with the George Municipality,
- Site Notices were placed on site calling for I&APs to register and review the DBAR,
- Written notifications were sent to all potential I&APs via email/post/hand delivery informing of the availability of the DBAR and the opportunity to register as an I&AP.
- Advert appeared in the *Mossel Bay Advertiser* for I&APs to register and submit comment on the DBAR.

Comments received during the Public Participation Process will be considered and included in the Final Basic Assessment Report.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

Mossel Bay Municipality (Carel Venter, Eric Louw, Dick Naidoo and Rudi Mini)

BOCMA (Mr Carlo Abrahams and Rudzani Makahane)

CapeNature (Megan Simons)

Garden Route District Municipality

Heritage Western Cape (Stephanie-Ann Barnardt)

Department of Agriculture (Mr Cor van der Walt)

Department of Forestry: (Melanie Koen)

Department of Health (Nathan Jacobs)

Oceans & Coast (Ieptieshaam Bekko)

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

Department of Defence & SACAA – The EAP is of the opinion that the themes are not applicable to this application. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating level of Low remains. There are no reasonable grounds to conduct any specialists' studies to affirm this and further consultation with the Department of Defence & SACAA are not necessary.

5. if any of the State Departments and Organs of State did not respond, indicate which.

All comments received in response to the DBAR will be reflected in the Final BAR and information will then be available as to which State Departments, if any, did not respond within the prescribed 30-day commenting period.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

Issues raised by I&APs during the Public Participation Period will be reflected in the Final BAR.

Note:

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing.

The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that *"Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority."*

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);
  - if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
  - if a facsimile was sent, a copy of the facsimile Report;
  - if an electronic mail was sent, a copy of the electronic mail sent; and
  - if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	~~YES~~	NO
~~1.2.~~	~~Provide the name and or company who conducted the specialist study.~~		
~~1.3.~~	~~Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.~~		
~~1.4.~~	~~Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.~~		

2. Surface water

2.1.	Was a specialist study conducted?	YES	~~NO~~
2.2.	Provide the name and/or company who conducted the specialist study.		
Confluent Environmental.			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		
According to the aquatic specialist, most of the proposed infrastructure upgrades are proposed in areas that are either terrestrial or (in the case of Sandhoogte Road) have no more recognisable aquatic habitat that could be considered representative of a watercourse. These areas were			

considered to be of low sensitivity for aquatic biodiversity, and no water use authorisation in terms of the National Water Act is required for the proposed work.

The exceptions is the area where the proposed pump station upgrade on the cricket field and associated sewer lines connecting to Bergsig Suburb is located. This area is located in the Estuarine Function Zone, and while there is minimal to no natural estuarine habitat remaining, a large area of the EFZ is located within the 1:50 and 1:100-year flood line. The edge of the estuary has been seriously modified through urban development, with high density residential, commercial, education, roads and sporting facilities all accounting for transformation of this habitat. The edge of transformation in the vicinity of the sewer line upgrades is shown in Figure 31. The pump station upgrade on the cricket field and sewer line upgrades are all clearly located within this transformed urban area.

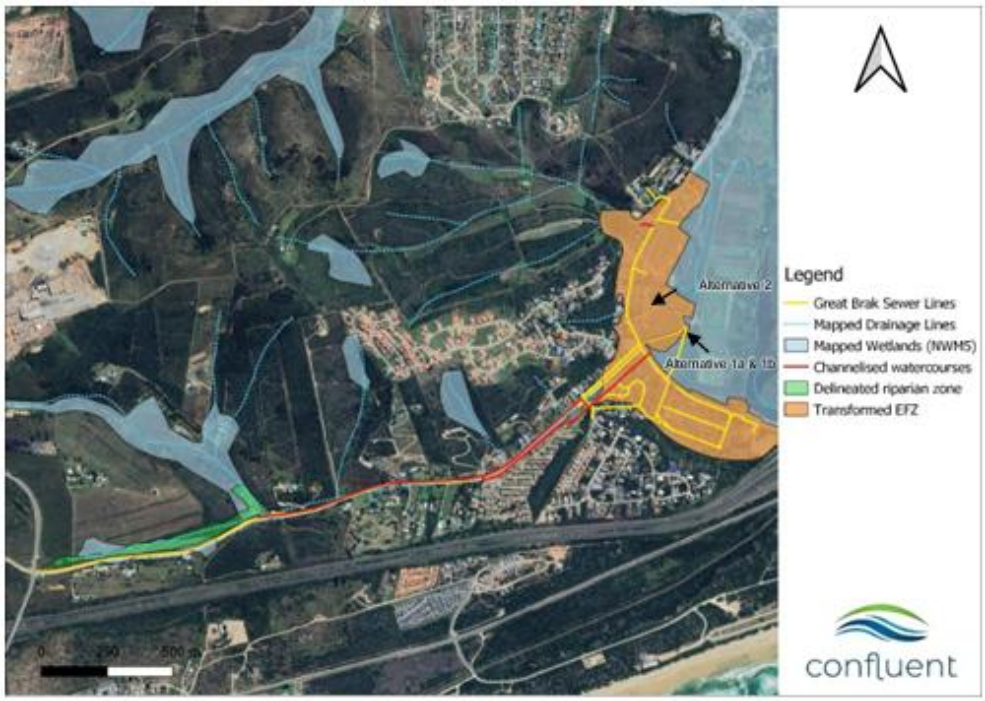


Figure 31: Delineation of watercourses including the edge of complete transformation along the estuary and the channelised section of watercourse (source: Confluent Environmental).

Given the wide extent of serious modification of watercourses, the existing disturbance due to the road, and the limited extent of disturbance anticipated with the upgrade of sewer lines and pump stations, the proposed upgrades are unlikely to seriously impact aquatic ecosystems. However, the specialist identified the following isolated points that influenced the proposed development:

Image	Location	Description	Requirement for Further Consideration
	1. Western extent of Sandhoogte Road adjacent to natural drainage line and associated riparian zone.	The drainage line is on the northern, downslope side of the road. If sewer line placement can be on the upslope (cut side) of the road, then it will be located outside of the regulated area of the watercourse.	If the sewer line can be upgraded along the cut (upslope/southern) side of Sandhoogte Road then it will be located outside of the regulated area of the watercourse and will not require further assessment.
	2. Upgrade section crosses a channelled but well vegetated outflow of stormwater under Lang St. with some wetland vegetation, connected to the EFZ (See Figure 20). 34° 3'5.53"S, 22°12'53.65"E	Stormwater outflow supports wetland and estuarine plants connected to the EFZ with the result that construction and maintenance must be carefully undertaken at this point.	Provided excavations can be undertaken without disturbance to the existing stormwater channel, and all material for and from the trenching is placed on the northern side of the trench, then the risk to the estuary is considered very low. No further assessment would be required.
	3. Cricket field pump station to be upgraded or decommissioned (depending on Alternative 1a or 1b) is located close to the more natural edge of the EFZ. 34° 3'4.36"S, 22°12'59.50"E	The existing pump station is located 10m from the disturbed edge of the EFZ on entirely flat ground.	Provided activities can be restricted to the existing disturbance footprint of this area, the upgrade presents a very low risk to the EFZ and would not require further assessment. To mitigate the conceivable risk of leakage and overflow to the estuary, an emergency overflow reserve (tank), overflow alarms and concrete bunding should be included in the design.
	4. Tennis courts pump station to be constructed based on Alternative 2 (includes decommissioning Cricket field pump station). To be constructed within the EFZ on a completely transformed area but adjacent to drains which lead to the estuary. 34° 3'1.15"S, 22°12'54.15"E	The location of the proposed pump station is 168m from the disturbed edge of the EFZ. Located further away from the natural edge of the EFZ than the cricket field pump station. However, a stormwater drain surrounds the site which leads directly to the estuary.	Although this site is located within the EFZ it is entirely transformed and lacks any features associated with estuarine habitat. The adjacent stormwater drain links directly to the estuary however, and for this reason, the PS should be designed with emergency overflow reserve (tank), overflow alarms and concrete bunding to prevent leakage to the drain. Access by vehicles from the main road is excellent.
	5. Eastern section of Lang St. which is adjacent to the natural edge of the EFZ (Figure 21).	No direct impacts expected, but indirect impacts associated with eroded material washing into the estuary from one large stormwater drain is possible (red arrow).	Provided the sewer line is located on the more developed (south-western) edge of the road then disturbance should be minimal. The stormwater outlet should be protected from silt/soil from entering the channel with the use of sandbags to demarcate the work area and to contain dirty water in the event of rainfall. If this potential impact can be effectively mitigated, then no further assessment is required.

The above-mentioned recommendations have been considered in the alignment / design of the proposed development.

Given that the above considerations and mitigation measures provided by the specialist be implemented, the significance of impact on watercourses and the Great Brak Estuary can be reduced from **minor to negligible / moderate to negligible**.

The aquatic specialist further confirmed that the preferred alternative from an aquatic biodiversity/sensitivity perspective is Alternative 2, followed by Alternative 1a. Alternative 1b is the least preferred of the three alternatives.

3. Coastal Environment

3.1.	Was a specialist study conducted?	~~YES~~	NO
~~3.2.~~	~~Provide the name and/or company who conducted the specialist study.~~		
~~3.3.~~	~~Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.~~		
~~3.4.~~	~~Explain how estuary management plans (if applicable) has influenced the proposed development.~~		
~~3.5.~~	~~Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.~~		

4. Biodiversity

4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
Confluent Environmental.			
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		

- The DFFE Screening Tool.
- SANBIs Botanical Research and Herbarium Management System.
- iNaturalist.
- The 2018 updated South African National Vegetation Map from SANBIs Biodiversity GIS database.
- Shapefiles for the Western Cape Biodiversity Spatial Plan.
- Cape Farm Mapper.
- Chief Directorate: National Geo-spatial Information Geospatial Portal and Google Earth.
- Revised National List of Ecosystems.

The botanical/biodiversity specialists used the above-mentioned biodiversity informants to compile a detailed Botanical and Terrestrial Biodiversity Assessment.

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.

The Western Cape Biodiversity Spatial Plan (WCBSP; 2017) indicated the following biodiversity priority areas adjacent to the sewerage infrastructure and surrounding areas;

- An aquatic and terrestrial Critical Biodiversity Area 1 (CBA1),
- An aquatic Ecological Support Area 1 (ESA1),
- An Ecological Support Area 2 (ESA2).

The reasons that inform these BSP areas include:

- Coastal resource protection- Eden
- Great Brak Dune Strandveld (EN)
- South Strandveld Western Strandveld Channelled Valley Bottom Wetland
- South Strandveld Western Strandveld Seep Wetland
- Water source protection- Great-Brak
- Watercourse protection- Southern Coastal Belt.

The botanical/biodiversity specialist confirmed that the sensitivity of the Terrestrial Biodiversity Theme for the site is confirmed as Low within the Project Area Of influence (PAOI). The BSP layers of CBA1, ESA1 and ESA2 do not apply to the PAOI. The vegetation along the extent of the proposed upgrade area in Great Brak is also transformed and does not represent natural thicket nor fynbos vegetation.

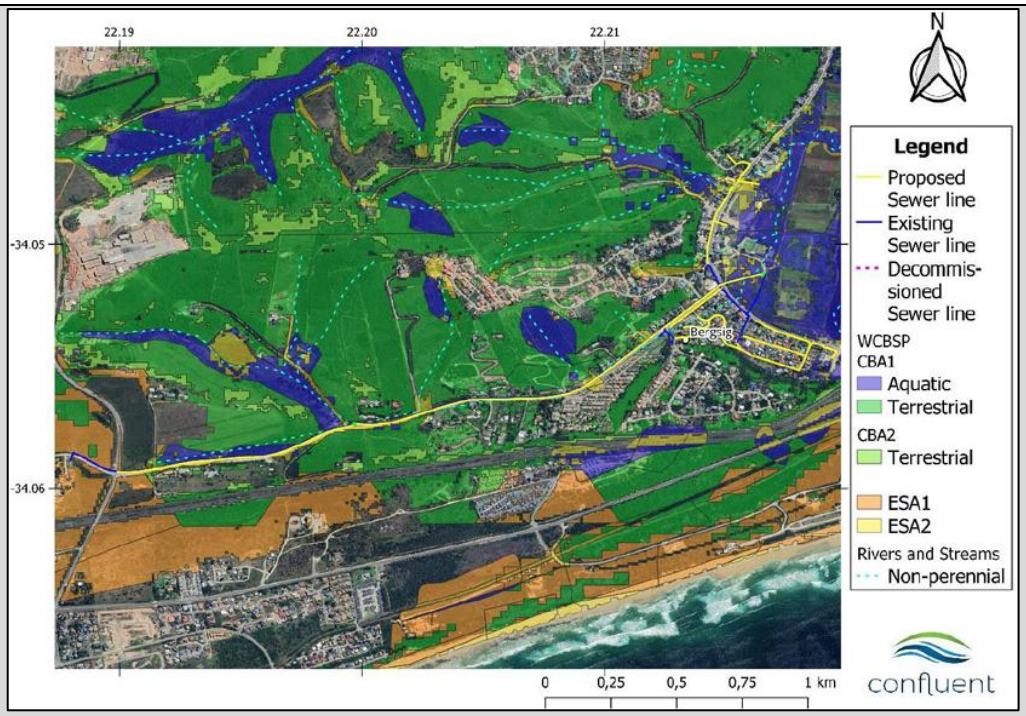


Figure 32: The mapped Western Cape Biodiversity Spatial Plan (WC BSP) categories for the Great Brak area (source: Confluent Environmental).

4.5.	Explain what impact the proposed development will have on the site-specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.

- Aquatic Impacts assessed for both the construction and operational phase can be effectively mitigated to **negligible negative ratings**,

- No Impacts from a botanical / biodiversity perspective:
  - The project area will not impact on CBA1, ESA1 or ESA2.
  - No remaining fynbos or thicket exists in the project area.
  - The vegetation within the project area is not consistent with any Red Listed Ecosystem.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.

The proposed development is not located in a protected area.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.

According to the fauna specialist, the site sensitivity for the terrestrial animal theme for the upgrade and introduction of proposed sewer lines to Groot Brak Rivier is LOW in contrast to the high and medium sensitivities highlighted by the DFFE Screening tool:

- The habitat types found within 50m of the site are not unique in the landscape (Figure 33). Due to high human activity (road and foot traffic) creating a landscape of fear, wildlife is more likely to use the larger landscape and avoid the roads along which the infrastructure is aligned.
- A distance of 50m was designated for outlining habitat types as an estimate for the distance of potential noise disturbance by the construction phase of the upgrades. However, since the upgrades will take place along a busy road noise is an existing disturbance.
- The direct disturbance footprint of the upgrade to the sewer lines/ pump stations, addition of new sewer lines, and introduction of the pump stations is very small and exists along a road (already a modified landscape feature).
- No SCC have been found on site and has a low likelihood of occurrence.

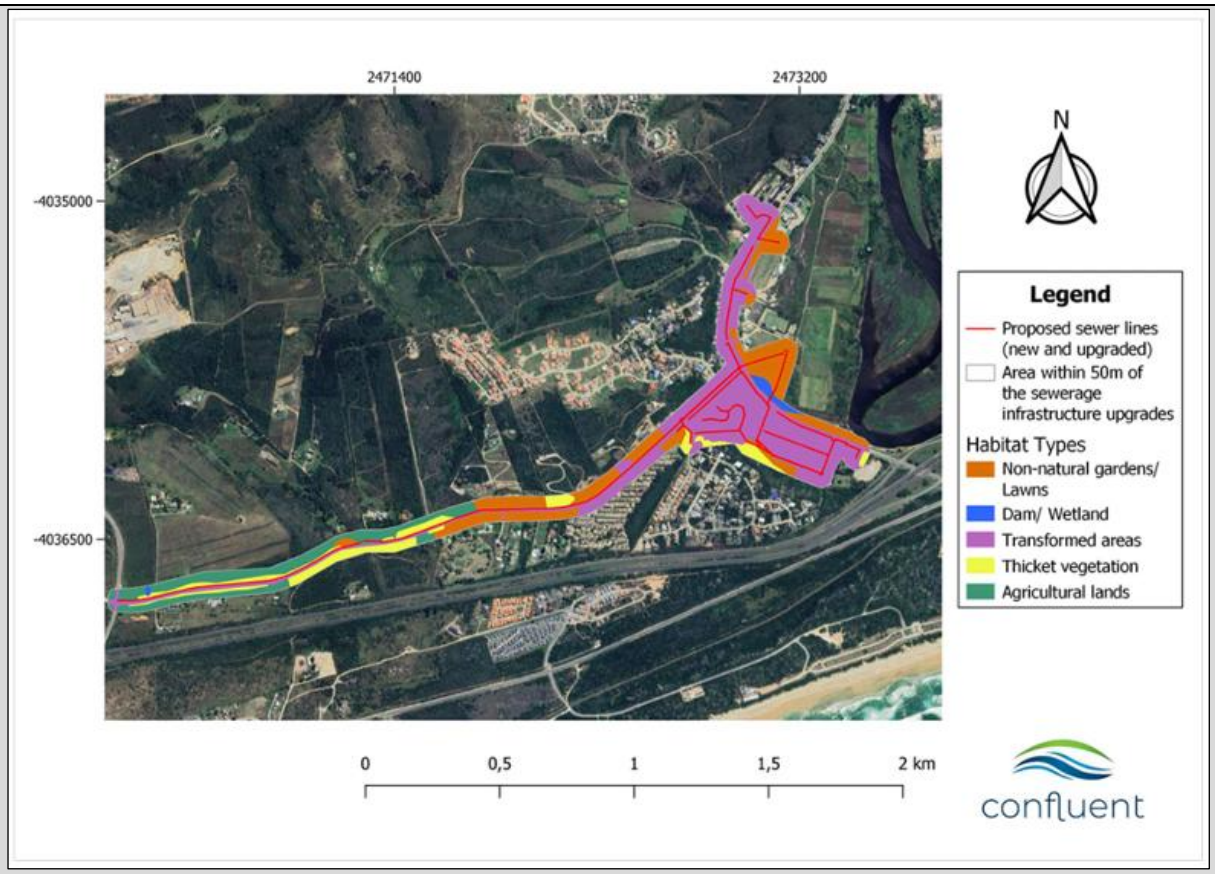


Figure 33: Habitats found within 50m of the proposed new or proposed upgraded sewer lines and pump stations in Groot Brak River (source: Confluent Environmental).

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.
No geographical aspects will be affected by the proposed development.

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	~~NO~~
6.2.	Provide the name and/or company who conducted the specialist study.		
Perception Planning			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
According to Perception Planning, during a field assessment it was noted that most of the remaining historic buildings along Long Street and the Sandhoogte Road have either been demolished or altered through inappropriate interventions over the years, to the extent that little of the historic (authentic) streetscape qualities remain within the proximity of the study area. The proposed works would mostly be for the installation of underground infrastructure along existing roads and pedestrian pavements, which would be returned to its current state following construction. Only limited expansion to existing infrastructure (e.g. two existing pumpstations) would be required, none of which would negatively impact what remains of the cultural landscape context within Great Brak River. Based on fieldwork, historic background research and the literature review undertaken as part of this assessment it is our view that no heritage resources of cultural significance (i.e. built environment, cultural landscape, archaeology, or palaeontology) would be impacted through the proposed development.			

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.
There are no culturally or historically significant elements that will be affected by the proposed activity.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The proposed site being within an existing urban context, is in the vicinity of: • The N2 (National Road) • Restaurants (Pepper Tree, Brothers Coffee – Hole in the Wall) • Residential Neighbourhood (Bergsig) • Other Businesses (hardware stores, superettes).	
8.2.	Explain the socio-economic value/contribution of the proposed development.
• Create temporary employment opportunities to local labour during the construction phase. • Create temporary employment opportunities for local contractors and suppliers during the construction phase. • Ensure that the Municipality can achieve and deliver its mandate of service delivery.	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
• Employment of local labour. • Source materials locally.	
8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.
The key social issues associated with the proposed activity may include some temporary negative impacts during the construction phase and operational phase: • Negative: Security and safety risk posed by workers when conducting the work. • Negative: Temporary noise impacts for residents. • Negative: Possible odour introduced in the new location of the Cricket Pump station closer to existing businesses in the event of unplanned overflow.	

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered.

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred property and site alternative.

Preferred Property Alternatives

Section 01: 355mm sewer line (pumping main) along Sandhoogte Road.

Erf / Farm #	Locality of Sewer line
RE/139	**Road Reserve of Sandhoogte Road.**
RE/25/129	
RE/53/129	
19/129	
RE/93/129	
45/129	
46/219	
44/29	
RE/2833	
RE/48/129	
124/129	
87/129	
RE/5098	
5138	
5097	
5/138	
RE/4752	
RE/4739	
RE/1/138	
RE/4637	
4/138	
RE/2/138	
RE/4638	
3/138	
RE/4768	
4770	
4771	
4772	
RE/4722	Street Parcel (Sandhoogte Road)
4808	Cricket Field Pumpstation

Section 02: 160mm – 200mm sewer line to connect un-serviced erven in Great Brak River.

Erf / Farm #	Locality of Sewer line
RE/198	Stander Street
1687	Ebenezer Avenue
Erf 189	Private Property
Erf 111	Public Place
1/275	Fourie Street & Wiggett Street
RE/275	Van Rensburg Street
RE/4766	Road Reserve of Long Street (underneath sidewalks)
Erf 5101	Road Reserve of Long Street (underneath sidewalks)
Erf 4788	Private Property
Erf 4787	Great Brak Police Station
RE/4722	Sandhoogte Road Reserve
RE/4812	Road Reserve of Long Street (underneath sidewalks)
Erf 769	Private Property
Erf 768	Private Property
RE/4812	Church Street & Long Street
Erf 770	Private Property
RE/4806	End Street
Erf 871	Road Reserve of Long Street (underneath sidewalks)
Erf 887	Private Property
RE/4811	Road Reserve of Long Street (underneath sidewalks)
Erf 89	Private Properties (Road Reserve of Long Street
Erf 90	

Erf 91	Private Properties (Road Reserve of Long Street)
Erf 95	
Erf 96	

Section 03: Upgrades at the Cricket Field Pump Station (Erf 4808).

Preferred Alignments / Localities

Section 01: Northern Road Reserve of Sandhoogte Road between the Cricket Field Pump Station and Sandhoogte Pump Station. Southern Road Reserve of Sandhoogte Road between the Sandhoogte Pump Station and the Great Brak Water Treatment Works (WWTW).

Section 02: Within existing tar & gravel municipal roads, underneath paved sidewalks, underneath stormwater channels, within road reserves and building lines of private properties.

Section 03: Alternative 2 – new pump station next to the Great Brak Sport Club – Tennis Courts (Figure 34 – Option 01).

Provide a description of any other property and site alternatives investigated.

No other property alternatives were investigated. However, the following site alternatives for the Cricket Field Pump Station were investigated (i.e., Section 03):

Alternative 1a: Expansion of the existing Cricket Field Pump Station (Erf4808) & construction of a smaller Myburgh Street Pump Station on Erf 111(Figure 34 – Option 01).

Alternative 1b: Construction of a new pump station adjacent to the Cricket Field Pump Station (Erf 4808) and the decommissioning of the Cricket Field Pump Station (Figure 34 – Option 01).

Alternative 2: Construction of a new pump station next to the Great Brak Sport Club – Tennis Courts (Figure 34 – Option 02).

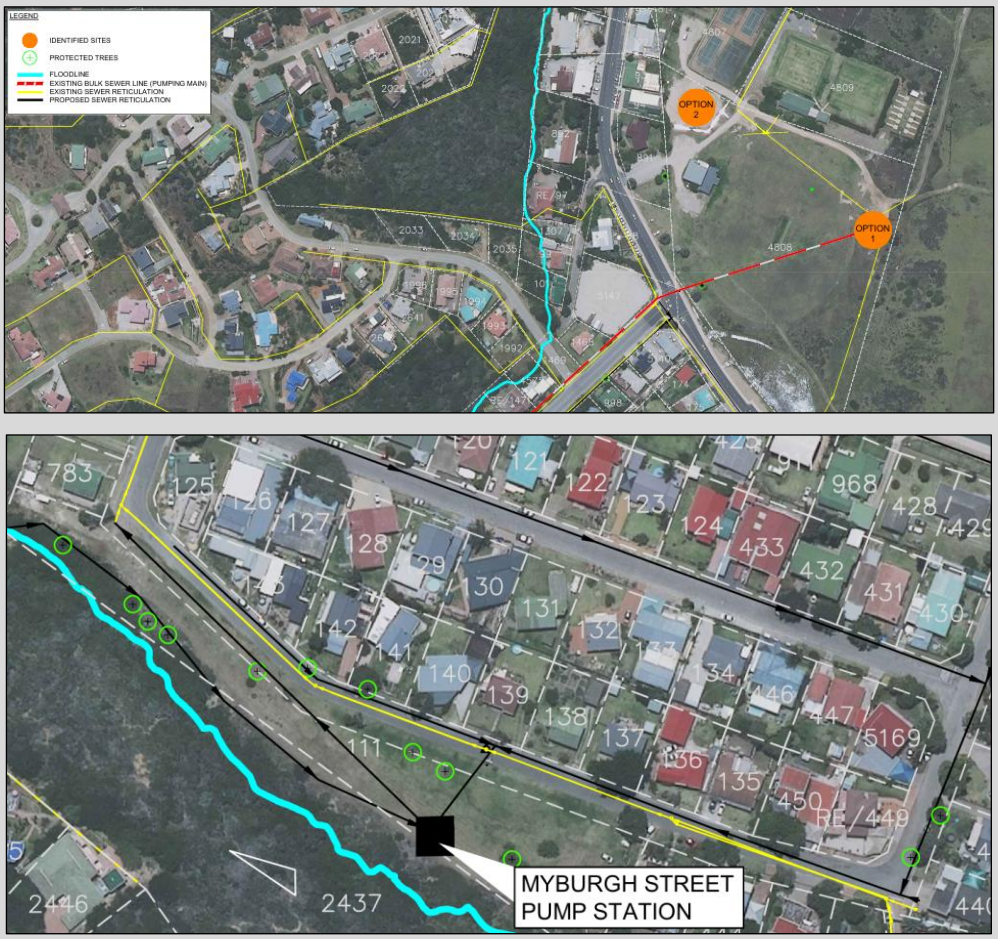


Figure 34: Site Alternatives for the upgrade of the Cricket Field Pump Station on Erf 4808 & Erf 111 (Municipal Erven).

Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.

Section 01

- The proposed sewer line will be within an already transformed road reserve (no natural watercourses, no natural remaining vegetation, no Plant / Fauna SCC).
- The proposed sewer line avoids a riparian zone identified by the aquatic specialist, north of Sandhoogte Road, between Sandhoogte Pump Station and the Great Brak Water Treatment Works.

Section 02

- The proposed sewer lines will be installed within already disturbed and transformed areas (i.e., existing roads, sidewalks, stormwater channels, road reserve and 5m building lines of private properties).

Section 03

- The new pump station will be located within an already disturbed area, outside a CBA / ESA, on Municipal Property (Erf 4808).

For all of the above sections, no natural watercourses or red listed ecosystems will be impacted by the preferred properties & sites.

Provide a full description of the process followed to reach the preferred alternative within the site.

- Various specialists (botany/biodiversity, fauna and aquatic) were appointed to best inform the proposed upgrades.
- Consultation with the DEADP during pre-application meeting.
- Input from stakeholders during public participation phase will inform the preferred alternatives.

Provide a detailed motivation if no property and site alternatives were considered.

List the positive and negative impacts that the property and site alternatives will have on the environment.

Positive

- Sections 01 – 03: No negative impacts on natural watercourses.
- Sections 01 – 03: No impacts on Fynbos, Thicket or any Red Listed ecosystem.
- Sections 01 – 03: No impacts on Plant SCC, Protected Tree Species and Fauna SCC.
- Sections 01 – 03: No impacts on highly sensitive agricultural fields.
- Section 03, Alternatives 1a & 1b: As the pump station will be located about 190 meters from any residential or commercial properties, the impact from the odor or noise will be minimal to none.

Negative

- Sections 01 – 03: Temporary security & noise impacts for affected landowners during the construction phase.
- Sections 01 – 03: Temporary access restrictions during the installation of the sewer pipeline across roads/driveways of private properties during the construction phase.
- Sections 01 – 03: Temporary traffic impacts (i.e., construction of pipelines within roads).
- Section 03, Alternative 2: As the proposed location of the pump station is near commercial properties consideration must be given to the impact on the community. Some of the potential impacts on the community are the potential for odour (in the event of unforeseen overflow) and noise from the pump station as well as the visual impact (although architectural design will minimize this aspect). As the pump station will be constructed behind existing buildings the visual

impact will be limited resulting in the direct view of the pump station as limited. The potential impacts of the odour won't be completely eliminated in the unforeseen event of overflow. However, daily operational odours will be mitigated as the pumps/inflow will be fully enclosed.

1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

Preferred Activities

Mossel Bay Municipality, hereafter referred to as the Applicant, proposes to **upgrade** a portion of their existing sewer reticulation system in Great Brak River, Mossel Bay Municipal District, Western Cape Province (Figure 26).

The proposed upgrades are divided into **three (3) sections** (breakdown provided below) (Figure 35):

- Section 01: Replace an existing 200mm sewer pipeline with a new 355mm sewer pipeline along Sandhoogte Road and internal upgrades at the existing Sandhoogte Pump Station.

- Section 02: New 160mm - 200mm sewer pipelines along un-serviced erven in Great Brak River, that are still using conservancy tanks, to link them to the municipal system.

- Section 03: Upgrade of the so-called Cricket Field Pump Station to accommodate additional flow and address existing challenges. According to Sky High Consulting Engineers, the pump station does not have adequate pumping capacity to pump at a flow rate higher than the inflow of the sewage during wet weather (rainy conditions), thus the pump station floods during wet weather conditions. Furthermore, it was also found that the pump station does not have adequate emergency storage capacity (Technical Report, 2025).

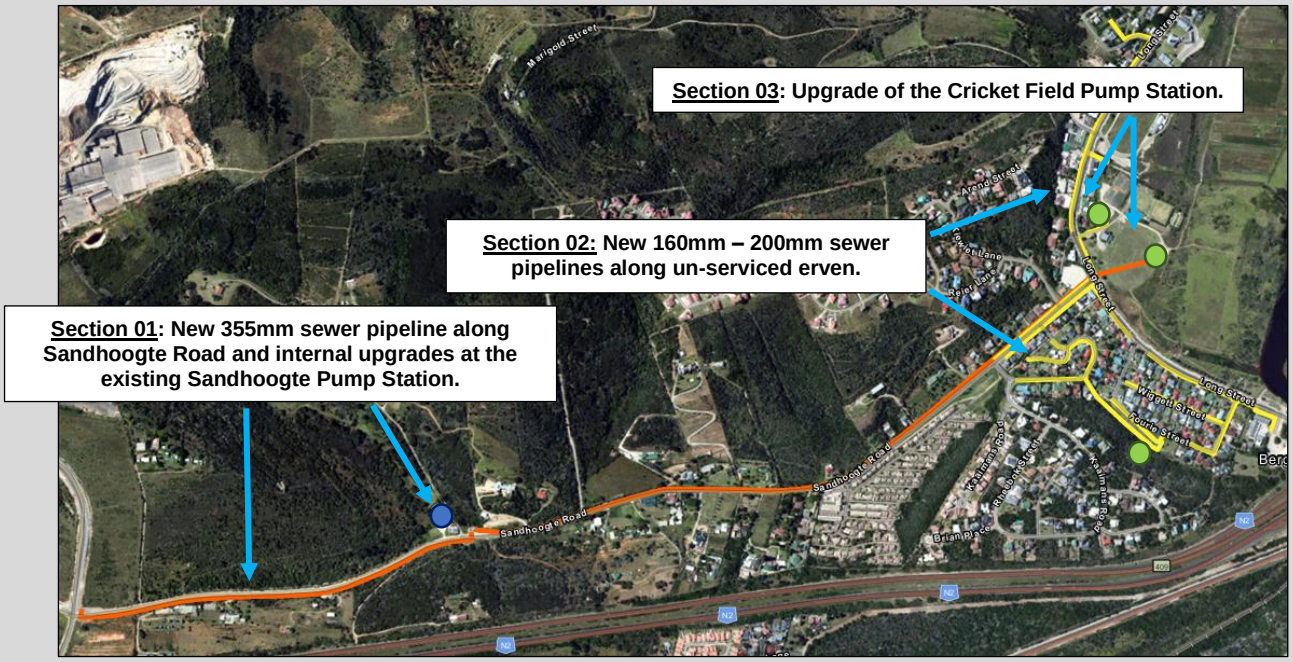


Figure 35: Locality map of the proposed three (3) Great Brak sewer system upgrade sections: (1) new 355mm sewer pipeline along Sandhoogte Road (orange solid line) and internal upgrades at the existing Sandhoogte Pump Station (blue filled circle); (2) new 160mm – 200mm sewer pipelines along un-serviced erven in Great Brak (yellow solid line); and (3) expansion / replacement of the Cricket Field Pump Station (green filled circles).

Provide a description of any other activity alternatives investigated.

No-Go Activity Alternative i.e., no upgrade of the municipal sewer system of Great Brak.

The No-Go Development option would see the current sewerage infrastructure in Groot Brak remain in the same condition as at present. The suburb of Bergsig currently has no serviced sewerage system and presumably uses conservancy or septic tanks. The area along Sandhoogte Road is developing with

several new residential developments established and planned, but development is constrained by capacity of the sewerage network. If the pump stations are not upgraded they could not handle the additional waste generated by new developments or existing development in Bergsig. If the town of Groot Brak was to develop no further, then the No-Go option could potentially be feasible. However, as development and growth of key nodes such as that along Sandhoogte Road are already in progress, it is in the best interest of the environment as well as the community that the sewerage network be upgraded accordingly.

Provide a motivation for the preferred activity alternative.

- To support future developments in Great Brak River and alleviate existing problems with the Cricket Pump station that often overflows.
- To reduce the risk of contamination in the Great Brak Estuary as the existing pump station does not have adequate pumping capacity during rainy conditions and also does not have adequate emergency storage capacity (new design / location can address the problems to some degree).
- To reduce the use of conservancy tanks in Great Brak River (which often show signs of leakages) by connecting erven to the Municipal System.

Provide a detailed motivation if no activity alternatives exist.

List the positive and negative impacts that the activity alternatives will have on the environment.

Preferred Activity Alternative

Positive

- Ensure adequate and reliable services to current properties and future demands.
- No frequent maintenance and repair work.
- No conservancy tanks and associated maintenance.
- Unlock development potential in Great Brak which could contribute to municipal rates and taxes.

Negative

- Temporary noise & safety impacts during construction.
- Temporary access restrictions for affected landowners when the pipelines are installed through roads/driveways.
- Potential odour concerns during operational phase (can be mitigated through design).

No-Go Activity Alternative

Positive

- No temporary noise & safety impacts during installation of the sewer pipeline.
- No temporary access restrictions for affected landowners.

Negative

- Cost implications because of more frequent maintenance and repair work.
- The No-Go Activity Alternative would result in no sewer system upgrades and would therefore limit development in Great Brak River.
- Continued risk of contamination in Great Brak Estuary due to insufficient emergency storage capacity during rainy conditions as well as inadequate pumping capacity.

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Section 01: 355mm diameter Class 12 mPVC pipeline.

Section 02: 160mm – 200mm diameter HDPE Pipelines.

Section 03: Upgrades of the Cricket Field Pump Station (Technical Report, 2025).

Alternative 1a - Preferred Design Alternative (Figure 36)

- Expansion of the existing Cricket Field Pump Station.

- Minimal re-routing of the bulk sewer line (Sandhoogte Pumping Main).
- Relocation of the last manhole before the pump station (1.5m in diameter).
- To provide the required six (6) hour emergency storage capacity, the existing sump will be expanded. The expansion will be done by constructing an additional sump with a new inlet.
  - Area: ±160m^2
  - Volume: ±550m^3
  - Depth: 2.7m
- The floor level of the new sump will be higher than the existing and sloped at 2% fall towards the interconnecting pipe work (400mm pipes casted into the walls).
- The new inlet (25m^2) will be equipped with a gate valve (to shut off flow into the pump station), and a macerator (to reduce the number of blockages that occur at the pumpstation).
- The existing pumps will be replaced with two (2) new pumps each being able to pump the future flowrate of 120L/s.
  - To limit the flooding on the pumps and motors, they will be placed on top of the sump which is 300mm above natural ground level. The motors will be installed an additional 1m from the top of the sump thus the water level would have to rise at a minimum of 1.3m before the motors will be affected.
- All manholes will be raised to a cover level higher than that of the pump station sumps.

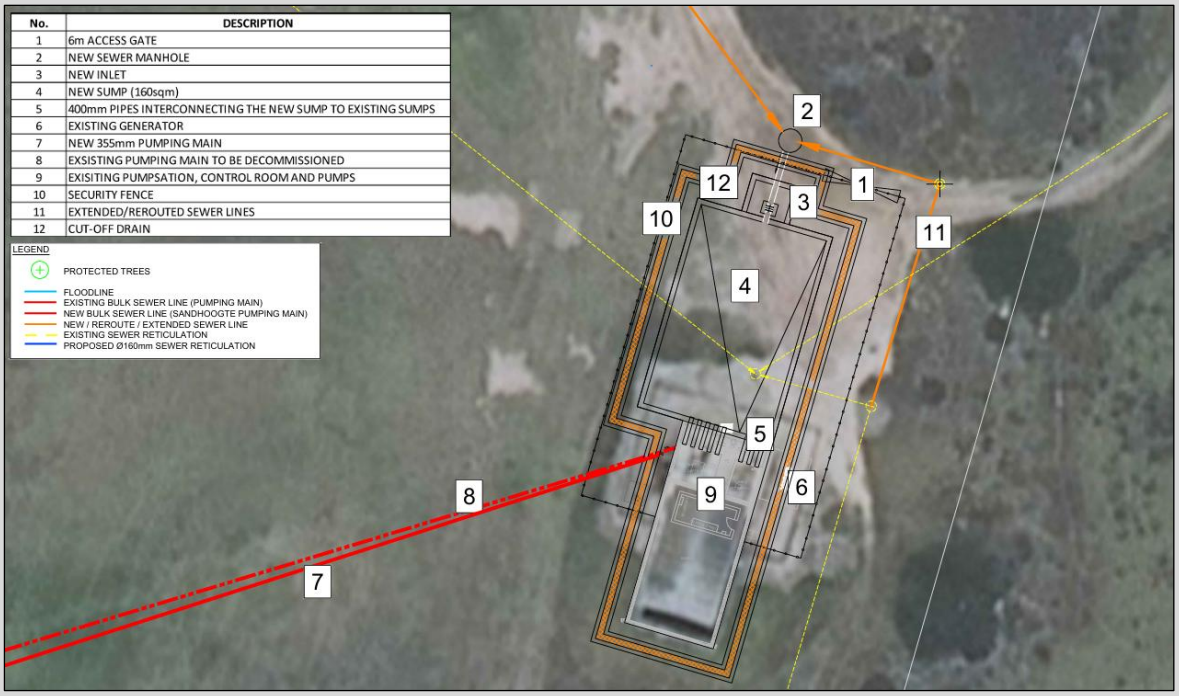


Figure 36: Proposed design of Alternative 1a (source: Sky High Consulting Engineers).

- New pumps station at Myburgh Street (i.e., Myburgh Pump Station).

<u>Alternative 1b – Preferred Design Alternative (Figure 37)</u>

- Construction of **new pump station** next to the existing Cricket Field Pump Station.
- Minimal re-routing of the bulk sewer line (Sandhoogte Pumping Main).
- Relocation of the last manhole before the pump station (1.5m in diameter).
- The **inlet** will be equipped with a **gate valve** (to shut off flow into the pump station), and a **macerator** (to reduce the number of blockages that occur at the pumpstation).
- The pumpstation will consist of **two (2)** interconnected **sumps**, namely sump 1 and 2. Each sump will be able to operate independently from the other so that for maintenance purposes a sump can be isolated to be cleaned.
  - Area: 50m^2 per sump.

- Volume: 275m^3 per sump.

- Sump 1 will be slightly deeper than sump 2 and will operate as the main sump. The floor of sump 2 will be sloped in such that any sewage flowing into sump 2 will be able to flow into sump 1 from which it will be pumped out.
- Each sump has the capacity for the required active volume and 3 hours of emergency storage providing a total emergency storage capacity of 6 hours.
- The **pumps** that will be installed will each be capable of pumping the future peak wet weather flow of 120 L/s.
- All pipes in the sump and the pumphouse will be made of 316L stainless steel.
- The pump station will have a 1 meter deep and 500 mm wide **cut off drain** around the pumpstation.
    - The purpose of the drain is to prevent sewage in the case of a spillage reaching the surrounding area. Furthermore, in the event of a flood the drain will limit the amount of water that reaches the pump station.

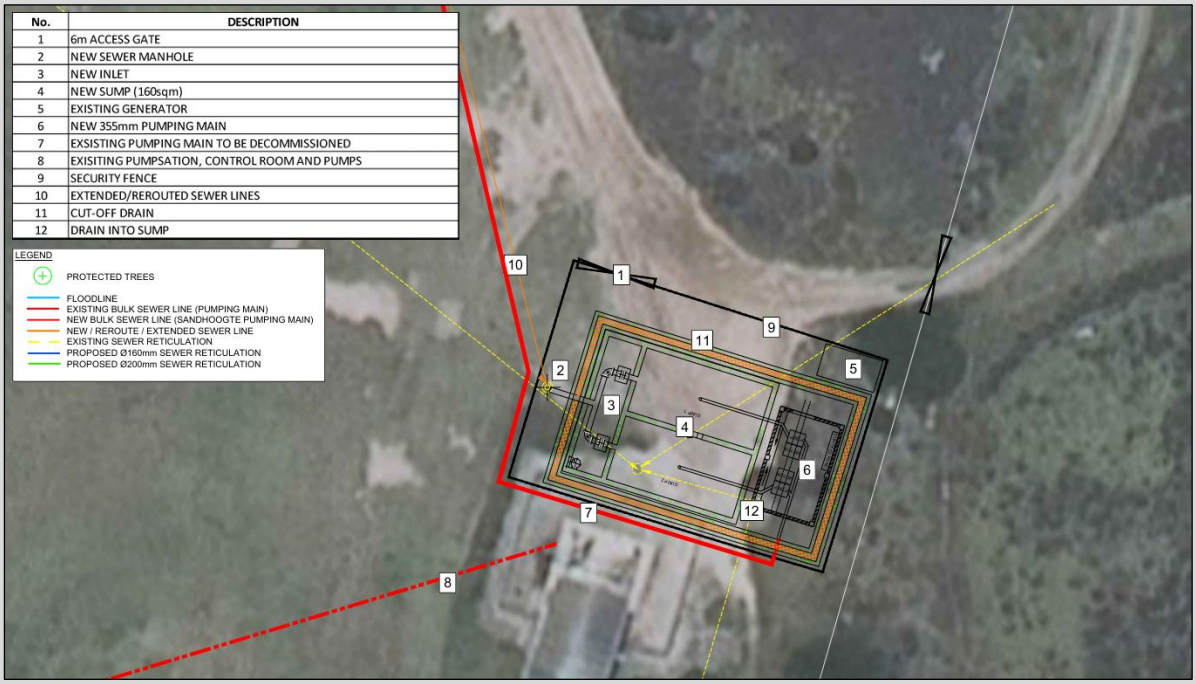


Figure 37: Preferred Design Alternative for Alternative 1b (source: Sky High Consulting Engineers).

Alternative 2 - Preferred Design Alternative (Figure 38)

- Construction of a new pump station next to the Great Brak River Sports Club – Tennis Courts.
- The Bulk Sewer Line (Sandhoogte Pumping Main) will be re-routed along Lang Street towards the new pump station (i.e., no works across the Cricket Field).
- The design of the pump station will be the same as Alternative 1b.

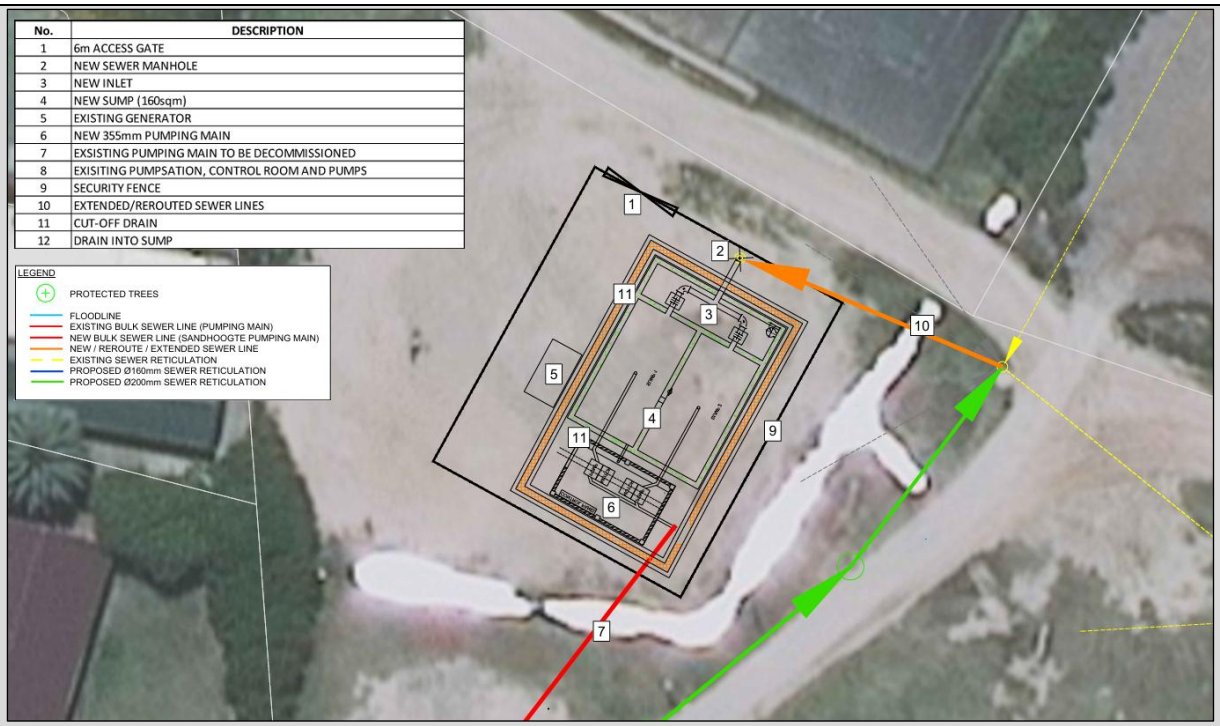


Figure 38: Preferred Design Alternative for Alternative 2 (source: Sky High Consulting Engineers).

Provide a description of the preferred design or layout alternative.

Provide a description of any other design or layout alternatives investigated.

Provide a motivation for the preferred design or layout alternative.

The pump stations are designed:

- to limit / avoid the potential of spillage during peak wet weather.
- to limit / avoid negative impacts on infrastructure.
- to limit / avoid spillage along the sewer lines.

Provide a detailed motivation if no design or layout alternatives exist.

The pump stations are designed to consider all potential negative environmental impacts whilst being feasible (i.e., cost effective) for the Municipality to implement in Phases.

List the positive and negative impacts that the design alternatives will have on the environment.

Positive

- Section 03, Alternatives 1a & 1b: As the pumpstation will be located about 190 meters from any residential or commercial properties, the impact from the odor or noise will be minimal to none.
- Section 03, Alternative 2: The pump station is located further away from the estuary and closer to the 1:100 year flood line reducing the risk of negative impacts on the Great Brak Estuary.

Negative

- Section 03, Alternative 2: As the proposed location of the pumpstation is near commercial properties consideration must be given to the impact on the community. Some of the potential impacts on the community are the odor and noise from the pump station as well as the visual impact. As the pumpstation will be constructed behind existing buildings the visual impact will be limited as the direct view of the pump station will be limited. The potential impacts of the odor won't be completely eliminated. However, they will be mitigated as the pumps will be enclosed.

1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

Not applicable.

Provide a description of any other technology alternatives investigated.

Provide a motivation for the preferred technology alternative.

Provide a detailed motivation if no alternatives exist.

List the positive and negative impacts that the technology alternatives will have on the environment.

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

No applicable.

Provide a description of any other operational alternatives investigated.

Provide a motivation for the preferred operational alternative.

Provide a detailed motivation if no alternatives exist.

List the positive and negative impacts that the operational alternatives will have on the environment.

1.6.	The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

The No-Go Option would result in no pipeline upgrade and would therefore limit development in Great Brak River. There will be continued challenges experienced at the Cricket Field Pump Station (known to overflow during high rainfall). There will be an increased amount of conservancy tanks being used in Great Brak River.

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.

The preferred activity is to upgrade a portion of the Great Brak Municipal Sewer System:

- Replace the existing sewer line along Sandhoogte with a greater capacity sewer line.
- Link un-serviced erven to the Municipal System.
- Upgrades at the Cricket Field Pump Station to address challenges during high rainfall.

The preferred localities include Sandhoogte Street, Lang Street, Kerk Street, Fourie Street, Stander Street, Van Rensburg Street, Ebenezer Avenue and Wigget Street.

The different locality / position alternatives for the Cricket Field Pump Station remains on Erf 4808 except for Alternative 1a where another pump station is proposed on Erf 111 next to Fourie Street.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).
The development footprint and working area will be demarcated. All areas outside the demarcation are considered as "No-Go" areas during the construction phase.

3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.
Criteria for Assessment These criteria are drawn from the EIA Regulations, published by the Department of Environmental Affairs and Tourism (April 1998) in terms of the Environmental Conservation Act No. 73 of 1989. These criteria include: • **Nature of the impact** This is the appraisal of the type of effect the construction, operation and maintenance of a development would have on the affected environment. This description should include what is to be affected and how. • **Extent of the impact** Describe whether the impact will be local extending only as far as the development site area; or limited to the site and its immediate surroundings; or will have an impact on the region or will have an impact on a national scale or across international borders. • **Duration of the impact** The specialist / EAP should indicate whether the lifespan of the impact would be short term (0-5 years), medium term (5-15 years), long term (16-30 years) or permanent. • **Intensity** The specialist / EAP should establish whether the impact is destructive or benign and should be qualified as low, medium or high. The study must attempt to quantify the magnitude of the impacts and outline the rationale used. • **Probability of occurrence** The specialist / EAP should describe the probability of the impact occurring and should be described as improbable (low likelihood), probable (distinct possibility), highly probable (most likely) or definite (impact will occur regardless of any prevention measures). The impacts should also be assessed in terms of the following aspects: • **Legal requirements** The specialist / EAP should identify and list the relevant South African legislation and permit requirements pertaining to the development proposals. He / she should provide reference to the procedures required to obtain permits and describe whether the development proposals contravene the applicable legislation.

- **Status of the impact**

The specialist / EAP should determine whether the impacts are negative, positive or neutral ("cost – benefit" analysis). The impacts are to be assessed in terms of their effect on the project and the environment. For example, an impact that is positive for the proposed development may be negative for the environment. It is important that this distinction is made in the analysis.

- **Accumulative impact**

Consideration must be given to the extent of any accumulative impact that may occur due to the proposed development. Such impacts must be evaluated with an assessment of similar developments already in the environment. Such impacts will be either positive or negative, and will be graded as being of negligible, low, medium or high impact.

- **Degree of confidence in predictions**

The specialist / EAP should state what degree of confidence (low, medium or high) is there in the predictions based on the available information and level of knowledge and expertise.

Based on a synthesis of the information contained in the above-described procedure, you are required to assess the potential impacts in terms of the following significance criteria:

No significance: the impacts do not influence the proposed development and/or environment in any way.

Low significance: the impacts will have a minor influence on the proposed development and/or environment. These impacts require some attention to modification of the project design where possible, or alternative mitigation.

Moderate significance: the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.

High significance: the impacts will have a major influence on the proposed development and/or environment and will result in the "no-go" option on the development or portions of the development regardless of any mitigation measures that could be implemented. This level of significance must be well motivated.

4. Assessment of each impact and risk identified for each alternative.

Note: The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

Construction Phase Impacts

Alternative:	**Alternative 1a**
DEVELOPMENT PHASE	
Potential impact and risk:	Potential Risk to the Great Brak Estuary
Nature of impact:	Negative
Extent and duration of impact:	Extend: Limited (with & without mitigation) Duration: Medium term (without mitigation); Short term (with mitigation)
Consequence of impact or risk:	Potential leakage of sewage during flood events which could pollute the estuary
Probability of occurrence:	Probably (without mitigation) Unlikely (with mitigation)
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	None
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor – Negative
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	EMPr
Degree to which the impact can be mitigated:	
Proposed mitigation:	An Environmental Control Officer (ECO) must be appointed for the duration of the construction phase to monitor and report back on compliance with conditions of the environmental authorisation. Consult weather forecasts daily and weekly. Do not work during rainfall and minimise the storage of mobile materials in low-lying areas. Plan the construction area as if it could be inundated with floodwaters in the event of a significant rainfall event. Construction access for the new pump station should utilise the existing gravel access road from Lang Street that provides convenient access to both the existing pump station and to the alternative location next to the tennis courts. No new roads should be necessary.

	Include a channel or cutoff drain around the pump station that drains to the sump. Spillage from the pump station and possible flood waters should drain to this channel, flow into the sump, and be pumped away. Designate the estuarine habitat as a No-Go area for the duration of construction. The area indicated should be fenced off using shade-cloth fencing with signage to this effect. This measure is compatible with Option 2 and Option 1a, but not with Option 1b in its present layout, because it extends slightly into this area. Option 1b should be designed to not extend into natural estuarine vegetation. If Option 1b were approved in the current layout, then the minimal disturbance footprint must be agreed with the ECO, and the estuarine habitat beyond that designated as the No-Go area and fenced as previously explained. Open trenching for sewer lines should be done in as short a stretch as possible and backfilled with material as soon as possible to reduce the likelihood of material loss in the event of flooding. No dirty water from the construction site can be pumped directly out to the estuary, either directly or via stormwater drainage. If excavations are filled with water post-rainfall, sediment laden water may be pumped out onto the cricket field and spread. The grass will act as a sediment trap. Keep a skip on site so that any waste materials can be conveniently discarded and removed. This includes small amounts of dirty water, such as that used for mixing concrete. Equipment and materials lay-down areas should be located away from the estuarine habitat. Minimise the storage of loose materials in case of a flood event that could wash them into the estuary. If the cricket ground pump station is to be decommissioned (Option 2) then this should only be done once the new pump station is fully operational. A honey-sucker should be available if any remnant sewage must be disposed of during decommissioning of the existing pump station. All above-ground structures should be removed from the site and disposed of. Refuse (e.g. waste cardboard / plastic) must be removed from the site daily to reduce the impact of litter being wind-blown or washed into the estuary during inclement weather. Post-construction site clean-up must be completed to ensure the entire site footprint and surrounding area has been cleared of litter and any waste materials associated with construction. The ECO should be informed of the construction close-out and complete an inspection to ensure this measure has been implemented.
Residual impacts:	None

Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

Alternative:	**Alternative 1b**
DEVELOPMENT PHASE	
Potential impact and risk:	Potential Risk to the Great Brak Estuary
Nature of impact:	Negative
Extent and duration of impact:	Extend: Limited Duration: Permanent (without mitigation); Short Term (with mitigation)
Consequence of impact or risk:	Potential leakage of sewage during flood events which could pollute the estuary
Probability of occurrence:	Certain (without mitigation) Unlikely (with mitigation)
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	None
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible – Negative
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	EMPr
Degree to which the impact can be mitigated:	
Proposed mitigation:	An Environmental Control Officer (ECO) must be appointed for the duration of the construction phase to monitor and report back on compliance with conditions of the environmental authorisation. Consult weather forecasts daily and weekly. Do not work during rainfall and minimise the storage of mobile materials in low-lying areas. Plan the construction area as if it could be inundated with floodwaters in the event of a significant rainfall event. Construction access for the new pump station should utilise the existing gravel access road from Lang Street that provides convenient access to both the existing pump station and to the alternative location next to the tennis courts. No new roads should be necessary.

	Include a channel or cutoff drain around the pump station that drains to the sump. Spillage from the pump station and possible flood waters should drain to this channel, flow into the sump, and be pumped away. Designate the estuarine habitat as a No-Go area for the duration of construction. The area indicated should be fenced off using shade-cloth fencing with signage to this effect. This measure is compatible with Option 2 and Option 1a, but not with Option 1b in its present layout, because it extends slightly into this area. Option 1b should be designed to not extend into natural estuarine vegetation. If Option 1b were approved in the current layout, then the minimal disturbance footprint must be agreed with the ECO, and the estuarine habitat beyond that designated as the No-Go area and fenced as previously explained. Open trenching for sewer lines should be done in as short a stretch as possible and backfilled with material as soon as possible to reduce the likelihood of material loss in the event of flooding. No dirty water from the construction site can be pumped directly out to the estuary, either directly or via stormwater drainage. If excavations are filled with water post-rainfall, sediment laden water may be pumped out onto the cricket field and spread. The grass will act as a sediment trap. Keep a skip on site so that any waste materials can be conveniently discarded and removed. This includes small amounts of dirty water, such as that used for mixing concrete. Equipment and materials lay-down areas should be located away from the estuarine habitat. Minimise the storage of loose materials in case of a flood event that could wash them into the estuary. If the cricket ground pump station is to be decommissioned (Option 2) then this should only be done once the new pump station is fully operational. A honey-sucker should be available if any remnant sewage must be disposed of during decommissioning of the existing pump station. All above-ground structures should be removed from the site and disposed of. Refuse (e.g. waste cardboard / plastic) must be removed from the site daily to reduce the impact of litter being wind-blown or washed into the estuary during inclement weather. Post-construction site clean-up must be completed to ensure the entire site footprint and surrounding area has been cleared of litter and any waste materials associated with construction. The ECO should be informed of the construction close-out and complete an inspection to ensure this measure has been implemented.
Residual impacts:	None

Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

Alternative:	**Alternative 2**
DEVELOPMENT PHASE	
Potential impact and risk:	Potential Risk to the Great Brak Estuary
Nature of impact:	Negative
Extent and duration of impact:	Extend: Limited Duration: Medium Term (without mitigation); Short Term (with mitigation)
Consequence of impact or risk:	Potential leakage of sewage during flood events which could pollute the estuary
Probability of occurrence:	Probably (without mitigation) Unlikely (with mitigation)
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	None
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible – Negative
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	EMPr
Degree to which the impact can be mitigated:	
Proposed mitigation:	An Environmental Control Officer (ECO) must be appointed for the duration of the construction phase to monitor and report back on compliance with conditions of the environmental authorisation. Consult weather forecasts daily and weekly. Do not work during rainfall and minimise the storage of mobile materials in low-lying areas. Plan the construction area as if it could be inundated with floodwaters in the event of a significant rainfall event. Construction access for the new pump station should utilise the existing gravel access road from Lang Street that provides convenient access to both the existing pump station and to the alternative location next to the tennis courts. No new roads should be necessary.

	Include a channel or cutoff drain around the pump station that drains to the sump. Spillage from the pump station and possible flood waters should drain to this channel, flow into the sump, and be pumped away. Designate the estuarine habitat as a No-Go area for the duration of construction. The area indicated should be fenced off using shade-cloth fencing with signage to this effect. This measure is compatible with Option 2 and Option 1a, but not with Option 1b in its present layout, because it extends slightly into this area. Option 1b should be designed to not extend into natural vegetation. If Option 1b were approved in the current layout, then the minimal disturbance footprint must be agreed with the ECO, and the estuarine habitat beyond that designated as the No-Go area and fenced as previously explained. Open trenching for sewer lines should be done in as short a stretch as possible and backfilled with material as soon as possible to reduce the likelihood of material loss in the event of flooding. No dirty water from the construction site can be pumped directly out to the estuary, either directly or via stormwater drainage. If excavations are filled with water post-rainfall, sediment laden water may be pumped out onto the cricket field and spread. The grass will act as a sediment trap. Keep a skip on site so that any waste materials can be conveniently discarded and removed. This includes small amounts of dirty water, such as that used for mixing concrete. Equipment and materials lay-down areas should be located away from the estuarine habitat. Minimise the storage of loose materials in case of a flood event that could wash them into the estuary. If the cricket ground pump station is to be decommissioned (Option 2) then this should only be done once the new pump station is fully operational. A honey-sucker should be available if any remnant sewage must be disposed of during decommissioning of the existing pump station. All above-ground structures should be removed from the site and disposed of. Refuse (e.g. waste cardboard / plastic) must be removed from the site daily to reduce the impact of litter being wind-blown or washed into the estuary during inclement weather. Post-construction site clean-up must be completed to ensure the entire site footprint and surrounding area has been cleared of litter and any waste materials associated with construction. The ECO should be informed of the construction close-out and complete an inspection to ensure this measure has been implemented.
Residual impacts:	None

Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

Operational Phase Impacts

Alternative:	**Alternative 1a & 1b**
OPERATIONAL PHASE	
Potential impact and risk:	Potential Risk to the Great Brak Estuary due to maintenance & repairs required.
Nature of impact:	Negative
Extent and duration of impact:	Extend: Local (without mitigation); Limited (with mitigation) Duration: Medium Term (with & without mitigation)
Consequence of impact or risk:	Negative impacts on Estuarine Habitat.
Probability of occurrence:	Unlikely (with & without mitigation)
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	None
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor – Negative
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	EMPr
Degree to which the impact can be mitigated:	
Proposed mitigation:	Pump stations should be fenced off to protect them against acts of vandalism or theft which could result in malfunctions / leaks. Sewer manhole covers should not be made of metal because of the risk of theft. All of the mitigation measures provided for the construction phase are applicable to maintenance work where applicable. Pump stations should have signage indicating that they are wastewater pump stations and who to call should malfunctions or leaks be observed by the public. Should theft of signs be an issue, then details can be spray painted onto surfaces.

	Ensure the remote monitoring system in place to detect faults in the pump station is always functional. Fix faults timeously. When blockages to sewerage infrastructure within the EFZ occur, the maintenance team should ensure a honey-sucker is on standby to mop up any spills or overflows for removal and disposal at the Wastewater Treatment Works. Any serious sewage spills that result in large quantities of sewage leaking from a pump station or manhole must be contained in a temporary coffer dam which can be constructed using sandbags for the walls and plastic sheeting as a base. From here, honey-suckers can collect sewage for removal. Any water-tight seals around manholes, joints or other access points that must be broken for maintenance should be replaced thereafter to ensure the mitigation measures to prevent water ingress or sewage leakage are maintained under flood scenarios. Keep sewer lines clear of dense vegetation to facilitate access and reduce the risk of roots cracking sewer lines.
Residual impacts:	None
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor - Negative

Alternative:	**Alternative 2**
OPERATIONAL PHASE	
Potential impact and risk:	Potential Risk to the Great Brak Estuary due to maintenance & repairs required.
Nature of impact:	Negative
Extent and duration of impact:	Extend: Local (with and without mitigation) Duration: Medium Term (without mitigation); Short Term (with mitigation)
Consequence of impact or risk:	Negative impacts on Estuarine Habitat.
Probability of occurrence:	Probably (without mitigation) Unlikely (with mitigation)
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Degree to which the impact can be reversed:	Medium
Indirect impacts:	None
Cumulative impact prior to mitigation:	

Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Minor – Negative
Degree to which the impact can be avoided:	
Degree to which the impact can be managed:	EMPr
Degree to which the impact can be mitigated:	
Proposed mitigation:	Pump stations should be fenced off to protect them against acts of vandalism or theft which could result in malfunctions / leaks. Sewer manhole covers should not be made of metal because of the risk of theft. All of the mitigation measures provided for the construction phase are applicable to maintenance work where applicable. Pump stations should have signage indicating that they are wastewater pump stations and who to call should malfunctions or leaks be observed by the public. Should theft of signs be an issue, then details can be spray painted onto surfaces. Ensure the remote monitoring system in place to detect faults in the pump station is always functional. Fix faults timeously. When blockages to sewerage infrastructure within the EFZ occur, the maintenance team should ensure a honey-sucker is on standby to mop up any spills or overflows for removal and disposal at the Wastewater Treatment Works. Any serious sewage spills that result in large quantities of sewage leaking from a pump station or manhole must be contained in a temporary coffer dam which can be constructed using sandbags for the walls and plastic sheeting as a base. From here, honey-suckers can collect sewage for removal. Any water-tight seals around manholes, joints or other access points that must be broken for maintenance should be replaced thereafter to ensure the mitigation measures to prevent water ingress or sewage leakage are maintained under flood scenarios. Keep sewer lines clear of dense vegetation to facilitate access and reduce the risk of roots cracking sewer lines.
Residual impacts:	None
Cumulative impact post mitigation:	
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Negligible - Negative

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.

Aquatic

Findings

- Along the upper western section of Sandhoogte Road, there is a mapped watercourse classified as a drainage line. The preferred alignment of the new sewer line along Sandhoogte Road is planned on the southern side, outside the regulated area.
- Natural watercourses along Sandhoogte Road has been modified through straightening, canalising, vegetation removal and road construction. There are no remaining natural features of a watercourse.
- The unchanneled wetland crossed by Lang Street has been partially canalised. The proposed sewer lines does not cross the watercourse.
- The mapped Estuarine Functional Zone (EFZ) are seriously modified by urban development. What is left of the watercourse that is channelled and canalised along Sandhoogte Road exits into the estuary through an excavated channel and culvert under Lang Street.
- The new Myburgh Pump Station on Erf 111 (Alternative 1a) is no located in any watercourses, although mapped as being in the transformed EFZ. No estuarine habitat remains in any of the mapped areas.
- Should the no-go option be considered, the aquatic resources could be polluted due to overloaded systems.
- All potential impacts can be mitigated from moderate to negligible provided that the mitigation measures be implemented.
- Alternative 2 is preferred from an aquatic biodiversity perspective.

Recommendation that influenced the project

- If the sewer line can be upgraded along the cut (upslope/southern) side of Sandhoogte Road then it will be located outside of the regulated area of the watercourse and will not require further assessment.

Botanical & Biodiversity

Findings

- The sensitivity of the Terrestrial Biodiversity Theme for the site is confirmed as **Low** within the footprint of the proposed sewerage infrastructure upgrade area. BSP layers of CBA1, CBA2, and ESA2 do not apply within the road reserved where all the upgrades will be taking place. The vegetation along the extent of the proposed upgrade area in Great Brak is also transformed and does not represent natural thicket nor fynbos vegetation.
- The site sensitivity in terms of the Terrestrial Plant Species Theme is confirmed as Low. No Plant SCC were found on-site and has a low likelihood of occurrence.
- Four protected tree species were observed at various locations along the sides of the roads where the upgrades will be taking place, however all the yellowwood trees (2 species) are cultivated, and all the Milkwood (Sideroxylon inerme inerme) and Cheesewood (Pittosporum viridiflorum) trees can be avoided by the proposed upgrades. If there is any reason why some of these trees might be impacted by the sewerage infrastructure upgrades, an appropriate licence must be applied for from the Department of Forestry, Fisheries and the Environment (DFFE).

Fauna

Findings

- The terrestrial animal theme for the upgrade and introduction of proposed sewer lines to Groot Brak River is LOW.
- Due to high human activity (road and foot traffic) creating a landscape of fear, wildlife is more likely to use the larger landscape and avoid the roads along which the infrastructure is aligned.
- The direct disturbance footprint of the upgrade to the sewer lines/ pump stations, addition of new sewer lines, and introduction of the pump stations is very small and exists along a road (already a modified landscape feature).

Heritage

Findings

- Most of the remaining historic buildings along Long Street and the Sandhoogte Road have either been demolished or altered through inappropriate interventions over the years, to the extent that little of the historic (authentic) streetscape qualities remain within the proximity of the study area. The proposed works would mostly be for the installation of underground infrastructure along existing roads and pedestrian pavements, which would be returned to its current state following construction. Only limited expansion to existing infrastructure (e.g. two existing pumpstations) would be required, none of which would negatively impact what remains of the cultural landscape context within Great Brak River.
- Scatters of ESA and MSA may be recovered from the study area. However, it is important to note that the remains will be in the road reserve, or along the route of the existing sewer pipelines, and that the soil in the area will be significantly disturbed. For this reason, further archaeological surveys are not recommended.
- The proposed works would mostly only affect formerly disturbed/established urban areas, it is considered unlikely that the proposal would impact palaeontological occurrences of high local cultural significance.

2.	List the impact management measures that were identified by all Specialist that will be included in the EMPr

- If any palaeontological materials, human remains or significant archaeological materials are exposed during development activities, then such find(s) must be protected from further disturbance and work in the immediate area should be halted and Heritage Western Cape must be notified immediately. These heritage resources are protected by Section 36(3)(a) and Section 35(4) of the NHRA (Act 25 of 1999) respectively and may not be damaged or disturbed in any way without a permit from the heritage authorities. Any work in mitigation, if deemed appropriate, should be commissioned and completed before construction continues in the affected area and will be at the expense of the developer.
- Air valves along sewer lines must be elevated above the 1:100 year flood line.
- Critical components (e.g. pumps, motors, control panels, electrical switchgear) must be elevated above the 1:100-year flood line or sealed off in a water-tight unit. The engineering team indicated that all electrical components would be elevated 1m above the floor of the pump station, which in turn would be 1m above the ground level. This should be adequate to raise the electrical components above the flood line.
- Use materials that are designed to withstand water damage due to periodic inundation with water. The wet well must be treated on the inside and the outside to prevent leakage. Concrete to be used is the type used in reservoirs which is watertight and doesn't allow seepage in or out.
- Construction of new pump stations would allow for inclusion of a drain from the pump station to the sump so that water can drain into the sump and be pumped away.

- Include a channel or cutoff drain around the pump station that drains to the sump. Spillage from the pump station and possible flood waters should drain to this channel, flow into the sump, and be pumped away.
- Ensure the system is accessible for maintenance and inspections even during a flooding event. This is why Option 2 near the tennis courts is the preferred alternative.
- Install a monitoring system at all pump stations providing real-time alerts for any faults.
- An Environmental Control Officer (ECO) must be appointed for the duration of the construction phase to monitor and report back on compliance with conditions of the environmental authorisation.
- Consult weather forecasts daily and weekly. Do not work during rainfall and minimise the storage of mobile materials in low-lying areas. Plan the construction area as if it could be inundated with floodwaters in the event of a significant rainfall event.
- Construction access for the new pump station should utilise the existing gravel access road from Lang Street that provide convenient access to both the existing pump station (for upgrade as per Option 1a, or decommissioning as in Option 2), and to the alternative location next to the tennis courts (Options 2). No new roads should be necessary.
- Designate the estuarine habitat as a No-Go area for the duration of construction. The area indicated should be fenced off using shade-cloth fencing with signage to this effect.
- If Option 1b were approved, then the minimal disturbance footprint must be agreed with the ECO, and the estuarine habitat beyond that designated as the No-Go area and fenced.
- Open trenching for sewer lines should be done in as short a stretch as possible and backfilled with material as soon as possible to reduce the likelihood of material loss in the event of flooding.
- Equipment and materials lay-down areas should be located away from the estuarine habitat. Minimise the storage of loose materials in case of a flood event that could wash them into the estuary.
- If the cricket ground pump station is to be decommissioned (the preferred option here) then this should only be done once the new pump station is fully operational. A honey-sucker should be available if any remnant sewage must be disposed of during decommissioning of the existing pump station. All above-ground structures should be removed from the site and disposed of.
- Refuse (e.g. waste cardboard / plastic) must be removed from the site daily to reduce the impact of litter being wind-blown or washed into the estuary during inclement weather.
- Post-construction site clean-up must be completed to ensure the entire site footprint and surrounding area has been cleared of litter and any waste materials associated with construction. The ECO should be informed of the construction close-out and complete an inspection to ensure this measure has been implemented.

Figure 39: Annotated image of areas discussed for mitigation during the construction phase.

- Pump stations should be fenced off to protect them against acts of vandalism or theft which could result in malfunctions / leaks.
- Sewer manhole covers should not be made of metal because of the risk of theft.
- Pump stations should have signage indicating that they are wastewater pump stations and who to call should malfunctions or leaks be observed by the public. Should theft of signs be an issue, then details can be spray painted onto surfaces.
- Ensure the remote monitoring system in place to detect faults in the pump station is always functional. Fix faults timeously.
- When blockages to sewerage infrastructure within the EFZ occur, the maintenance team should ensure a honey-sucker is on standby to mop up any spills or overflows for removal and disposal at the Wastewater Treatment Works.
- Any serious sewage spills that result in large quantities of sewer leaking from a pump station or manhole must be contained in a temporary coffer dam which can be constructed using sandbags for the walls and plastic sheeting as a base. From here, honey-suckers can collect sewage for removal.
- Any water-tight seals that must be broken for maintenance should be replaced thereafter to ensure the mitigation measures to prevent water ingress or sewage discharge are maintained under flood scenarios.
- Keep sewer lines clear of dense vegetation to facilitate access and reduce the risk of roots cracking sewer lines.

3.	List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

All the impact management measures that were identified by all specialists are included in the EMPr (Section I # 1).

4.	Explain how the proposed development will impact the surrounding communities.

- Ensure adequate and reliable services to current properties and future demands.
- No frequent maintenance and repair work.
- Temporary noise & safety impacts during construction.
- Temporary access restrictions for affected landowners when the pipeline is installed through roads/driveways.

5.	Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.
6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.
There are no conflicting recommendations between the specialists.	
7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.
All findings and recommendations by the specialists have been incorporated into the proposal.	
8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

1. Avoid Impacts

Several meetings were held between the engineering (SMEC) and environmental team (Cape EAPrac and Confluent) to discuss potentially sensitive areas of the pipeline route and how these could best be navigated to avoid and minimise impacts.

2. Minimise Impacts

By involving an aquatic specialist to advise on planning and design at an early stage.

Appoint an ECO to oversee construction to further minimise the potential unnecessarily direct or indirect impacts.

Implement noise control during construction to minimise the impacts on neighbouring property owners.

Implement the Environmental Management Plan under ECO supervision.

3. Rectify

Ongoing removal of alien vegetation during the construction and operational phase.

4. Reduce

By implementing the mitigation measures provided by the specialist, all potential impacts will either be avoided or reduced.

5. Off-set

No off sets are deemed necessary.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.

- The **agricultural specialist** confirms that the impact duration is confined to the construction period only (i.e., temporary) and the pipeline will be buried which means that agricultural activities (potential) can continue unaffected above it, once construction is completed. Therefore, no land is permanently lost to agriculture. The agricultural impact is therefore assessed as being of very low significance.
- The **faunal specialist** disputes the high sensitivity and confirms that it should be LOW as there is very little natural vegetation and habitat and there is a low likelihood of occurrence of terrestrial animal SCC within the project footprint (including the 10m working area) for all route alternatives. No animal SCC were found on the site.
- The **aquatic specialist** confirmed that the impacts assessed for both the construction and operational phase can be effectively mitigated to negligible negative ratings.
- The **botanical/biodiversity specialist** confirmed that no plant SCC were observed within the project area of influence. The potential for the vegetation within the project site to support SCC is LOW.
- The **heritage specialist** confirmed that based on fieldwork, historic background research and the literature review undertaken as part of this assessment it is therefore our view that no heritage resources of cultural significance (i.e. built environment, cultural landscape, archaeology, or palaeontology) would be impacted through the proposed development.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)

Please refer to Appendix B2.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.

Positive

- Sections 01 – 03: No negative impacts on natural watercourses.
- Sections 01 – 03: No impacts on Fynbos, Thicket or any Red Listed ecosystem.
- Sections 01 – 03: No impacts on Plant SCC, Protected Tree Species and Fauna SCC.
- Sections 01 – 03: No impacts on highly sensitive agricultural fields.
- Section 03, Alternatives 1a & 1b: As the pump station will be located about 190 meters from any residential or commercial properties, the impact from the odor or noise will be minimal to none.
- Section 02, Alternative 02: The pump station is further away from the estuary and closer to the 1:100 year flood line.

Negative

- Sections 01 – 03: Temporary security & noise impacts for affected landowners during the construction phase.
- Sections 01 – 03: Temporary access restrictions during the installation of the sewer pipeline across roads/driveways of private properties during the construction phase.
- Sections 01 – 03: Temporary traffic impacts (i.e., construction of pipelines within roads).
- Section 03, Alternative 2: As the proposed location of the pumpstation is near commercial properties consideration must be given to the impact on the community. Some of the potential impacts on the community are the odor and noise from the pump station as well as the visual

impact. As the pumpstation will be constructed behind existing buildings the visual impact will be limited as the direct view of the pump station will be limited. The potential impacts of the odor won't be completely eliminated. However, they will be mitigated as the pumps will be enclosed.

- Section 03, Alternatives 1a & 1b: The pump station will remain close to the Estuary.

2. Recommendation of the Environmental Assessment Practitioner ("EAP")

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr

Impact Management Outcomes included in the EMPr.

- Minimise negative impacts of stormwater, sedimentation and erosion.
- Ensure no health risk due to emission of dust to the environment.
- Ensure nuisance from noise and vibration does not occur.
- Manage and minimise the nuisance effect created by construction traffic.
- Minimise waste discharged to the environment.
- Manage stockpile materials so that dust and sediment in run-off are minimised.
- Ensure that fuel and chemical storage is safe, and that any materials that escape do not cause environmental damage.
- Minimise soil lost during construction due to land-clearing.
- Ensure that degradation to existing botanical/biodiversity components are minimised and that any rehabilitation is undertaken with conservation orientated approach.
- Ensure that impacts to fauna species is minimised and / or avoided.
- Ensure equitable, fair and safe interaction on construction sites.
- Ensure efficient communication mechanisms in the implementation of environmental performance requirements.

2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

Refer to section 2.1, 2.3 & 2.4.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.

The proposed activity should be authorised:

- Limit / avoid potential pollution of aquatic resources due to overloaded systems.
- Ensure sufficient capacity of future development in Great Brak River.
- To reduce the use of Conservancy Tanks in Great Brak River.

Conditions to be include in the EA:

- The mitigation measures listed in the EMPr must be implemented and monitored by an ECO and relevant regulating authorities.

It is submitted that although the 'Most Preferred Alternative' (relocation of the cricket pump station) is likely to reduce environmental risk that is associated with the alternative of re-building the cricket pump station in the same location (Preferred Alternative), the concept of 'coming to source' must be considered. And in the case of the 'Most Preferred Alternative' the opposite of 'introducing the source' is a consideration. Design mechanisms through technology are available and can be implemented to manage and reduce potential (odour) risks, however it is acknowledged that once the pump station is constructed in the Most Preferred Alternative location (relocation), any potential future odour impacts will become a reality. Similarly, the design technology mechanisms for addressing and reducing the potential for spills at the Preferred Alternative location can address this risk without introducing a new potential impact.

The outcome of the stakeholder engagement process will therefore be important to give input as to the ultimate site selection between the Most Preferred and the Preferred alternative locations.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.
2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.
Five(5) year period to commence with the activity from date of issue of the EA and a further five (5) years to complete the activity from date of commencement.	

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.
Not applicable.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.
Waste must be collected and disposed of at a registered waste facility. No waste material may be left on the site.

5. Energy Efficiency

8.1.	Explain what design measures have been taken to ensure that the development proposal will be energy efficient.
Not applicable.	

SECTION K: DECLARATIONS

DECLARATION OF THE APPLICANT

Note: Duplicate this section where there is more than one Applicant.

I.....**S. NAIDOO**..... ID number .....**6210245252084**.....in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;

- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;

- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;

- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;

- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;

- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Signature of the Applicant: Date: 14 May 2025

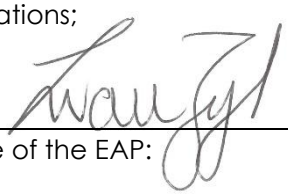
Mossel Bay Municipality

Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I ……**Louise-Mari van Zyl**……, EAP Registration number ……**2019/1444**…….. as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;



16 May 2025

Signature of the EAP: Date:

Cape Environmental Assessment Practitioners

Name of company (if applicable):

DECLARATION OF THE CANDIDATE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I ……**Mariska Byleveld**……, EAP Registration number ……**2023/6593**…….. as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

MByleveld — 14 May 2025

Signature of the EAP: Date:

Cape Environmental Assessment Practitioners

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

I ……, EAP Registration number …… as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Bianke Fouche....., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

16 May 2025

Signature of the ~~EAP~~: Date:

Specialist (Botanist)

Confluent Environmental

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Jackie Dabrowski, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

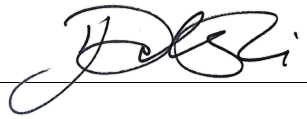
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.



Signature of the EAP: Date: 16 May 2025

Confluent Environmental

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I …… Johann Lanz ……., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

14 May 2025

Signature of the EAP: Date:

SoilZA

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Kim Daniels, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

14/05/2025

Signature of the EAP: Date:

Confluent Environmental

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

Note: Duplicate this section where there is more than one specialist.

I Stefan de Kock, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or

  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);

- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;

- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and

- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

14 May 2025

Signature of the EAP: Date:

Perception Planning

Name of company (if applicable):

DECLARATION OF THE REVIEW SPECIALIST

I ……., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

Signature of the EAP: Date:

Name of company (if applicable):