



# FINAL REPORT

## PART 2 AMENDMENT ASSESSMENT

for

### MUNICIPAL SEWER LINE - THEMBALETHU

on

Erf 5006, Portion 40/197, Portion 50/197 and  
Portion 58/197, Thembaletu, George  
Municipality

In terms of the

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



**Prepared for Holder of EA:**  
George Municipality

**Date: 2 December 2024**

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**Assisting Candidate EAP:** Mr Francois Byleveld (2023/6770)

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**Report Reference:** GEO379d/10

**Department Reference:** 16/3/3/5/D2/51/0014/24

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**Assisted By - Candidate EAP: Mr Francois Byleveld** (MSc Geology [University of the Free State] (Candidate EAPASA Registration Number: **2023/6770**) in assistance to the Appointed EAP.

**PURPOSE OF THIS REPORT:**

**FINAL PART 2 AMENDMENT ASSESSMENT REPORT FOR THEMBALETHU MUNICIPAL SEWER LINE**

**HOLDER OF EA:**

**George Municipality**

**CAPE EAPRAC REFERENCE NO:**

**GEO379d/10**

**SUBMISSION DATE**

**02 December 2024**

# FINAL PART 2 AMENDMENT ASSESSMENT REPORT

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

## MUNICIPAL SEWER LINE - THEMBALETHU

**Erf 5006, Portion 40/197, Portion 50/197 and Portion 58/197, Thembaletu, George  
Municipality**

Submitted for:

Departmental Compliance

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# FINAL PART 2 AMENDMENT ASSESSMENT REPORT

## 1. INTRODUCTION

---

George Municipality, hereafter referred to as the Applicant, has applied for an amendment of their valid Environmental Authorisation (EA) (DEA&DP Reference #16/3/1/1/D2/50/0060/12) for a section of the authorised bulk sewer line through the 'All Brick' site in Thembaletu.

The sewer line has an existing Environmental Authorisation (EA), dated 14 March 2014, with subsequent amendments to the Environmental Management Programme (EMP), approved on 17 November 2021. Sections of the line have been installed and the EA is deemed to be enacted and therefore valid.

The original EA states in Condition 14:

*"The applicant must submit an application for amendment of the environmental authorisation to the competent authority where any detail with respect to the environmental authorisation must be amended, added, substituted, corrected, removed or updated, further, the rights granted by this environmental authorisation are personal rights (i.e., not attached to a property, but granted to a natural or juristic person). As such, only the holder may undertake the activities authorised by the competent authority".*

The amendment applied for include:

- Realignment of a section of the already approved sewer pipeline route, along Erf 5006, Portion 40/197 and Portion 50/197, to avoid the majority of the informal settlement that established over the approved alignment during the COVID lock-down period. In addition to avoiding the subsequent expansion of the informal housing area, the realignment will also enable potential future connection of these informal households to the bulk sewer network, if deemed necessary by the Municipality at the time.
- Additional erosion protection measures on Portion 58/197.
- Inclusion of End-date (10-years from the issue of the Amendment Decision) to the development phase of the activity to align with the amended Environmental Regulations.



**Figure 1:** Green = Approved pipeline route (already constructed). Red = Approved pipeline route (not yet constructed). Yellow = Proposed amended pipeline route (to be constructed still).

Long sections of the original approved pipeline route, have already been installed, however the **need** for amending the approved route stems from uncontrolled land invasion since the issue of the Environmental Authorisation in 2014, subsequently preventing the Municipality from completing the remaining section along the original alignment, due to informal structures being erected over the approved sewer pipeline route (Figure 1). Furthermore, it is **desirable**, given the expanded informal housing area across the 'All Brick' brickworks site, that the route section be realigned to have the ability to accommodate such lower lying households as part of the gravity fed waterborne sewage system should the Municipality be in a position to service such households.

Not realigning this section of the approved sewer pipeline route, would require mass relocation of numerous informal dwellings (to allow workspace for installation) and since it is a gravity fed line, none of the informal dwellings (currently) below the (approved) route would then ever be able to connect to the Municipal sewer line in the future unless significant pumpstations are included at huge cost. Furthermore the Municipality is trying to do away with, and/or reduce pump stations as far possible due to the risk of increased maintenance. The cost and time delays associated with such a mass relocation effort to re-open the approved alignment, is not deemed reasonable considering the alternative and it is also not deemed feasible since there is a high likelihood of the sewer line then being re-occupied once installation is completed, which would make maintenance along that route near impossible and not practical.

Deviating this affected section of sewer pipeline route, has the added benefit of enabling all of the newly erected informal structures currently located on-top of, as well as downstream of the original approved route, to be able to connect to the municipal sewer system in the future as well, should the Municipality be able to do so.

### **Amendment (Description of Upgrade Of Bulk Sewer Infrastructure)**

Amendment is requested for the description of the Upgrade of Bulk Sewer Infrastructure on Page 2 of the Correction Notice, and Page 8 of the Environmental Authorisation (Ref: 16/3/1/1/D2/50/0060/12) and Condition 5.6. on Page 10 of the EA.

**From:** Upgrade of Bulk Sewer Infrastructure: Approximate to Plan No: 108429 GE 400 Rev I, dated 13 November 2013, including:

- New bulk gravity and rising mains totalling a distance of approximately 12km to service for UISP Areas 1, 2, 3, 5, 6A&B, 7 and 8A, B & C;
- Upgrade of Pacaltsdorp No. 1 Pumpstation and Thembaletu No. 6 Pumpstation.
- Decommissioning of Thembaletu Pumpstations No. 3, 4 & 5 and associated rising main sewer lines; and
- Five pipe bridges over the Schaapkop River, as well as several stream / tributary crossings as detailed and defined by the Water Use License Application.

**Amend To:** Upgrade of Bulk Sewer Infrastructure: Approximate to Plan No: 1762-SEW-001, dated 02 October 2024 and 1762-SEW-002, dated 30 July 2024 including:

- New bulk sewer mains totalling a distance of approximately 2.43km along Erf 5006, Portion 40/197 and Portion 50/197.
- Additional erosion protection measures on Portion 58/197 in the form of reno mattresses, junction boxes, stormwater headwalls and stormwater pipes.
- Three stream / tributary crossings as detailed and defined by the Water Use License Application.
- Addition of an 'end-date' to conclude installation (development/construction) phase of the activity (10-years from the issue of the Amendment Decision).

The remainder of the Environmental Authorisation is to remain the same.

## **2. LEGISLATIVE AND POLICY FRAMEWORK**

The applicable legislation has been updated since the submission of the Final BAR for the original route alignment, in 2014 and these changes in legislation have been considered as part of this Amendment Application process. The table below lists the applicable legislation and describes whether any additional considerations are applicable to the amendment (i.e. that were not considered in the final BAR).

**Table 1:** Legislation applicable to proposed Bulk Services Upgrade Pipeline Realignment in Thembaletu including any additional considerations applicable to the amendment of the EA.

<b>Legislation</b>	<b>Additional considerations for Bulk Services Upgrade Pipeline Realignment Amendment in Thembaletu.</b>
<b>NATIONAL LEGISLATION</b>	
The Constitution of the Republic of South Africa	No additional considerations applicable to the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembaletu.
National Environmental Management Act (NEMA, Act 107 of 1998) & EIA Regulations 2014, as amended.	The NEMA EIA Regulations were amended in 2014 & 2017. This application is being undertaken in terms of this legislation. All similar listed activities are applicable to what was originally assessed i.e. no additional activities are applicable to the Bulk Services Upgrade Pipeline Realignment Amendment in Thembaletu.

Legislation	Additional considerations for Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu.
National Environmental Management: Biodiversity (Act 10 of 2004)	The ecosystem status of the mapped vegetation type: (Garden Route Granite Fynbos) changed from Endangered to Critically Endangered in 2014 and Gazetted as such on 18/11/2022. The site sensitivity verification confirms that the ecological status remains the same as previously assessed: transformed and degraded with <b>no remnant Garden Route Granite Fynbos</b> along the section to be realigned.
Conservation of Agricultural Resources Act – CARA (Act 43 of 1983):	No additional considerations applicable to Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.
The Subdivision of Agricultural Land, Act 70 of 1970	No additional considerations applicable to Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.
National Water Act, No 36 of 1998	Amendment of the Water Use Licence (16/K30C/CI/2723) is being facilitated by Confluent Environmental for the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu. Water uses applied for includes Section 21(c) & Section 21(i). Any activities that impede or divert the flow of water in a watercourse or alter the bed, banks, course or characteristics of a watercourse (21c and 21i).
National Forests Act (No. 84 of 1998):	No natural forest or protected tree on / near site of the realigned route. No additional considerations applicable to Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu.
National Heritage Resources Act (NHRA, Act 25 of 1998)	A Notification of Intent to Develop (NID) for the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu has been submitted to Heritage Western Cape. HWC confirmed that no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.
<b>PROVINCIAL LEGISLATION</b>	
Western Cape Nature Conservation Ordinance (Act 9 of 2009).	No additional considerations applicable to the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George. Site conditions remain the same as previously assessed: transformed and degraded.
Western Cape Provincial Spatial Development Framework (PSDF)	No additional considerations applicable to the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.
<b>REGIONAL AND MUNICIPAL LEGISLATION</b>	
Garden Route District Municipality Spatial Development Framework	No additional considerations applicable to the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.
George Local Municipality Integrated Development Plan (IDP)	No additional considerations applicable to the proposed Bulk Services Upgrade

Legislation	Additional considerations for Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu.
	Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.
George Local Municipality Spatial Development Framework (SDP)	No additional considerations applicable to applicable to the proposed Bulk Services Upgrade Pipeline Realignment Amendment in Thembalethu, located within the urban context of George.

### 3. ADMINISTRATIVE DETAILS

Highlight the Departmental Region and District in which the intended application will fall	CAPE TOWN OFFICE (REGION 1)		GEORGE REGIONAL OFFICE (REGION 3)	
	City of Cape Town	Cape Winelands District	Central Karoo District	
	West Coast District	Overberg District	Garden Route District	
<b>Duplicate this section where there is more than one Applicant</b>				
1.	Name of Applicant:	George Municipality		
	Contact person name (if other):	Johannes Franciscus Koegelenberg		
	Company/ Trading name State Department/Organ of State:	George Municipality		
	Company Registration Number:			
	Postal address & Postal code:	P.O. Box 19, George	Code	6530
	Contact numbers:	Tel. 044 801 9111	Cell:	
	E-mail:	jkoegelenberg@george.gov.za		
2.	Company of EAP:	Cape Environmental Assessment Practitioners (Cape EAPrac)		
	EAP / Candidate EAP name:	Appointed EAP - Ms Louise-Mari van Zyl / Assisting Candidate EAP - Mr Francois Byleveld		
	EAP registration no:	Appointed EAP - 2019/1444 / Assisting Candidate EAP - 2023/6770		
	Postal address & Postal code:	P.O. Box 2070, George	Code	6530
	Contact numbers:	Tel. 044 874 0365	Cell:	071 603 4132
	E-mail:	louise@cape-eaprac.co.za / francois@cape-eaprac.co.za		
	<b>Duplicate this section where there is more than one Landowner</b>			
3.	Name of landowner:	George Municipality		
	Name of contact person for landowner (if other):	Johannes Franciscus Koegelenberg		
	Postal address & Postal code:	P.O. Box 19, George	Code	6530
	Contact numbers:	Tel. 044 801 9111	Cell:	

	E-mail:	jkoegelenberg@george.gov.za				
<p><b>Note:</b> The written consent form must be attached as Appendix B to this Form. If there is more than one cadastral, written consent must be provided for each cadastral unit by all landowners. The consent of the landowner or person in control of the land is not required for: a) linear activities; b) an activity directly related to prospecting or exploration of a mineral and petroleum resource or extraction and primary processing of a mineral resource; or c) strategic integrated projects ("SIPs") as contemplated in the Infrastructure Development Act, 2014 (Act No. 23 of 2014). For a Part 2 amendment process, the proposed amendment(s) must be brought to the attention of landowner who must be given a minimum period of 30 days to comment on the Report. Note that the landowner consent must be completed and submitted with the application form should the applicant not be the landowner.</p>						
4.	Name of Person in control of the land:	Same As Landowner				
	Contact person for 'person in control of the land' (if other):					
	Postal address & Postal code:				Code:	
	Contact numbers:	Tel.	+27(0)	Cell:	+27(0)	
	E-mail:					
<b>Duplicate this section where there is more than one Municipal Jurisdiction</b>						
5.	Municipality in whose area of jurisdiction the proposed activity will be undertaken:	George Municipality				
	Name of contact person:	Lionel Daniels				
	Postal address & Postal code:	P.O. Box 19, George			Code	6530
	Contact numbers:	Tel.	044 801 9354	Cell:		
	E-mail:	rldaniels@george.gov.za				

## 4. PLANNING CONTEXT

The planning requirements for the proposed Bulk Services Upgrade Pipeline Realignment in Thembaletu remain unchanged to those which were considered in the original Final Basic Assessment Report in 2014. The proposed development site was being utilised as an informal settlement as is still the case in 2024.

George is considered in the Provincial Spatial Development Framework (PSDF) to be an area for high priority fixed investment urban settlement, with the formalisation of erven and provision of basic services to existing settlements.

The Western Cape Provincial Spatial Development Framework (PSDF) was approved in 2014 by the Western Cape Parliament and serves as a strategic spatial planning tool that 'communicates the province's spatial planning agenda'. The PSDF puts in place a coherent framework for the province's urban and rural areas that:

- Gives spatial expression to national and provincial development agendas.
- Serves as basis for coordinated and integrated planning alignment of National Provincial Department Programmes.
- Support municipalities to fulfil their mandates in line with national and provincial agendas.

- Communicates the government's spatial development agenda.

The proposed development compliments the SDF's spatial goals that aim to take the Western Cape on a path towards:

- Greater productivity, competitiveness and opportunities within the spatial economy;
- More inclusive development and strengthening the economy in rural areas;
- Strengthening resilience and sustainable development.

The proposed activity complies with:

- Policy R1 (Protect Biodiversity and Ecosystem Services).
- Policy E3 (Revitalise and strengthen urban space-economies as the engine of growth).

The amended pipeline route **avoids high biodiversity sensitive areas** by limiting the route to **already disturbed and invasive vegetation/transformed areas**. The proposed activity strengthens the Municipality's ability to provide services to its residents as part of its service delivery mandate by not excluding the additional households that have occupied the site since COVID, whilst recognising the challenge that they now face with informal households having occupied the area where the pipeline route was previously approved.

According to the Spatial Development Framework of George Municipality (2019) the Bulk Sewer and Link services in Thembaletu have been identified as a priority in the next five years.

The proposed pipeline is in line with the following policies identified in the George Municipality SDF:

- Policy A1: Maintain, improve and expand basic services.
- Policy A2: Prioritise investment in the roll-out, maintenance and improvement of social infrastructure targeting poor households.
- Policy D1: Support and maintain the functionality of biodiversity areas.
- Policy D4: Manage watercourses so that they remain in a natural state or their present ecological status is improved or at least does not deteriorate.
- Policy F1: Maintain the urban edge as the development boundary where identified for settlements in the Greater George Area including the George City Area.

Erf 5006, Portion 40/197, Portion 50/197 and Portion 58/197 is currently zoned Agricultural Zone I. The amended pipeline route is located within the Urban Edge as delineated in the George Municipality Spatial Development Framework.

## 5. SITE DESCRIPTION AND ATTRIBUTES

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The short section of sewer pipeline that is to be re-routed is located along on Erf 5006, Portion 40/197, Portion 50/197 and Portion 58/197 in Thembaletu, George. These properties are located within the Urban Edge of George Municipality (Figure 2).



**Figure 2:** Proposed development site located within the Urban Edge (orange line) of George Municipality (GeorgeMunicipalGISViewer, 2024).

The Thembaletu area contains existing sewerage, electricity and water services. The amended pipeline route will cross various unregistered gravel roads as well as navigate between informal houses. The portion of sewer line that must be rerouted forms part of a larger sewer pipeline routing of which parts have already been implemented (Figure 1).

The proposed development route is highly transformed and invaded by informal settlements.



**Figure 3:** Original pipeline route site conditions indicating high levels of pollution and transformation. Toilets placed within watercourses not connected to any municipal sewer systems.





**Figure 4:** Informal houses erected over the approved sewer pipeline route since the issue of the Environmental Authorisation in 2014.



**Figure 5:** Informal houses erected since the issue of the Environmental Authorisation in 2014. Due to the presence of the informal houses, the implementation of the original approved alignment is no longer feasible. Dumping and removal of vegetation is evident across the 'All Bricks' brickworks area.



**Figure 6:** Informal houses erected on the original approved pipeline route with high levels of pollution.

## 6. SCREENING TOOL & APPLICABILITY OF SPECIALIST STUDIES

On 20 March 2020 the Minister of Forestry, Fisheries and the Environment published the general requirements for undertaking site sensitivity verification for environmental themes for activities requiring environmental authorisation (Government Gazette No. 43110). In terms of these requirements, prior to commencing with a specialist assessment, the **current land use** and **environmental sensitivity** of the site under consideration by the screening tool, must be confirmed by undertaking a site sensitivity verification by either an **EAP or a specialist**.

In accordance with the applicable protocols or minimum information requirements, the SSV must **confirm or dispute** the site sensitivities for each of the themes identified in the Screening Tool Report. The SSV must include a **motivation** for the **exclusion of any of the specialist assessments** identified in the Screening Tool Report which in the opinion of the EAP or specialist are **not considered relevant or required**.

The report uses national datasets to identify site sensitivities and potential specialist studies that may be required for any particular development. Since the datasets are not necessarily ground-truthed, there may be instances where the required specialist study is in actual fact not necessary.

Prior to commencing with a specialist assessment, the **current use of the land** must be verified and the environmental sensitivity of the site under consideration identified by the screening tool must be verified by undertaking a **site sensitivity verification** (SSV).

1. The SSV must be undertaken by an **EAP or a specialist**.
  - This site sensitivity verification report has been compiled by the EAP with specialist input where necessary.

2. A preliminary on-site inspection must be undertaken.
  - A site inspection was conducted on 01 November 2023.
3. A desktop analysis must be undertaken, alongside any other applicable/relevant information.
  - Consideration has been given to the George GIS Viewer, Cape Farm Mapper spatial layers, and Google Earth.

According to the Screening Tool Report for this site that was run on **12 June 2024**, the following summary of the development footprint environmental sensitivities is identified (Table 2).

**Table 2:** Summary of the development footprint environmental sensitivities.

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
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Below is confirmation of the studies required for the Application based on the sensitivity themes identified above.

**Agriculture Theme (Medium Sensitivity)**

The development of a sewer line with associated infrastructure will have a very narrow footprint. The majority of the pipeline will be in close proximity of steep slopes with informal houses, implying that it is not a feasible agricultural unit despite the Screening Tool Report indicating a medium sensitivity (Figure 7). **There are no reasonable grounds for any specialist studies to confirm this.**

The sensitivity rating is therefore **refuted** and the EAP is of the opinion that the Agricultural Sensitivity Theme is **Not Applicable** to the proposed development. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating of **Low** is selected, however Very-Low/Insignificant is more appropriate. It is submitted that an Agricultural Compliance Statement will not be undertaken for this theme.

The Western Cape Department of Agriculture has been approached for comment as part of the amendment application process, however no formal written comment has been received. It is noted that Section 24O of the Regulations stipulates that should an Authority not submit comment during the stipulated time, such Authority is deemed to not have comment.



**Figure 7:** Steep slopes and informal housing units located in close proximity to the proposed pipeline route.

#### **Animal Species Theme (Medium Sensitivity)**

The Screening Tool Report indicated the site sensitivity for animal species to be **Medium**. Due to the current condition / pollution of the proposed development route, it is highly unlikely that any species of conservation concern will find a suitable habitat in the surrounding area. The majority of mammals are being poached for food and/or killed by roaming domestic animals (Figure 8).

Following the outcome of a Site Sensitivity Verification undertaken by a Faunal Specialist, the sensitivity rating is **refuted** and was determined to be '**LOW**'. A **Terrestrial Animal Species Compliance Statement** has been undertaken to form part of this amendment application process.

CapeNature has been approached for comment during the public participation process, however no formal written comment has been received to date. It is noted that Section 240 of the Regulations stipulates that should an Authority not submit comment during the stipulated time, such Authority is deemed to not have comment.

**Table 3:** Animal Species Sensitivity Features.

Sensitivity	Feature(s)
Medium	Amphibia-Afrixalus knysnae
Medium	Aves-Circus ranivorus
Medium	Aves-Neotis denhami
Medium	Aves-Bradypterus sylvaticus
Medium	Mammalia-Chlorotalpa duthieae
Medium	Sensitive species 8
Medium	Invertebrate-Aneuryphymus montanus



**Figure 8:** Pollution along non-perennial tributary.

**Aquatic Biodiversity Theme (Very High Sensitivity)**

The Screening Tool Report indicated the site sensitivity for aquatic biodiversity to be **Very High** due to the presence of Critical Biodiversity Areas, non-perennial streams as well as the Skaapkop River to the south of the amended pipeline route.

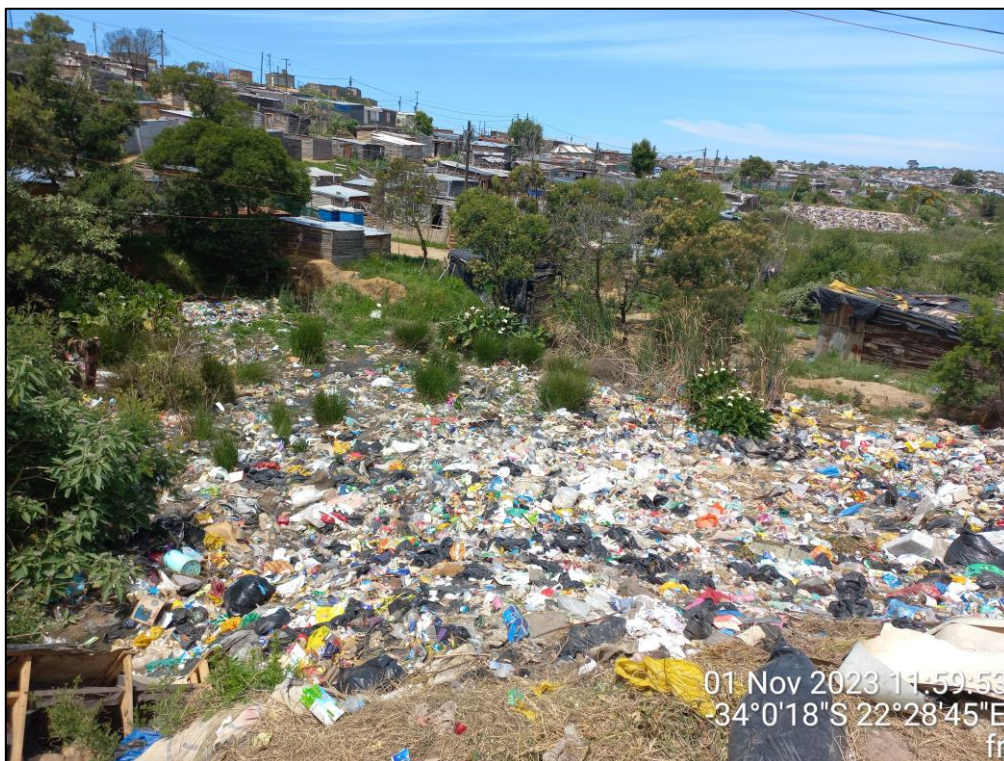
Following the outcome of a Site Sensitivity Verification completed by an Aquatic Specialist, the sensitivity rating of 'Very High' is **confirmed** due to the amended pipeline route that will have to physically cross watercourses and will therefore entail work within and adjacent to watercourses which could result in further degradation during both the construction and operational phases of the project.

A full **Aquatic Specialist Assessment** has been undertaken and forms part of this amendment application.

The Breede-Olifants Catchment Management Agency (BOCMA) has been approached for comment during the public participation process. The BOCMA provided formal written comment on the draft Part 2 Amendment Assessment Report on 20 October 2024 which is included as Appendix J to this Final Part 2 Amendment Assessment Report.



**Figure 9:** Pollution along non-perennial tributary.



**Figure 10:** Pollution in remnant wetland habitat.

### **Archaeological and Cultural Heritage Theme (Very High Sensitivity)**

The Screening Tool Report indicated the site sensitivity for archaeological and cultural heritage to be **Very High**. Due to the historic and ongoing land use, any potential archaeological sites on the proposed amended pipeline route will be out to context by now, thus being of low significance (Figure 11). Development of the proposed amended pipeline route is unlikely to have a notable impact on a Grade II Heritage site that may be in proximity to the proposed amended pipeline route.

The sensitivity rating is therefore **refuted** and the EAP is of the opinion that Archaeological and Cultural Heritage Theme is **Not Applicable**. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating of **Low** is selected.

A Notice of Intent to Develop was submitted to Heritage Western Cape upon which it was confirmed that there is no reason to believe that the proposed installation of a bulk gravity sewer pipeline on Erf 5006, Farm Sandkraal 197/50, Thembalethu, George, will impact on heritage resources, **no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.**

Heritage Western Cape will remain a registered stakeholder for the remainder of the amendment application process.



**Figure 11:** Ongoing land use in close proximity to the proposed pipeline route.

### **Civil Aviation Theme (High Sensitivity)**

The development of a sewer pipeline, within an urban area, will not exceed any of the Civil Aviation Regulations in terms of height and does not pose a threat to air traffic in terms of any obstruction.

The sensitivity rating is therefore **refuted** and the EAP is of the opinion that the Civil Aviation Theme is **Not Applicable** to the proposed development. Since there is no provision in the Protocols for 'not applicable' the lowest possible rating level of **Low** remains. A rating of Very-Low or Insignificant is more appropriate. There are no reasonable grounds to conduct any specialist studies to affirm this and further consultation with SACAA is not necessary.

### **Defence Theme (Low Sensitivity)**

The development will pose no threat to military or defence forces of South Africa. The proposed pipeline route is not situated near any military facilities.

The EAP is of the opinion that the theme is **Not Applicable** to this application. Since there is no provision in the Protocols for 'not applicable', the lowest rating of **Low** remains. A rating of Very-Low or Insignificant is more appropriate. There are no reasonable grounds to conduct any specialist studies to affirm this and further consultation with the Department of Defence is not necessary.

### **Plant Species Theme (Medium Sensitivity)**

The Screening Tool Report indicated the site sensitivity for plant species to be 'Medium'. Due to the current condition / pollution of the proposed development route, it is highly unlikely that any species of conservation concern will find a suitable habitat in the surrounding area. Although the vegetation present in proximity to the 'All Brick' brickworks site could be considered sensitive and could possibly retain significant biodiversity, the long-term viability and persistence of these areas are weak due to alien invasive species replacing indigenous vegetation as well as anthropogenic impacts (livestock grazing and plant collecting for medicinal uses).

Following the outcome of a Site Sensitivity Verification undertaken by a Botanical Specialist, the sensitivity rating of 'Medium' was **refuted** and a new sensitivity rating of '**LOW**' was confirmed. A **Terrestrial Plant Species Compliance Statement** was undertaken and forms part of this amendment application.

CapeNature has been approached for comment during the public participation period, however no formal written comment has been received to date. It is noted that Section 240 of the Regulations stipulates that should an Authority not submit comment during the stipulated time, such Authority is deemed to not have comment.

### **Terrestrial Biodiversity Theme (Very High Sensitivity)**

The Screening Tool Report indicated the site sensitivity for terrestrial biodiversity to be **Very High**.

The following aspects are also considered:

- The site does not form part of a formally protected area;
- The project will not introduce any direct/indirect threat to biodiversity through means of hazardous installations, contamination or pollution;
- The proposed development will not impact negatively on important ecosystem goods or services in the area which supports livelihoods;



- The development footprint is small and focussed on already disturbed land.
- The remaining natural areas along the tributaries will continue to function as an ecological corridor and link to remaining natural system;

Following the outcome of a Site Sensitivity Verification undertaken by a Biodiversity Specialist, the sensitivity rating of 'Very High' was **refuted** and a new sensitivity rating of '**LOW**' was confirmed. A **Terrestrial Biodiversity Compliance Statement** was undertaken and forms part of this amendment application.

CapeNature has been approached for comment during the public participation period, however no formal written comment has been received to date. It is noted that Section 24O of the Regulations stipulates that should an Authority not submit comment during the stipulated time, such Authority is deemed to not have comment.

## 7. PROPOSAL DESCRIPTION

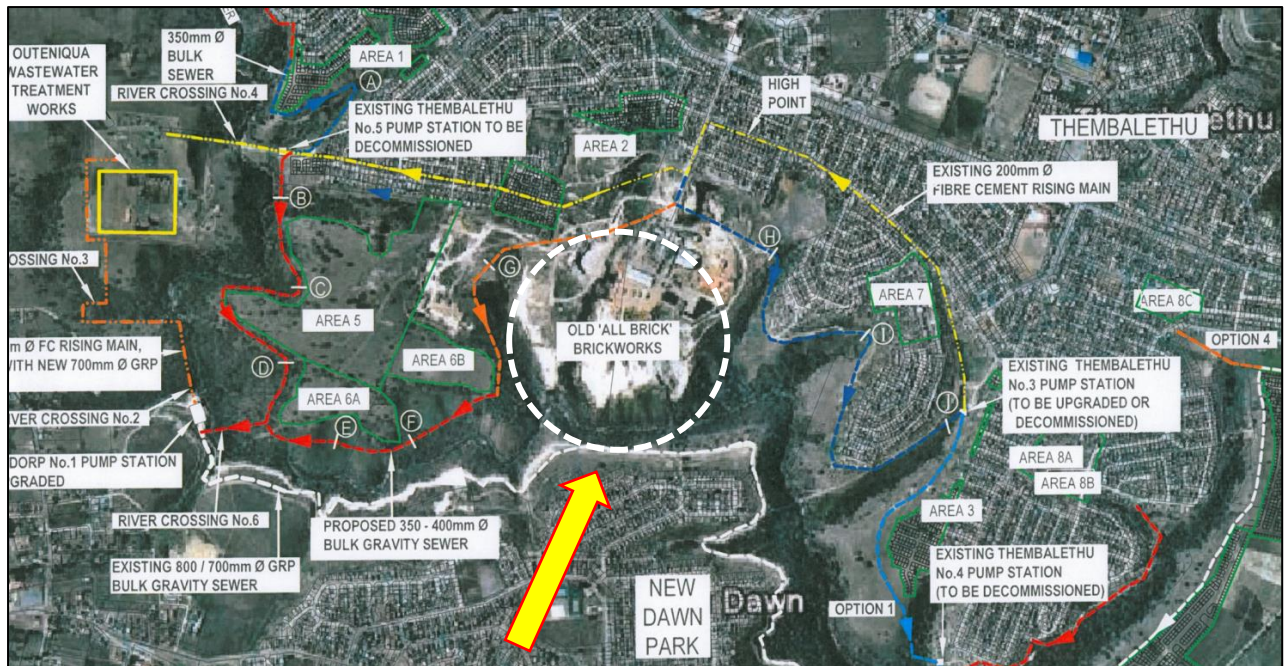
This Amendment Application is for the purposes of re-aligning the bulk sewer pipeline route authorised in 2014 as well as to implement additional erosion protection measures at already installed sections of the originally approved bulk sewer pipeline.

### **7.1. AUTHORISED BULK SEWER PIPELINE ROUTE (No-Go / Status Quo Alternative)**

The original approved pipeline route is considered a No-Go Status Quo Alternative due to it physically not being possible to implement due to the obstruction of newly erected informal houses across the route, since the issue of the Environmental Authorisation in 2014.

The original ROD stipulated the following regarding the upgrade of bulk sewer infrastructure:

- Approximate to Plan No: 108429 GE 400 Rev I, dated 13 November 2013, including:
  - New bulk gravity and rising mains totalling a distance of approximately 12km to service for UISP Areas 1, 2, 3, 5, 6A&B, 7 and 8A, B & C;
  - Upgrade of Pacaltsdorp No. 1 Pumpstation and Thembaletu No. 6 Pumpstation;
  - Decommissioning of Thembaletu Pumpstations No. 3, 4 & 5 and associated rising main sewer lines; and
  - Five pipe bridges over the Schaapkop River, as well as several stream / tributary crossings as detailed and defined by the Water Use License Application.



**Figure 12:** Approved Plan No: 108429 GE 400 Rev I referenced in ROD from 14 March 2014 indicating the location of the 'All Brick' brickworks site with WHITE dotted line and the approved sewer line running to the north of the All Brick site (Aurecon, 2013) in ORANGE and BLUE lines.

The approved pipeline route (Figure 12 and Figure 13) was authorised north of the old 'All Brick' brickworks site as being the lowest point for the gravity sewer line at the time with no households occupying the lower lying 'All Brick' site. The 'All Brick' brickworks site however was the subject of **severe land invasion/occupation during and following the COVID period** when there was an understandable **lapse in monitoring protocol in terms of anti-land invasion** by the Municipality.

The 'All Brick' brickworks site is **now completely occupied** by informal dwellings making it a near impossible challenge to implement the approved route (logistical challenges with relocation of families / safety for contractors in terms of their staff and materials, as well as safety in terms of wide open excavated trenches that need to be dug to lay the pipe that poses a threat to especially free roaming livestock and children, cost and time delays associated with relocation of families, as well as the reality that once installed the route will most likely be re-occupied once more making future maintenance impossible).

In addition, should these informal areas be formalised (services) in future by the Municipality, with the original alignment of the sewer pipeline in the approved position, all of the households on the 'All Brick' brickworks site will be excluded from a formal sewage reticulation network.

Due to informal housing units erected since the issue of the Environmental Authorisation (Figure 14 and Figure 15) the alignment north of the 'All Brick' brickworks site is therefore **not deemed feasible any longer**.



Figure 13: Approved pipeline route north of the old 'All Brickworks' brickworks site (Aurecon, 2013).



Figure 14: Aerial imagery of the old 'All Brick' brickworks site in 2014 (Google Earth, 2024).



**Figure 15:** Aerial imagery of the old 'All Brick' brickworks site in 2023 (Google Earth, 2024).

It is therefore proposed to **realign the pipeline route** that was originally located **between Point G and Point H in** Figure 13, to the **south** of the old 'All Brick' brickworks site/approved route, to avoid the majority of the newly erected settlements (Figure 16) and to enable future connection of these households to the sewer network if deemed necessary by the Municipality. The realignment of the sewer pipeline route to the south of the 'All Brick' brickworks site will also enable that if this area is formalised/serviced in future, households in this newly occupied area, can also be connected to the municipal sewage system.



**Figure 16:** Proposed pipeline route (Yellow Line) around the southern border of the old 'All Brick' brickworks. Original approved pipeline route (Red Line).

The **biophysical impact** of the new proposed pipeline route will be **similar** compared to the impacts assessed for the original environmental authorisation application because of the already degraded nature of the area. The specialists noted that the **state of the site has degraded significantly** since the issue of the ROD in 2014/approved EMP, with uncontrolled **invasive alien vegetation** along the rivers, **extremely high levels of pollution** associated with the informal settlement conditions and absence of sewage/solid waste removal services, as well notably **erosion in the tributaries**.

## **7.2. PROPOSED AMENDMENTS (Preferred Alternative)**

### *Pipeline Length and Design:*

Details of the proposed sewer pipeline realignment on Erf 5006, Portion 40/197 and Portion 50/197 being the focus of this amendment application can be viewed in Table 4.

**Table 4:** Estimated bulk gravity sewer design proposed (Lukhozi Consulting Engineers (Pty) Ltd, 2024).

<b>Estimated Length</b>	<b>Estimated Pipe Diameter</b>	<b>Estimated Number of Manholes</b>
2430m	200mm ø	87

The bulk sewer lines will be designed to the following standards (Table 5):

**Table 5:** Sewer line design standards (Lukhozi Consulting Engineers (Pty) Ltd, 2024).

Minimum Full Pipe Velocity	0.7 m/s (due to the low design flows calculated velocities are as low as 0.4-0.5 m/s).
Maximum Full Pipe Velocity	3.5 m/s.
Minimum Cover To Pipes	1.0m below finished road level and 0.8m below finished ground level.
Maximum Depth	4.0m below finished ground level.
Maximum Manhole Spacing	80m.
Minimum Pipe Size	200mm ø.
Minimum Erf Connection Size	110mm ø.
Minimum Gradient Sewer Main	1:150 (per George Municipality requirements)

Sewer mains will be uPVC Class 34 heavy-duty solid wall (complying with SANS 1601) with a pipe stiffness of 400 kPa.

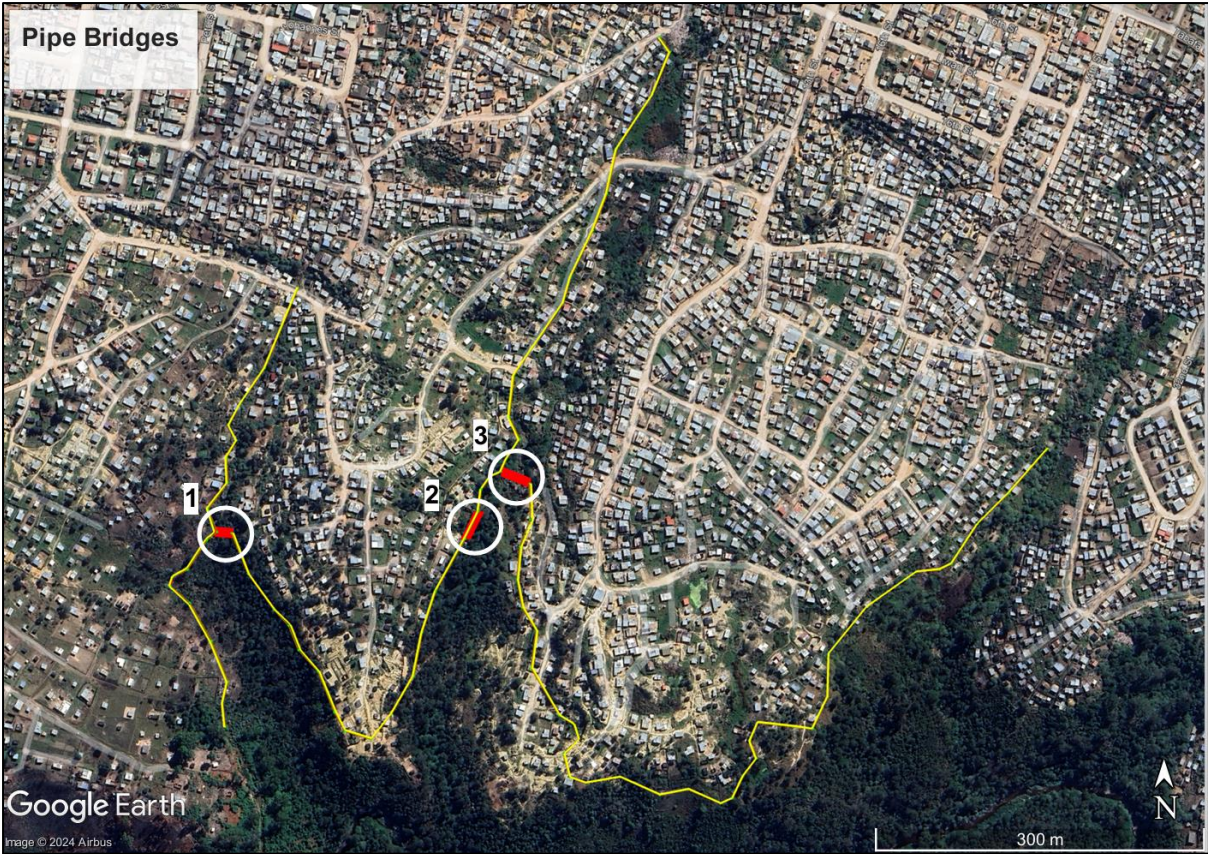
Manhole Design:

Manholes are to be constructed using 1.0m ø precast concrete rings. Manholes deeper than 1.5m will be reduced to 0.75m ø precast concrete rings. Manhole covers will be flush with ground level within roadways, 50mm above ground level in road reserves and 500mm above ground level in open spaces.

Main Tributary Crossings:

Due to the proposed sewer pipeline route following the lowest possible contour line to allow for maximum gravitation drainage of sewage, main tributaries will be crossed along the length of the sewer pipeline route (Figure 17 and Table 6).

Main crossings will be by means of sewer **pipe bridges** constructed with reinforced concrete. Various minor tributaries will also have to be crossed along the length of the proposed pipeline route (Proposed method of installation: dig pipeline into the watercourse bed approximately 1m deep) (please see Appendix D). Stormwater protection measures will be implemented at the crossings (soil rip-rap, gabion baskets and reno mattresses etc.). Exposed faces of gabion baskets and reno mattresses are to be protected by means of shortcreting/gunite to prevent vandalism and theft.



**Figure 17:** Location of three main tributary crossings (Red Circles) along the new proposed sewer pipeline route.

**Table 6:** Main stream crossing details (Lukhozi Consulting Engineers (Pty) Ltd and Confluent Environmental (Pty) Ltd, 2024).

<b>Crossing Number and Approximate Length</b>	<b>GPS Coordinates and Property</b>	<b>Proposed Method of Installation</b>
#1. ~9m across.	34° 0'32.80"S 22°28'28.30"E Erf 5006	Bridge on concrete supports. Pipeline to be uPVC, laid on a bed of sand in a concrete bridge structure.
#2. ~9m across.	34° 0'32.59"S 22°28'37.09"E Erf 5006	Bridge on concrete supports. Pipeline to be uPVC, laid on a bed of sand in a concrete bridge structure. This pipe bridge is not over a main tributary but rather over a large erosion gully caused by stormwater runoff.
#3. ~19.5m across.	34° 0'31.18"S 22°28'38.61"E Erf 5006	Bridge on concrete supports. Pipeline to be uPVC, laid on a bed of sand in a concrete bridge structure.

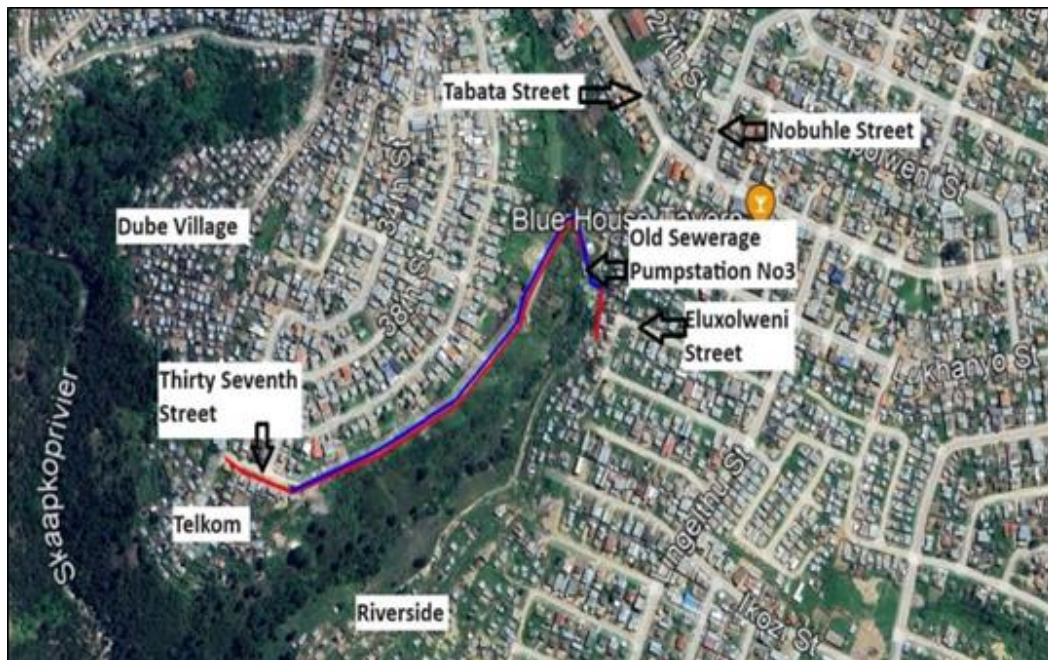
Additional Stabilisation of Beds and Banks on Portion 58/197:

In addition to the proposed sewer pipeline realignment forming the basis of this Amendment Application, additional stabilisation of beds and banks are proposed on Portion 58 of Farm 197.

The following bulk gravity sewers have recently (June 2024) been installed as part of the original Environmental Authorisation (Ref: 16/3/1/1/D2/50/0060/12) (Table 7 and Figure 18):

**Table 7:** Bulk gravity sewers installed on Portion 58/197 (Lukhozi Consulting Engineers (Pty) Ltd, 2024).

Portion	Length	Pipe Diameter
1A	316m (200mm $\varnothing$ ) 50m (355mm $\varnothing$ )	200mm $\varnothing$ and 355mm $\varnothing$ as per the existing pipeline with steeper falls of minimum 1 in 150.
1B	120m (355mm $\varnothing$ )	355 mm $\varnothing$ as per the existing pipeline with steeper falls of minimum 1 in 150.



**Figure 18:** Existing bulk sewer line with poor gradient (Red Line) and new bulk sewer line completed during June 2024 (Blue Line) (Lukhozi Consulting Engineers (Pty) Ltd, 2024) – similar alignment.

Following the completion of the above works, it was identified that additional protection in the form of reno mattresses, stormwater headwalls and junction boxes are required to prevent erosion and damage to the newly constructed sewer pipeline as well as the stream bed below the newly constructed gabion wall (34° 00' 40.22" S ; 22° 29' 20.05" E) (Figure 19).





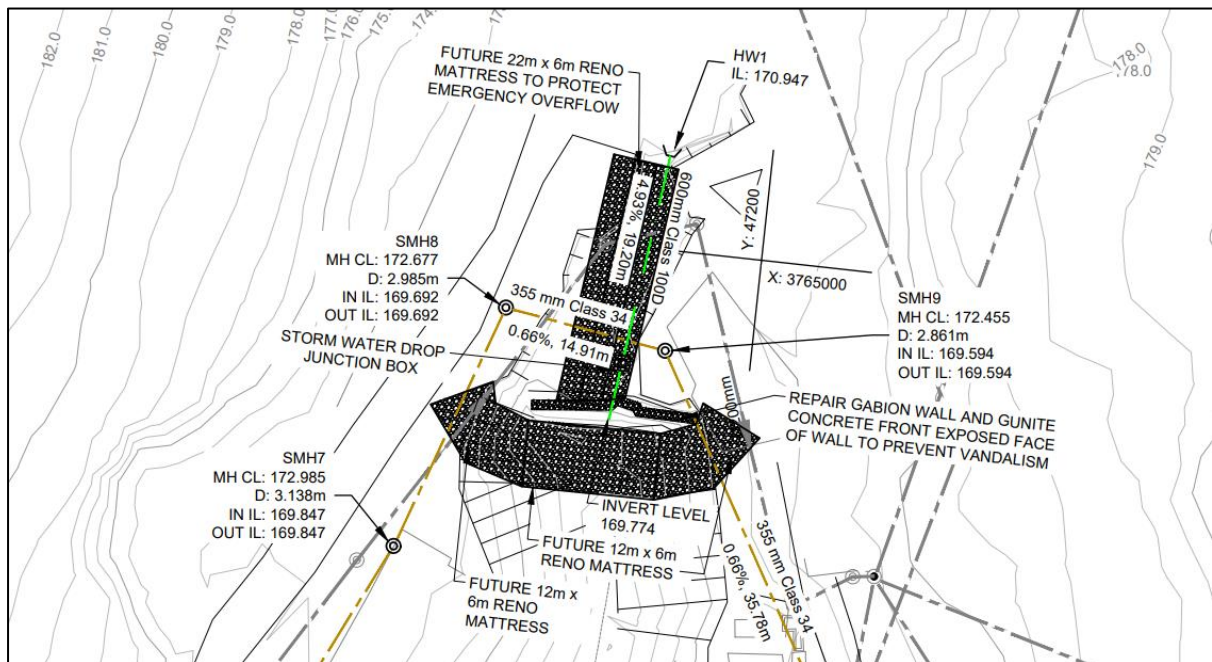
**Figure 19:** Newly constructed gabion wall. Reno mattresses proposed at the foot of the gabion wall to prevent erosion from plunging water in the stream bed. Reno mattress proposed above the gabion wall to prevent erosion caused by blocked stormwater pipelines causing water to flow over the face of the gabion wall.

Since completion of construction of the gabion wall, it has been noted that the inflow of the stormwater pipe continuously blocks with litter resulting in water overtopping the crossing point and washing down the face of the gabions. It is proposed to provide additional protection on the form of a 22m x 6m reno mattress on top of the crossing to prevent erosion. This installation is within the footprint of an existing road.



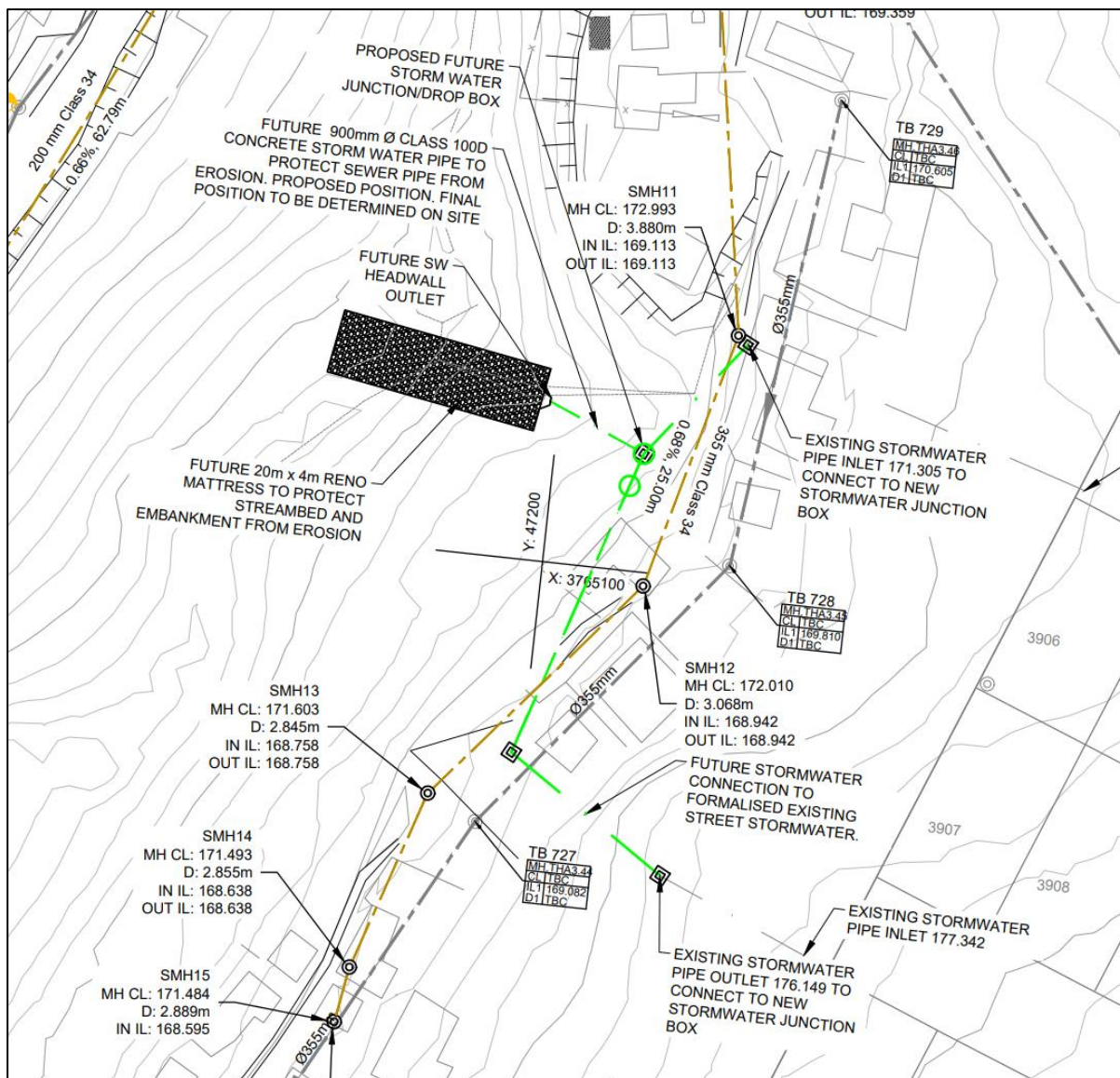
**Figure 20:** Schematic drawing of the proposed Reno mattress above the gabion wall to prevent erosion caused by blocked stormwater pipelines causing water to flow over the face of the gabion wall (Confluent Environmental, 2024).

Three (3) x reno mattresses of 12m x 6m each are proposed below the already constructed gabion wall at the same location of the stream crossing on Portion 58 of Farm 197. The proposed reno mattresses will prevent erosion of the stream bed caused by plunging water, as well as water entering from the west and east of the gabion wall (Figure 21).



**Figure 21:** Proposed reno mattresses above and below the newly constructed gabion wall to prevent erosion (Lukhozi Consulting Engineers (Pty) Ltd, 2024).

To prevent erosion/damage from stormwater entering Portion 58 of Farm 197 from the west and east, an additional reno mattress (20m x 4m) crossing the width of the stream, stormwater headwalls and a stormwater junction boxes are proposed (34° 00' 42.61" S ; 22° 29 '20.39" E). 900mm ø class 100D concrete stormwater pipes are proposed and will convey stormwater underneath the newly constructed 355mm ø sewer pipeline (Figure 22).



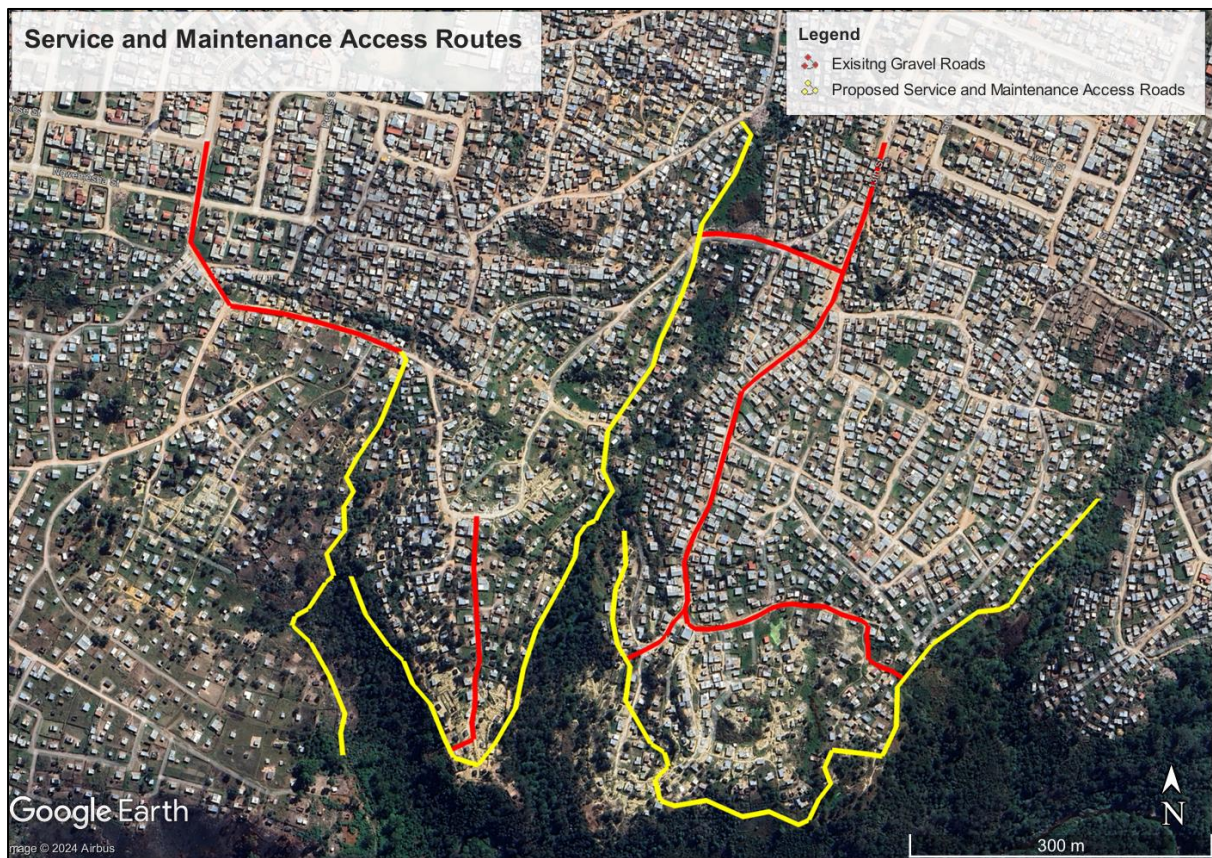
**Figure 22:** Proposed reno mattress (20m x 4m), stormwater headwalls, stormwater junction boxes and 900mm ø stormwater pipes (Lukhozi Consulting Engineers (Pty) Ltd, 2024).

Access routes for pipeline installation and future service and maintenance of the sewer infrastructure:

Access to the proposed amended sewer pipeline route will be via existing informal gravel roads (portions of which will be subject to upgrades due to damage caused by erosion) (Figure 23) (please see Appendix D for the full set of proposed development plans which includes detailed drawings of the access routes with elevation profiles done at various points along the access routes).

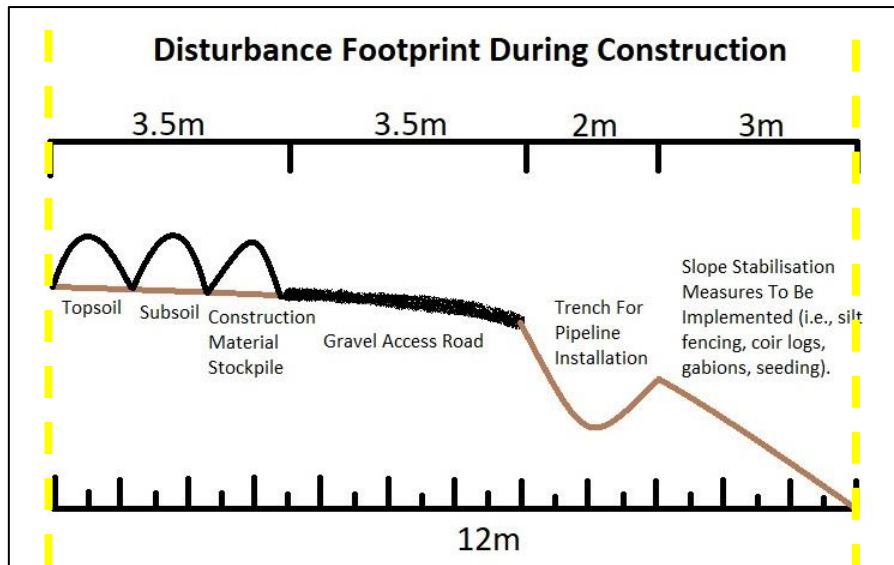
An approximately 3.5m – 4.5m wide gravel road will be created in parallel to the proposed sewer pipeline route, in order to enable installation, as well as future service and maintenance.

Access routes will not cross the main stream crossings (these will stop at the side of each tributary), although heavy machinery will access the tributaries during installation only. The provision of access tracks to provide safe access for future maintenance work on the pipeline routes have been included in the original assessment and approval (please see Section 6 on

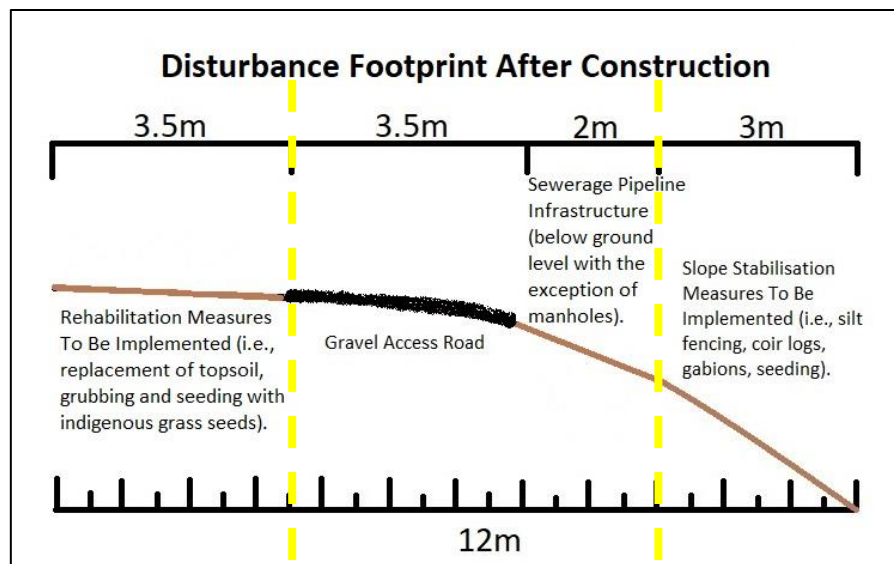


**Figure 23:** Existing gravel roads (RED Lines) to be utilised to gain access for pipeline installation. Proposed service and maintenance access roads (YELLOW Lines) parallel to the proposed sewer pipeline alignment.

The total disturbance footprint (including access road, material stockpile, topsoil and subsoil stockpiles, excavated trench) will be approximately between 8m – 15m wide during construction at the steepest sections (Figure 24). In extreme cases the construction width could be as wide as a maximum of 25m due to cutting into the disturbed informal areas. Once the sewer pipeline infrastructure is installed and rehabilitation measures implemented, the disturbance footprint (consisting of the gravel access road of ~3.5m - 4.5m and sewer pipeline infrastructure) will be approximately 5.5m wide (Figure 25).



**Figure 24:** Typical disturbance footprint during construction of sewerage pipeline infrastructure.



**Figure 25:** Typical disturbance footprint after construction of sewerage pipeline infrastructure.

### 7.3. ALTERNATIVES COMPARISON

**Table 8:** Positive and negative impacts comparison between the No-Go Status Quo Alternative (original approved pipeline route) and the Preferred Alternative (proposed amended pipeline route).

IMPACT	NO-GO ALTERNATIVE (ORIGINAL APPROVED ROUTE NOT POSSIBLE TO IMPLEMENT)	PREFERRED ALTERNATIVE (PROPOSED AMENDED ROUTE)
POSITIVE	<ul style="list-style-type: none"> <li>No construction disturbance.</li> <li>No loss of vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>The realignment of the sewer pipeline route to the south of the 'All Brick' brickworks site will ensure that if this area can also be formalised/serviced in future, should the households in this</li> </ul>

		<p>area be connected to the formal sewage system.</p> <ul style="list-style-type: none"> <li>• Reduce pollution caused by sewage flowing into tributaries.</li> <li>• Support ecological diversity by reducing pollution and removal of invasive alien species on the pipeline route during construction.</li> <li>• Support the George Municipality Spatial Development Framework by providing maintenance and improvement of social infrastructure targeting poor households.</li> <li>• Support and maintain the functionality of biodiversity areas.</li> <li>• Manage watercourses so that they remain in a natural state, or their present ecological status is improved or at least does not deteriorate.</li> <li>• Maintain the urban edge as the development boundary were identified for settlements in the Greater George Area including the George City Area.</li> <li>• Increase living standards of current occupiers/residents of the Thembaletu area by reducing uncontrolled sewage flows in the surrounding environment.</li> <li>• Will provide greater access for future maintenance required on the bulk sewer system in the Thembaletu area.</li> <li>• Employment opportunities during construction.</li> <li>• The realignment of the proposed bulk sewer pipeline and additional protection measures will not negatively affect the larger conservation plans in the Western Cape and Garden Route.</li> <li>• The proposed bulk sewer upgrades will not compromise or cause the loss of plan species of conservation concern.</li> </ul>
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<b>NEGATIVE</b>	<ul style="list-style-type: none"> <li>• Bulk sewer pipeline will not be implemented due newly erected houses since the issue of the Environmental Authorisation in 2014 physically obstructing the pipeline route.</li> <li>• Pollution caused by uncontrolled flow of sewage into tributaries will not decrease due to informal housing units on the 'All Brick' brickworks site not being able to connect to the municipal sewer systems.</li> <li>• Loss of ecological diversity due to pollution caused by uncontrolled sewage flows/overflows and leaks.</li> <li>• Temporary noise during construction.</li> <li>• Temporary construction traffic associated with the development phase.</li> <li>• Development of a new structure(s) within the landscape, however, the pipeline is proposed to be installed underground with minimal infrastructure such as manholes being visible to the community.</li> <li>• No employment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of vegetation (however the proposed development site is highly transformed and almost entirely invaded by alien vegetation species.</li> <li>• Temporary noise during construction.</li> <li>• Temporary construction traffic associated with the development phase.</li> <li>• Development of a new structure(s) within the landscape, however, the pipeline is proposed to be installed underground with minimal infrastructure such as manholes begin visible to the community.</li> </ul>
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## 8. NEMA LISTED ACTIVITIES

**Table 9:** NEMA Listed activities authorised.

LISTED ACTIVITIES AUTHORISED IN THE ORIGINAL ENVIRONMENTAL AUTHROISATION (DEA&DP REFERENCE # 16/3/1/1/D2/50/0060/12)	SIMILARLY LISTED ACTIVITES IN NEMA, 1998 (ACT NO. 107 OF 1998)
<p><b>Government Notice No. R544 of 18 June 2010:</b>  <b>Activity Number 9.</b>            The construction of facilities or infrastructure exceeding 1000 metres in</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b>  <b>Activity Number 10.</b>            The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent,</p>

<p>length for the bulk transportation of water, sewage or storm water –</p> <p>(i) with an internal diameter of 0.36 metres or more; or</p> <p>(ii) with a peak throughput of 120 litres per second or more,</p> <p>excluding where:</p> <p>a. such facilities or infrastructure are for the bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or</p> <p>b. where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.</p>	<p>process water, waste water, return water, industrial discharge or slimes –</p> <p>(i) with an internal diameter of 0,36 metres or more; or</p> <p>(ii) with a peak throughput of 120 litres per second or more; excluding where —</p> <p>(a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or</p> <p>(b) where such development will occur within an urban area.</p>
<p><b>Government Notice No. R544 of 18 June 2010:</b></p> <p><b>Activity Number 11.</b></p> <p>The construction of:</p> <p>(i) canals;</p> <p>(ii) channels;</p> <p>(iii) bridges;</p> <p>(iv) dams;</p> <p>(v) weirs;</p> <p>(vi) bulk storm water outlet structures;</p> <p>(vii) marinas;</p> <p>(viii) jetties exceeding 50 square meters in size;</p> <p>(ix) slipways exceeding 50 square meters in size;</p> <p>(x) buildings exceeding 50 square meters in size; or</p> <p>(xi) infrastructure or structures covering 50 square meters or more,</p> <p>Where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of the watercourse, excluding where such construction will occur begin the development setback line.</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b></p> <p><b>Activity Number 12.</b></p> <p>The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; — excluding—</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</p> <p>(ff) the development of temporary infrastructure or structures where such</p>



	<p>infrastructure or structures will be removed within 6 weeks of the commencement of the development and where indigenous vegetation will not be cleared.</p>
<p><b>Government Notice No. R544 of 18 June 2010:</b>  <b>Activity Number 18.</b>  The infilling or depositing of any material or more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock from</p> <ul style="list-style-type: none"> <li>(i) a watercourse;</li> <li>(ii) the sea;</li> <li>(iii) the seashore;</li> <li>(iv) the littoral active zone, an estuary or distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater – but excluding where such infilling, depositing, dredging, excavation, removal or moving:</li> </ul> <ul style="list-style-type: none"> <li>(i) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or</li> <li>(ii) occurs behind the development setback line.</li> </ul>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b>  <b>Activity Number 19.</b>  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;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <ul style="list-style-type: none"> <li>(a) will occur behind a development setback;</li> <li>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</li> <li>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</li> <li>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</li> <li>(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.</li> </ul>
<p><b>Government Notice No. R544 of 18 June 2010:</b>  <b>Activity Number 23.</b>  The transformation of undeveloped, vacant or derelict land to –</p> <ul style="list-style-type: none"> <li>(i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or</li> <li>(ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectares but less than 20 hectares;</li> </ul> <p>-</p> <p>except where such transformation takes place for</p> <ul style="list-style-type: none"> <li>(i) linear activities;</li> </ul>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b>  <b>Activity Number 27.</b>  The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>

<p>(ii) for purposes of agriculture or afforestation, in which case Activity 16 of Notice No. R. 545 applies.</p>	
<p><b>Government Notice No. R544 of 18 June 2010:</b> <b>Activity Number 37.</b></p> <p>The expansion of facilities or infrastructure for the bulk transportation of water, sewage or storm water where:</p> <p>(a) the facility or infrastructure is expanded by more than 1000 meters in length; or</p> <p>(b) where the throughput capacity of the facility or infrastructure will be increase by 10% or more –</p> <p>excluding where such expansion:</p> <p>(i) relates to transportation of water, sewage or storm water within a road reserve; or</p> <p>(ii) where such expansion will occur within urban areas but further than 32 meters from a watercourse, measured from the edge of the watercourse.</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b> <b>Activity Number 46.</b></p> <p>The expansion and related operation of infrastructure for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes where the existing infrastructure—</p> <p>(i) has an internal diameter of 0,36 metres or more; or</p> <p>(ii) has a peak throughput of 120 litres per second or more; and</p> <p>(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or</p> <p>(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more;</p> <p>excluding where such expansion—</p> <p>(aa) relates to the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes within a road reserve or railway line reserve; or</p> <p>(bb) will occur within an urban area.</p>
<p><b>Government Notice No. R544 of 18 June 2010:</b> <b>Activity Number 40.</b></p> <p>The expansion of</p> <p>(i) jetties by more than 50 square metres;</p> <p>(ii) slipways by more than 50 square metres; or</p> <p>(iii) buildings by more than 50 square metres;</p> <p>(iv) infrastructure by more than 50 square metres</p> <p>within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, but excluding where such expansion will occur behind the development setback line.</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b> <b>Activity Number 48.</b></p> <p>The expansion of—</p> <p>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</p> <p>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;</p> <p>where such expansion occurs— (a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding—</p> <p>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour; (bb) where such</p>

	<p>expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies; (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 23 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such expansion occurs within an urban area; or (ee) where such expansion occurs within existing roads, road reserves or railway line reserves.</p>
<p><b>Government Notice No. R544 of 18 June 2010:</b> <b>Activity Number 56.</b></p> <p>Phased activities for all activities listed in this Schedule, which commenced on or after the effective date of this Schedule, where any one phase of the activity may be below a threshold but where a combination of phases, including expansions or extensions, will exceed a specified threshold; -</p> <p>excluding the following activities listed in this Schedule: 2; 11 (i)-(vii); 16 (i)-(iv); 17; 19; 20; 22 (i) &amp; 22 (iii); 25; 26; 27 (iii) &amp; (iv); 28; 39; 45 (i)-(iv) &amp; (vii)-(xv); 50; 51; 53; and 54.</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 1 of 2014:</b> <b>Activity Number 67.</b></p> <p>Phased activities for all activities—</p> <p>(i) listed in this Notice, which commenced on or after the effective date of this Notice or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; excluding the following activities listed in this Notice—</p> <p>17(i)(a-d); 17(ii)(a-d); 17(iii)(a-d); 17(iv)(a-d); 17(v)(a-d); 20; 21; 24(i); 29; 30; 31; 32; 34; 54(i)(a-d); 54(ii)(a-d); 54(iii)(a-d); 54(iv)(a-d); 54(v)(a-d); 55; 61; 64; and 65; or (ii) listed as activities 5, 7, 8(ii), 11, 13, 16, 27(i) or 27(ii) in Listing Notice 2 of 2014 or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices;</p> <p>where any phase of the activity was below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.</p>
<p><b>Government Notice No. R546 of 18 June 2010:</b> <b>Activity Number 4.</b></p> <p>The construction of a road wider than 4 metres with a reserve less than 13,5 meters.</p> <p>(d) In Western Cape:</p> <p>i. In an estuary;</p> <p>ii. All areas outside urban areas;</p> <p>iii. In urban areas:</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 3 of 2014:</b> <b>Activity Number 4.</b></p> <p>The development of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <p>i. Western Cape</p> <p>i. Areas zoned for use as public open space or equivalent zoning; ii. Areas outside urban areas;</p> <p>(aa) Areas containing indigenous vegetation;</p> <p>(bb) Areas on the estuary side of the</p>

<p>(aa) Areas zoned for use as public open space within urban areas; and  (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose.</p>	<p>development setback line or in an estuarine functional zone where no such setback line has been determined; or  iii. Inside urban areas:  (aa) Areas zoned for conservation use; or  (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority.</p>
<p><b>Government Notice No. R546 of 18 June 2010:</b>  <b>Activity Number 13.</b>  The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:  (1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluding from this list.  (2) the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No 544 of 2010.  d) In the Western Cape  i. In an estuary;  ii. Outside urban areas, the following:  (aa) A protected area identified in terms of NEMPAA, excluding conservancies;  (bb) National Protected Area Expansion Strategy Focus areas;  (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;  (dd) Sites or areas identified in terms of an international Convention;  (ee) Core areas in biosphere reserves;  (ff) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 3 of 2014:</b>  <b>Activity Number 12.</b>  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;  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.</p>

<p>(gg) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p> <p>iii. In urban areas, the following:</p> <p>(aa) Areas zoned for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</p> <p>(cc) Areas seawards of the development setback line;</p> <p>(dd) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.</p>	
<p><b>Government Notice No. R546 of 18 June 2010:</b>  <b>Activity Number 16.</b>  The construction of:</p> <p>(i) jetties exceeding 10 square meters in size;</p> <p>(ii) slipways exceeding 10 square meters in size;</p> <p>(iii) buildings with a footprint exceeding 10 square meters in size; or</p> <p>(iv) infrastructure covering 10 square meters or more</p> <p>where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>(d) In the Western Cape</p> <p>i. All watercourse;</p> <p>ii. In an estuary;</p> <p>iii. Outside urban areas, in:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) World Heritage Sites;</p> <p>(dd) Sensitive areas as identified in an environmental management framework</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 3 of 2014:</b>  <b>Activity Number 14.</b>  The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(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.</p> <p>i. Western Cape</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) World Heritage Sites;</p> <p>(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;</p>

<p>as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(ee) Sites or areas identified in terms of an International Convention;</p> <p>(ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves;</p> <p>(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p> <p>(ii) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p> <p>iv. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose;</p> <p>(cc) Areas seawards of the development setback line or within 100 metres of the high water mark where no setback line.</p>	<p>(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;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p>(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.</p>
<p><b>Government Notice No. R546 of 18 June 2010:</b>  <b>Activity Number 24.</b>  The expansion of</p> <p>(a) jetties where the jetty will be expanded by 10 square meters in size or more;</p> <p>(b) slipways where the slipway will be expanded by 10 square meters or more;</p> <p>(c) buildings where the buildings will be expanded by 10 square meters or more in size; or</p> <p>(d) infrastructure where the infrastructure will be expanded by 10 square meters or more</p> <p>where such construction occurs within a watercourse or within 32 meters of a watercourse, measured from the edge of</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 3 of 2014:</b>  <b>Activity Number 23.</b>  The expansion of—</p> <p>(i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or</p> <p>(ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more;</p> <p>where such expansion occurs— (a) within a watercourse;</p> <p>(b) in front of a development setback adopted in the prescribed manner; or</p> <p>(c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; excluding the expansion of infrastructure or structures within existing ports or harbours that</p>

<p>a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>i. In an estuary;</p> <p>ii. All watercourses;</p> <p>iii. Outside urban areas, in:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an International Convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(ff) Core areas in biosphere reserves;</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve;</p> <p>(hh) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p> <p>iv. Inside urban areas:</p> <p>(aa) Areas zone for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for conservation purpose.</p>	<p>will not increase the development footprint of the port or harbour.</p> <p>i. Western Cape</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites;</p> <p>(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;</p> <p>(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;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p>(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.</p>
<p><b>Government Notice No. R546 of 18 June 2010:</b>  <b>Activity Number 26.</b>          Phased activities for all activities listed in this Schedule and as it applies to a specific geographical areas, which commenced on or after the effective date of this Schedule, where any phase, including expansions or extensions, will exceed a specified threshold.</p>	<p><b>Similar Activity In NEMA, 1998 (Act No. 107 of 1998) Listing Notice 3 of 2014:</b>  <b>Activity Number 26.</b>          Phased activities for all activities—</p> <p>i. listed in this Notice and as it applies to a specific geographical area, which commenced on or after the effective date of this Notice; or</p> <p>ii. similarly listed in any of the previous NEMA notices, and as it applies to a specific</p>

All the areas as identified for the specific activities listed in this schedule.	geographical area, which commenced on or after the effective date of such previous NEMA Notices— where any phase of the activity was below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold; — excluding the following activities listed in this Notice— 7; 8; 11; 13; 20; 21; and 24. All the areas as identified for the specific activities listed in this Notice.
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Due to the condition of the site and scope of the activity remaining the same as was originally assessed in the Basic Assessment process in 2014, the assessment of the impacts related to the upgrades of the bulk sewerage infrastructure remain applicable to this amendment application.

Therefore, the avoidance, mitigation, management monitoring and rehabilitation identified during the original Basic Assessment Process in 2014 remain applicable to the amended bulk sewer pipeline route and are contained in the updated Environmental Management Programme (EMPr) for implementation.

All additional mitigation measures related to impacts on the new aligned section of the proposed bulk sewer pipeline route have been included in this report as well as the updated EMPr.

Noted that it is only a short section of the approved sewer pipeline that is to be re-aligned. The remainder of the sewer line is either implemented already, or will remain along the approved alignment until implemented.

## 9. NEED AND DESIRABILITY

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

The Municipality originally identified the need for this project in 2013 that resulted in the subsequent Environmental Authorisation being issued for the sewer line. Subsequently the Municipality determined that they are not able to implement according to the approved alignment due to the area having been occupied unlawfully at high density. It is neither cost, nor time efficient to relocate the numerous affected families that now reside on the route earmarked (approved) for the sewer line. Amending the approved route along the specified section is deemed necessary to ensure continued implementation of the project.

### Need:

The proposed development is in line with all the provincial, district and local development policies. The timing is correct for this development as it will:

- Create employment opportunities during the construction phase;
- Contribute to the economic growth of Thembalethu (providing much needed sewerage infrastructure for informal housing);
- Increase the holistic financial sustainability of George Municipality.



### Desirability:

The proposal is regarded as desirable because the proposed development:

- Is unlikely to impact negatively on existing land use rights of neighbouring property owners.
- It will not prevent any surrounding owner to exercise their legal land use rights.
- Will create employment opportunities during the construction phase.
- It will provide much needed sewerage infrastructure in the Thembalethu area.
- It will reduce pollution within informal residential neighbourhoods in Thembalethu.
- It will increase the quality of living for all occupiers/residents of the Thembalethu area by reducing pollution.
- It will increase the ecological state of biodiversity habitats in the surrounding area by reducing pollution as a result of raw sewage flowing into natural watercourse habitats.

### Questions to be engaged with when considering need & desirability:

#### **1. How will this development impact the ecological integrity of the area?**

The Thembalethu area is highly transformed, degraded and polluted by the lack of municipal services infrastructure. Informal houses are not connected to the municipal sewage system and therefore sewage is flowing directly into tributaries and into the Skaapkop River. The proposed pipeline route is highly invaded by alien vegetation and the installation of sewerage infrastructure will not decrease the ecological integrity of the area, but rather increase it by reducing pollution in the Thembalethu area.

#### **2. 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?**

The proposed development will be limited to areas already disturbed, transformed and highly infested with alien vegetation. A full aquatic biodiversity impact assessment was undertaken as part of this Amendment Application process which identified various mitigation measures that aims to reduce the impact on the biophysical environment during construction and operational phases of the proposed development.

The installation of sewerage infrastructure will at least maintain the ecosystems by addressing pollution in the Thembalethu area associated with sewer spilling into the environment.

#### **3. How will this development pollute and/or degrade the biophysical environment?**

The proposed development will not pollute and/or degrade the biophysical environment. The installation of sewerage infrastructure will reduce pollution in the Thembalethu area. Various mitigation measures were identified in the Aquatic Biodiversity Impact Assessment in order to reduce the impact that construction and operational activities will have on the biophysical environment.

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

General construction waste during the development phase of the proposed project. Waste produced during construction will be collected and removed by appointed contractors to a registered waste management facility (records must be kept and provided to the environmental control officer for auditing purposes). Alternatively, the material can be re-used in the construction phase where fill material is required.

## **5. How will this development use and/or impact on non-renewable resources?**

The proposed development will not make use of municipal services for construction purposes. Non-treated (raw) water must be utilised for construction so as to conserve potable water sources.

## **6. How will the ecological impacts resulting from this development, have an impact on people's environmental right in terms of the following:**

### Negative impact:

- Temporary noise during construction.
- Temporary construction traffic associated with the development phase.
- Development of a new structure(s) within the landscape, however, the pipeline is proposed to be installed underground with minimal infrastructure such as manholes being visible to the community.

### Positive impacts:

- Reducing pollution in the Thembalethu area.
- Providing the opportunity for the George Municipality to connect surrounding settlements with the new sewerage infrastructure system.
- Employment opportunities during construction.

### Socio-economic impacts:

- Employment opportunities during the construction.
- Increase in living standards due to decrease in pollution.

### Positive and negative ecological impacts:

- Result in limited loss of vegetation, however the proposed pipeline route is highly transformed and invaded by alien vegetation species.
- Decrease in pollution.

In response to the draft Part 2 Amendment Assessment Report, the DEA&DP requested clarity on why the amendment is needed and desirable:

- The existing Thembalethu bulk sewer system is overloaded, with numerous blockages and leaks resulting in raw sewage flowing into watercourse systems.
- The proposed sewerage pipeline infrastructure has been specifically designed to rectify the constraints experienced by current sewerage systems by providing enough capacity to accommodate the informal housing developments erected in the area.
- Long sections of the original approved pipeline route, have already been constructed, however uncontrolled land invasion since the issue of the Environmental Authorisation in 2014, prevents the Municipality from completing the remaining section due to informal structures being erected over the approved sewer pipeline route.
- Implementing this last remaining section of the sewer line along the approved route, would require mass relocation of numerous informal dwellings (to allow workspace for installation) and since it is a gravity fed line, none of the informal dwellings below the original approved route would ever be able to connect to the Municipal sewer line in the future.
- Deviating this short section of sewer pipeline route has the added benefit of enabling all of the newly erected dwellings currently located on-top of, as well as downstream

of the original approved route, to be able to connect to the municipal sewer system in the future as well, should the Municipality be able to do so.

## 10. SPECIALIST INVESTIGATIONS

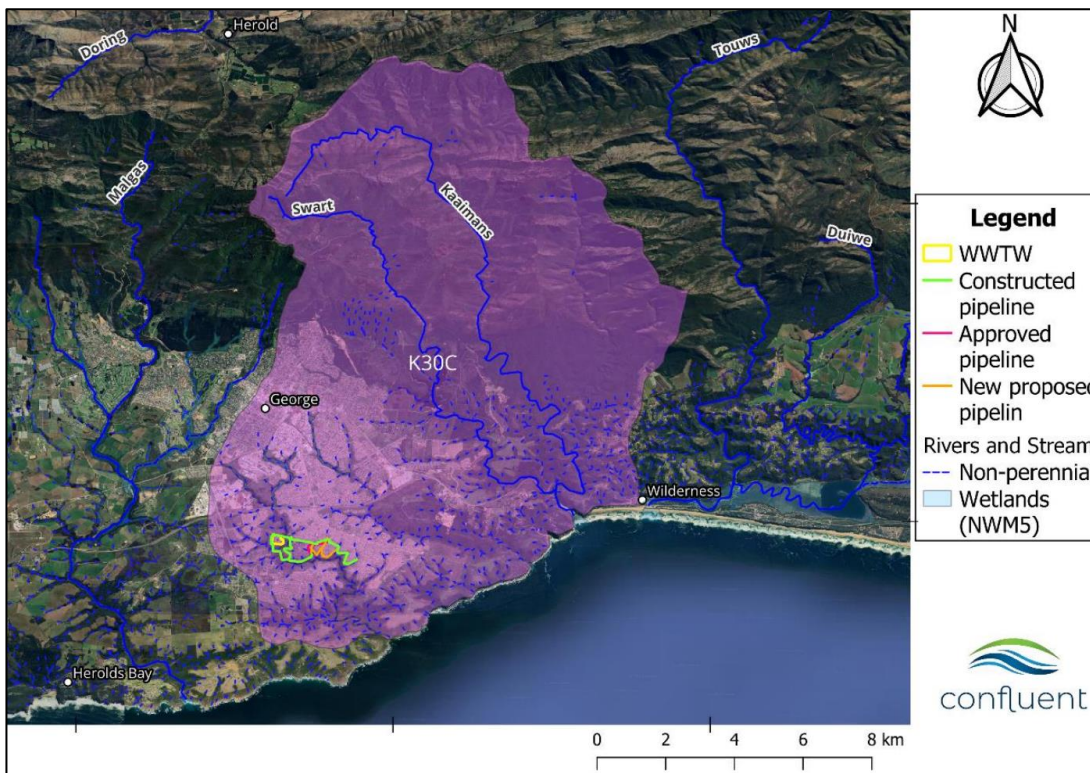
This section of the report was completed with input from the following specialists:

- Aquatic Biodiversity Impact Assessment: Confluent Environmental.
- Terrestrial Biodiversity and Botanical Compliance Statement: Confluent Environmental.
- Terrestrial Animal Species Compliance Statement: Confluent Environmental.

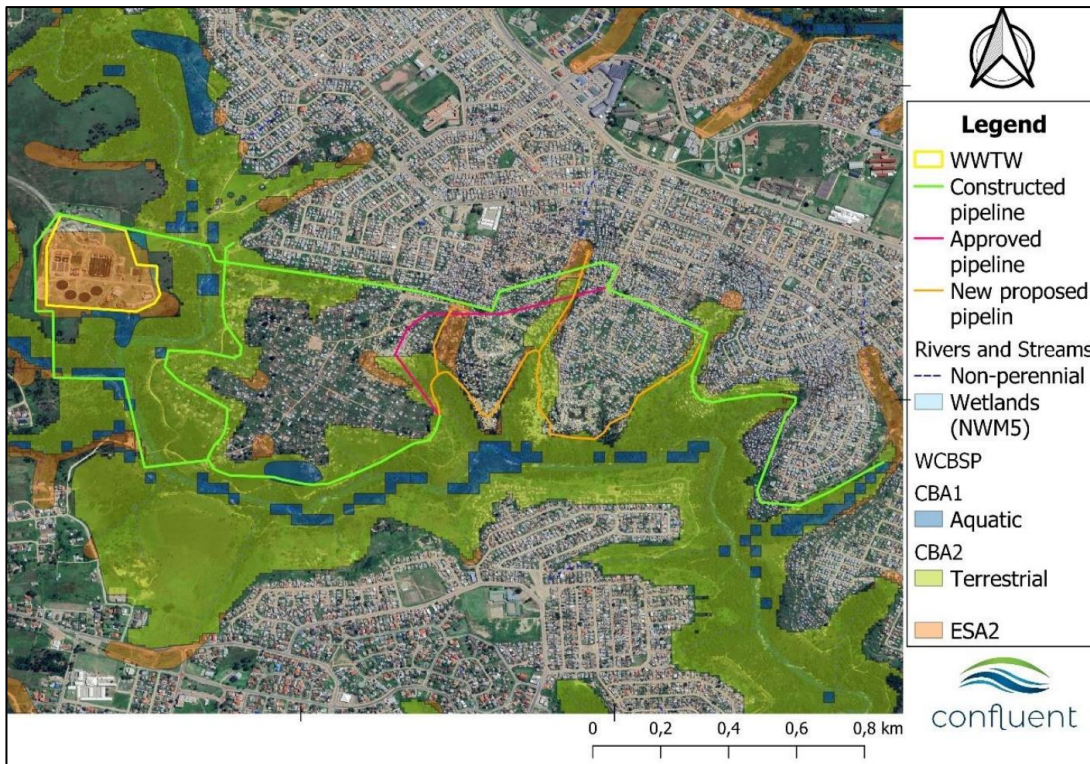
The sections below provide the conclusionary statements from the above-mentioned specialists.

### 10.1. AQUATIC BIODIVERSITY

The proposed bulk sewer pipeline route is located in the quaternary catchment K30C draining in a southerly direction towards the Skaapkop River (Figure 26).



**Figure 26:** Thembaletu bulk sewerline in quaternary catchment K30C (Confluent Environmental, 2024). The Western Cape Biodiversity Spatial (WCBS; 2017) indicates a range of classification areas within and/or adjacent to the proposed development footprint that was taken into consideration (Figure 27). The majority of the proposed sewer pipeline route traverse the edge of Terrestrial Critical Biodiversity Areas (CBA1).



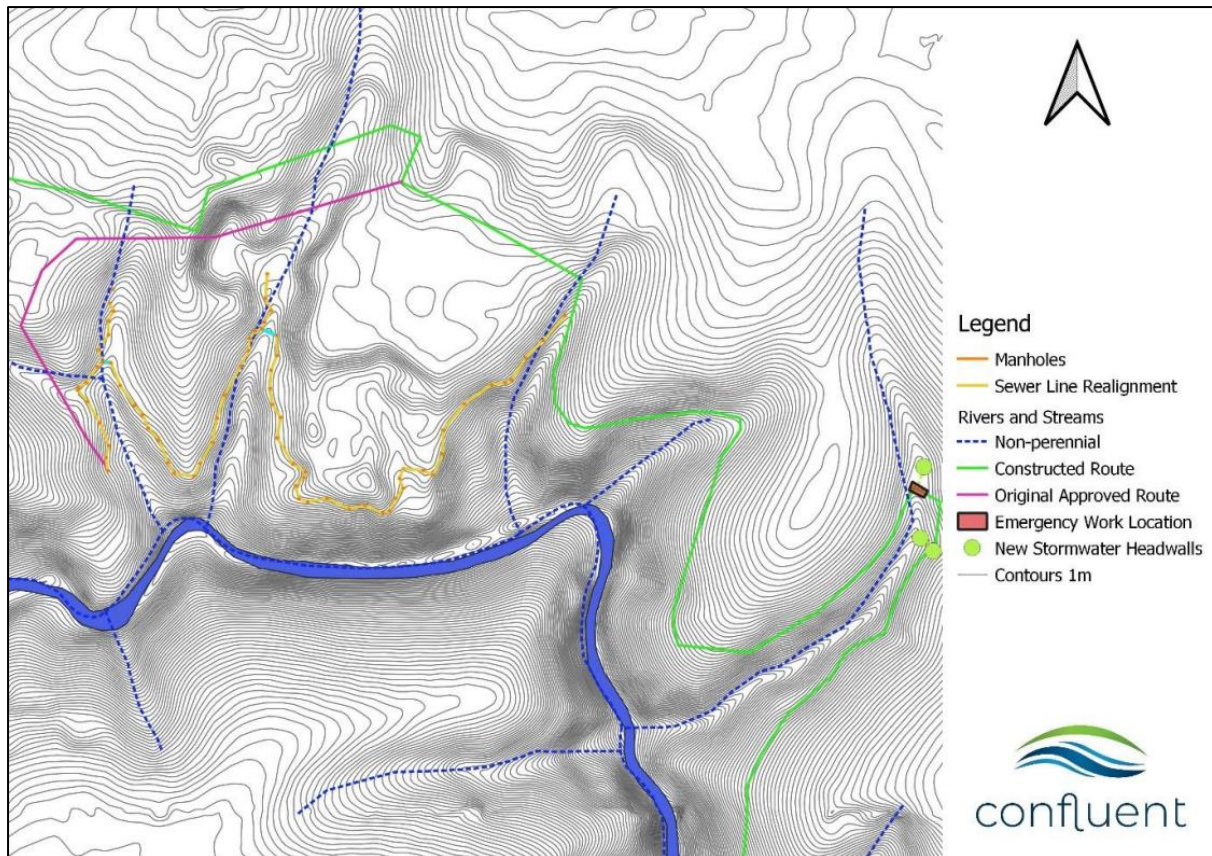
**Figure 27:** Proposed new sewer pipeline alignment in relation to the conservation areas identified in the WCBSP (Confluent Environmental, 2024).

Conservation Categories Definition and Management Objectives:

**Table 10:** Conservation categories definitions and management objectives (Extract from Aquatic Biodiversity Impact Assessment Confluent Environmental, 2024).

WCBSP Category	Definition	Management Objective
Critical Biodiversity Area 1 (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.
Ecological Support Area 2 (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 proposed sewer pipeline alignment crosses a number of non-perennial drainage lines which drain to the Skaapkop River in the valley bottom to the south and southwest of the sewer line (Figure 28). There are no mapped wetlands in proximity to the realigned sewer pipeline route.



**Figure 28:** Mapped watercourse using the DWS 1:50 000 flow paths layer and the National Wetland Map 5 (NWM5) (Confluent Environmental, 2024).

### **Impacts Assessed:**

- **Excessive disturbance of soil and plants in the watercourse and riparian areas (Figure 11).**
  - The construction of watercourse pipe bridge crossings will entail work with heavy machinery within and on the banks of the watercourse. Due to the slope of the landscape, this work is unavoidable, however, the disturbance footprint must be kept to a minimum by following mitigation measures identified in Figure 11. Even though a degree of mitigation can be achieved, this impact is rated as a Moderate-Negative impact both with and without mitigation.
- **Stormwater runoff from disturbed areas (Table 12).**
  - Due to the steep sloping landscape of the proposed sewer pipeline route, the impact of stormwater runoff from disturbed areas can be reduced to **Negligible-Negative**, provided that the mitigation measures that were identified are followed. All slopes end in a watercourse and therefore adaptive management principles must continuously be applied in order to prevent silt-laden water from leaving the construction site.
- **Material and vehicle management: Pollution of the watercourse (Table 13).**
  - Large quantities of soil will need to be stockpiled during construction for reuse or to be removed from site and disposed of out a registered landfill facility. The pollution of watercourses impact can be reduced to **Negligible-Negative** when all mitigation measures identified are applied.

- **Post-construction rehabilitation and site closure (Table 14).**
  - Once construction phase activities are completed along the proposed sewer pipeline route, topsoil must be replaced and the area revegetated to promote stabilisation of soil and prevent erosion and the spread of alien vegetation species. When all mitigation measures are implemented, the post-construction rehabilitation and site closure impact can be reduced to **Negligible-Negative**.
- **Additional rubbish dumping in watercourses due to improved access along benching/access (Table 15).**
  - The creation of additional vehicle access due to benching for the sewer pipeline installation, will create the opportunity for greater amounts of rubbish dumping and accessibility to otherwise steeper/vegetated areas. Restricting the newly created access routes will reduce the impact of pollution due to rubbish dumping to **Minor-Negative**, as dumping is still expected to occur to a certain extent.
  - The George Municipality must remove illegally dumped material found along the route on a regular basis as and when they have to conduct maintenance along the route.
- **Pipeline blockages and sewage spills (Table 16).**
  - Due to the isolated location of the proposed sewer pipeline, leaking due to blockages may occur, causing pollution for extended periods of time without response. Sewage leaks will never be entirely eliminated, however the pollution and eutrophication of receiving watercourses can be reduced by following identified mitigation measures to result in a **Minor-Negative** impact.
- **Channel incision or erosion due to changes in bed and channel characteristics at tributary crossings (Table 17).**
  - The alteration of beds and channels of the major tributary crossing points could result in altered flow paths and subsequently in increased erosion. The impact of degradation of habited, reduced water quality, and ongoing maintenance can be reduced to **Negligible-Negative** when all identified mitigations measures are applied.

Summary:

According to the Screening Tool Report, the sensitivity for Aquatic Biodiversity is '**Very High**' due to the presence of Critical Biodiversity Areas, non-perennial streams as well as the Skaapkop River to the south of the pipeline route. This sensitivity was **Confirmed** due to the proposed sewer pipeline route physically crossing watercourses and therefore entailing work within and adjacent to these watercourses which could result in further degradation during both the construction and operational phases of the development.

Watercourses affected by the proposed sewer line realignment as well as emergency works to the existing sewer lines, are all in relatively poor conditions. Mitigation measures through the construction and operational phase of the sewer pipeline are recommended to maintain the Present Ecological State in its current state and ensure no further decline. The sewer pipeline is a vital basic service to the residents of Thembaletu, as well as critical to reducing flows of untreated sewage and sillage into natural watercourses.

**Table 11:** Construction Phase Impact: Excessive disturbance of soil and plants in the watercourse and riparian areas (Confluent Environmental, 2024).

Project phase	Construction			
Impact	Excessive disturbance to soil and plants in the watercourse and riparian areas			
Description of impact	Vehicles, workers and materials active on the bed, banks and adjacent steep slopes.			
Mitigatability	Medium	Mitigation exists and will notably reduce significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• Prior to construction, the minimum footprint of disturbance must be delineated and should include vehicle access points, material stockpile areas, refuelling areas and actual work areas. A No-Go area must be delineated 2 m beyond the disturbance footprint. The delineated No-Go area must be indicated using construction mesh attached to wooden droppers or similar materials. Alternatively, danger tape could be used if the previously mentioned materials could be stolen, but is less effective.</li> <li>• As far as possible the watercourse should be accessed from a single point only to reduce disturbance to features such as the bed and banks. <ul style="list-style-type: none"> <li>• Signage indicating No-Go areas must be printed and placed on fencing.</li> </ul> </li> <li>• All contractors must be briefed that vehicles, workers and materials may not encroach into No-Go areas around watercourses.</li> <li>• As far as possible, try to keep vehicles out of the watercourse, working from the banks from the inside towards the outside to minimise disturbance. Excavators/Backhoes should operate from the maximum distance possible to reduce soil compaction and disturbance.</li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Medium term	Impact will last between 5 and 10 years	Short term	Impact will last between 1 and 5 years
Extent	Limited	Limited to the site and its immediate surroundings	Very limited	Limited to specific isolated parts of the site
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Almost certain / Highly probable	It is most likely that the impact will occur	Likely	The impact may occur
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	Medium	The affected environment will only recover from the impact with significant intervention
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	Minor - negative		Minor - negative	
Comment on significance	This impact can be mitigated to a degree following the recommended mitigation measures, but work will still need to be undertaken resulting in disturbance to the bed and banks of the watercourse.			
Cumulative impacts	Not applicable			

**Table 12:** Construction Phase Impact: Stormwater runoff from disturbed areas (Confluent Environmental, 2024).

Project phase	Construction			
Impact	Stormwater runoff from disturbed areas			
Description of impact	Erosion of soil from disturbed areas resulting in downstream deposition and destabilisation of banks or slopes			
Mitigatability	Medium	Mitigation exists and will notably reduce significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• Weekly and daily checks for predicted rainfall. Proactive steps to be taken in response to predicted rainfall.</li> <li>• Do not continue work during rainfall, and ensure the site is prepared to minimise erosion and sediment-laden runoff in advance of rainfall.</li> <li>• The site office / vehicle should have a store of materials suitable for rapid preparation and response to rainfall such as shade-cloth (silt-fencing &amp; check dams), wooden droppers, sand bags, hessian fabric, and fencing wire.</li> <li>• All material stores should be kept on flat areas and be bunded to prevent material loss during rainfall.</li> <li>• When construction commences in the watercourse, erect an instream silt fence using sand bags to hold down shade netting (90%) which should aim to intercept very low base flows of water and trap any silt. Excess silt must be removed from the trap to retain its effective use.</li> <li>• Soil from the trench for installation of the pipeline should be preferably placed on the upslope side of the trench so it washes back into it in the event of rain, and not down the slope. Alternatively, small sections of trenching must be undertaken at a time to reduce the risk of soil washing downslope.</li> <li>• Monitor the site during / following periods of rainfall, and install check dams at points where runoff collects using sand bags and hessian or shade cloth (90%). <ul style="list-style-type: none"> <li>• Following rainfall, water pumped out of trenches or other excavations must not be directed to the watercourse. A temporary coffer dam can be created using shadecloth as a filter material to contain silt-laden water which can then flow through vegetation into the watercourse where feasible.</li> </ul> </li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Short term	Impact will last between 1 and 5 years	Brief	Impact will not last longer than 1 year
Extent	Local	Extending across the site and to nearby settlements	Very limited	Limited to specific isolated parts of the site
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Low	Natural and/ or social functions and/ or processes are somewhat altered
Probability	Almost certain / Highly probable	It is most likely that the impact will occur	Probable	The impact has occurred here or elsewhere and could therefore occur
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	High	The affected environment will be able to recover from the impact
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	Minor - negative		Negligible - negative	
Comment on significance	Risk reduction is dependent on proactive and reactive mitigation measures as construction progresses across the site. Adaptive management to stormwater management during construction is essential.			
Cumulative impacts	Not applicable			



**Table 13:** Construction Phase Impact: Material and vehicle management (Confluent Environmental, 2024).

Project phase	Construction			
Impact	Materials and vehicle management			
Description of impact	Pollution of the watercourse			
Mitigatability	High	Mitigation exists and will considerably reduce the significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• All construction materials (topsoil, subsoil, building sand) must be stockpiled as far from the watercourse or slope edge as possible.</li> <li>• Materials to be removed must be taken away without delay to reduce the risk of spilling or washing down slopes, and limiting space in the work area.</li> <li>• Retain the upper 30cm of topsoil including vegetation during grubbing. This material should be stockpiled separately to other materials, kept uncontaminated, and protected with shaded cloth and bunding.</li> <li>• There is limited space to work along the pipeline route, and stockpiled materials must not be placed in a way that they force vehicles to move around them into sensitive or unstable areas.</li> <li>• Vehicle refuelling areas must be located as far from the watercourse as possible, and a spill kit must be on hand in case of fuel spills.               <ul style="list-style-type: none"> <li>• Vehicles leaking fuel (diesel or oil) may not be permitted to work on site.</li> <li>• No materials may be dumped into the watercourse.</li> </ul> </li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Short term	Impact will last between 1 and 5 years	Immediate	Impact will self-remedy immediately
Extent	Limited	Limited to the site and its immediate surroundings	Very limited	Limited to specific isolated parts of the site
Intensity	Moderate	Natural and/ or social functions and/ or processes are moderately altered	Low	Natural and/ or social functions and/ or processes are somewhat altered
Probability	Probable	The impact has occurred here or elsewhere and could therefore occur	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	Medium	The affected environment will only recover from the impact with significant intervention
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	Minor - negative		Negligible - negative	
Comment on significance				
Cumulative impacts	Mitigation measures should be applied through the length of the pipeline installation to ensure cumulative impacts are managed.			

**Table 14:** Construction Phase Impact: Post-construction rehabilitation and site closure (Confluent Environmental, 2024).

Project phase	Construction			
Impact	Post-construction rehabilitation and site closure			
Description of impact	<b>Loss of topsoil and vegetation without replacement renders areas vulnerable to erosion and invasive plants</b>			
Mitigatability	Medium	Mitigation exists and will notably reduce significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• Ensure all soil surfaces are reshaped to avoid preferential flow paths and very steep gradients.</li> <li>• All areas disturbed during the construction phase must have topsoil from the site mixed with indigenous grass seed (<i>Stenotaphrum secundatum</i> and <i>Cynodon dactylon</i>) replaced to a depth of 30 cm above subsoils.</li> <li>• Where sloping areas occur it will be necessary to stake a cover of soil saver matting over the grass seed / top soil mix to prevent movement downslope until vegetation can establish.</li> <li>• Alien vegetation must be removed 2 months and 6 months post replacement of the soil until the grass is established.</li> <li>• Ensure any litter from construction works or personnel is removed from the site. No litter, food scraps, or waste materials can be left at the site.</li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Medium term	Impact will last between 5 and 10 years	Short term	Impact will last between 1 and 5 years
Extent	Limited	Limited to the site and its immediate surroundings	Very limited	Limited to specific isolated parts of the site
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Very low	Natural and/ or social functions and/ or processes are slightly altered
Probability	Almost certain / Highly probable	It is most likely that the impact will occur	Probable	The impact has occurred here or elsewhere and could therefore occur
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	High	The affected environment will be able to recover from the impact
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	<b>Minor - negative</b>		<b>Negligible - negative</b>	
Comment on significance				
Cumulative impacts	If this aspect is not well managed, it will contribute further to extensive alien vegetation establishment in the area, compounding this negative impact.			

**Table 15:** Operational Phase Impact: Additional rubbish dumping in watercourses due to improved access along benching (Confluent Environmental, 2024).

Project phase	Operation			
<b>Impact</b>	<b>Additional rubbish dumping in the watercourse due to improved access along benching</b>			
<b>Description of impact</b>	<b>Further pollution of watercourses with litter and solid waste</b>			
<b>Mitigatability</b>	Medium	Mitigation exists and will notably reduce significance of impacts		
<b>Potential mitigation</b>	<ul style="list-style-type: none"> <li>• Create a barrier across the road restricting access to municipal personnel working on the pipeline for maintenance only. The barrier would need to be lockable, and made of a material that can't be stolen or tampered with. A lockable bollard could achieve this, and could at least restrict vehicle access.</li> </ul>			
<b>Assessment</b>	<b>Without mitigation</b>		<b>With mitigation</b>	
<b>Nature</b>	Negative		Negative	
<b>Duration</b>	Long term	Impact will last between 10 and 15 years	Short term	Impact will last between 1 and 5 years
<b>Extent</b>	Local	Extending across the site and to nearby settlements	Limited	Limited to the site and its immediate surroundings
<b>Intensity</b>	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
<b>Probability</b>	Almost certain / Highly probable	It is most likely that the impact will occur	Probable	The impact has occurred here or elsewhere and could therefore occur
<b>Confidence</b>	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
<b>Reversibility</b>	Medium	The affected environment will only recover from the impact with significant intervention	Medium	The affected environment will only recover from the impact with significant intervention
<b>Resource irreplaceability</b>	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
<b>Significance</b>	<b>Moderate - negative</b>		<b>Minor - negative</b>	
<b>Comment on significance</b>				
<b>Cumulative impacts</b>	Not applicable			

**Table 16:** Operational Phase Impacts: Pipeline blockages and sewage spills (Confluent Environmental, 2024).

Project phase	Operation			
Impact	Pipeline blockages and sewage spills			
Description of impact	Pollution and eutrophication of receiving watercourses including health hazards			
Mitigatability	Medium	Mitigation exists and will notably reduce significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• Add signage to manholes and pipelines informing passersby of the manhole ID and telephone number to call and report leaks. These should ideally be in English, Afrikaans and isiXhosa and can be spray painted onto infrastructure to prevent loss of signs.</li> <li>• Ensure manhole lids are tamper-proof to prevent them from being easily removed for the purpose of dumping in drains.</li> <li>• Minimise the number of pipe joints directly over watercourse crossings.</li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Medium term	Impact will last between 5 and 10 years	Short term	Impact will last between 1 and 5 years
Extent	Local	Extending across the site and to nearby settlements	Limited	Limited to the site and its immediate surroundings
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Almost certain / Highly probable	It is most likely that the impact will occur	Probable	The impact has occurred here or elsewhere and could therefore occur
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	High	The affected environment will be able to recover from the impact
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	Minor - negative		Minor - negative	
Comment on significance				
Cumulative impacts	The Skaapkop River is already heavily contaminated with sewage, improving the monitoring and response to sewer leaks is imperative to reducing this impact, but is somewhat beyond the scope of this assessment.			

**Table 17:** Operational Phase Impact: Channel incision or erosion due to changes in bed and channel characteristics at crossings (Confluent Environmental, 2024).

Project phase	Operation			
Impact	Channel incision or erosion due to changes in bed and channel characteristics at crossings			
Description of impact	Degradation of habitat, reduced water quality, and ongoing maintenance			
Mitigatability	Medium	Mitigation exists and will notably reduce significance of impacts		
Potential mitigation	<ul style="list-style-type: none"> <li>• The full length of the newly installed pipeline and watercourse crossing points must be inspected 6- and 12-months following completion of project by the site engineer. The purpose is to identify any areas of erosion, undercutting, instability or structural failure.</li> <li>• If channel incision is occurring due to high velocity inflows, this could jeopardise concrete bridge supports of the sewer line and must therefore be controlled. One possibility is to install a series of small gabion check dams along the stream bed upstream and downstream which are aimed at reducing flows and encouraging sedimentation, building up the stream bed.</li> </ul>			
Assessment	Without mitigation		With mitigation	
Nature	Negative		Negative	
Duration	Medium term	Impact will last between 5 and 10 years	Short term	Impact will last between 1 and 5 years
Extent	Local	Extending across the site and to nearby settlements	Limited	Limited to the site and its immediate surroundings
Intensity	High	Natural and/ or social functions and/ or processes are notably altered	Moderate	Natural and/ or social functions and/ or processes are moderately altered
Probability	Probable	The impact has occurred here or elsewhere and could therefore occur	Unlikely	Has not happened yet but could happen once in the lifetime of the project, therefore there is a possibility that the impact will occur
Confidence	High	Substantive supportive data exists to verify the assessment	High	Substantive supportive data exists to verify the assessment
Reversibility	Medium	The affected environment will only recover from the impact with significant intervention	Medium	The affected environment will only recover from the impact with significant intervention
Resource irreplaceability	Low	The resource is not damaged irreparably or is not scarce	Low	The resource is not damaged irreparably or is not scarce
Significance	Minor - negative		Negligible - negative	
Comment on significance				
Cumulative impacts	No applicable			

## 10.2. TERRESTRIAL ANIMAL SPECIES

The DFFE Screening Tool report determined the Animal Species Theme to have a 'Medium' sensitivity with several Species of Conservation Concern (SCC) to possibly occur within the proposed development site (Table 18).

**Table 18:** Species of Conservation Concern highlighted by the DFFE Online Screening Tool (Confluent Environmental, 2024).

Sensitivity	Classification	Scientific name	Common name	Red list status*
Medium	Amphibian	<i>Afrivalus knysnae</i>	Knysna Leaf-folding Frog	Endangered
Medium	Avifauna	<i>Circus ranivorus</i>	Marsh Harrier	Endangered
Medium	Avifauna	<i>Neotis denhami</i>	Denham's Bustard	Vulnerable
Medium	Avifauna	<i>Bradypterus sylvaticus</i>	Knysna Warbler	Vulnerable
Medium	Mammal	<i>Chlorotalpa duthieae</i>	Duthie's Golden Mole	Vulnerable
Medium	Mammal	<i>Sensitive species 8</i>	-	Vulnerable
Medium	Invertebrate	<i>Aneuryphymus montanus</i>	Yellow-winged Agile Grasshopper	Vulnerable

No SCCs were confirmed to be on site. All SCCs highlighted by the DFFE Screening Tool Report have a **LOW** likelihood of occurrence due to the lack of suitable habitat within the proposed development area (Table 19).

**Table 19:** Likelihood of occurrence for Terrestrial Fauna SCCs in the project area (Confluent Environmental, 2024).

Red list status	Species	Observed on site	Suitable habitat	Likelihood of occurrence	Reason
<b>AVIFAUNA</b>					
Endangered A2c+3c+4c; C1	<i>Circus ranivorus</i> Marsh Harrier	No	No	Low	No suitable habitat.
Vulnerable A3c; B2b(ii,iii,v); C1+2a(i)	<i>Bradypterus sylvaticus</i> Knysna warbler	No	No	Low	No suitable habitat. Water courses are also heavily polluted and a lot of human/domestic animal disturbance is present.
Vulnerable A2bcd+3bcd+4bcd; C1	<i>Neotis denhami</i> Denham's Bustard	No	No	Low	No suitable habitat.
Near Threatened C1	<i>Campethera notata</i> Knysna Woodpecker	No	No	Low	No suitable habitat. Some trees exist but all alien invasives, low potential to support SCC.
Least Concern (Regional), Near Threatened (Global)	<i>Buteo trizonatus</i> Forest Buzzard	No	Possible	Low	Alien invasive trees possibly suitable, but unlikely to be favoured by SCC given high levels of human/domestic animal disturbance. Limited hunting/prey availability.
<b>MAMMALS</b>					
Vulnerable B1ab(iii)+2ab(iii)	<i>Chlorotalpa duthieae</i> Duthie's Golden Mole	No	No	Low	No suitable forest habitat in vicinity.
Vulnerable B2ab(ii,iii,v)+C2a(i)	<i>Sensitive Species 8</i>	No	No	Low	No suitable forest/thicket habitat. SCC will be deterred by high levels of human/domestic animal disturbance.
<b>INVERTEBRATES</b>					
Vulnerable B2ab(iii,v)	<i>Aneuryphymus montanus</i> Yellow-winged Agile Grasshopper	No	No	Low	No suitable fynbos habitat.
<b>AMPHIBIANS</b>					
Endangered B1ab(i,ii,iii,v)+ 2ab(i,ii,iii,v)	<i>Afrivalus knysnae</i> Knysna Leaf-folding Frog	No	No	Low	No suitable endorheic wetland habitat.

### Summary:

Following the outcome of desktop and field assessments, the Terrestrial Animal Theme Sensitivity was determined to be '**LOW**' in contrast to the medium sensitivities highlighted by the DFFE Screening Tool Report.

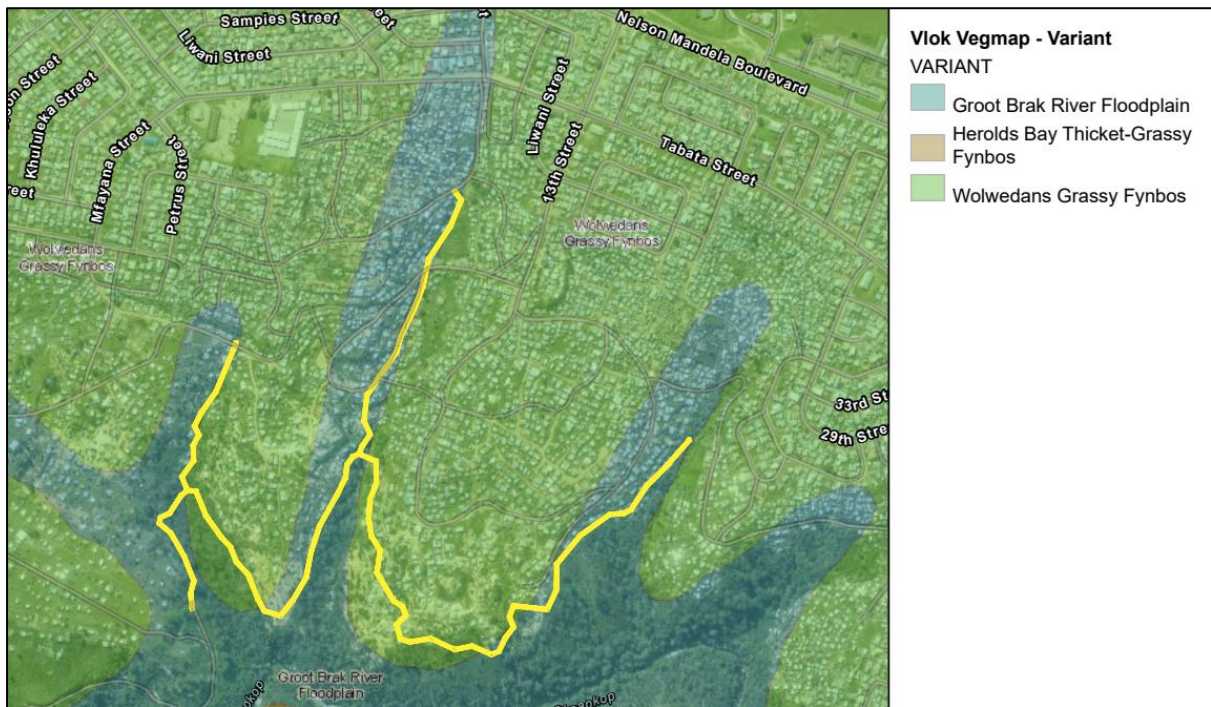
The findings of the Terrestrial Animal Species Compliance Statement are supported by the following reasons (Confluent Environmental):

- The low likelihood of occurrence of terrestrial animal SCCs and fauna overall within the project footprint.
- The limited footprint of the project area within which excavations and construction activities will take place is unlikely to cause changes to the existing highly modified habitat structure.
- It is highly unlikely that SCCs will occur in close proximity to the project footprint given the high levels of disturbance from human activity and free-roaming domestic animals.
- The temporary nature of the excavations and construction activities associated with the project.

### 10.3. TERRESTRIAL BIODIVERSITY AND BOTANICAL

The DFFE Screening Tool Report determined the Terrestrial Biodiversity Theme to have a 'Very High' sensitivity and the Terrestrial Plant Species Theme to have a 'Medium' and 'Low' sensitivity.

According to the National 2018 vegetation map of South Africa, the proposed development route is mapped to contain Garden Route Granite Fynbos (Critically Endangered). The Vlok Vegetation Map contains greater resolution at a local scale, indicating Groot Brak River Floodplain vegetation within the drainage lines, Heralds Bay Thicket-Grassy Fynbos south of the Skaapkop River, and Wolwedans Grassy Fynbos (equivalent to Garden Route Granite Fynbos)) over the majority of the proposed development route (Figure 29).



**Figure 29:** Vlok Vegetation Map in relation to the proposed development route (CapeFarmMapper, 2024).

Following a site investigation, it was confirmed that the current state of vegetation for the proposed development route was severely transformed and polluted and host of exclusively invasive alien species. No Species of Conservation Concern are likely to occur in the highly transformed and polluted vegetation that was assessed during the site investigation.

The proposed development route is located within the SANPARKS buffer area of the Garden Route Biosphere Reserve. The proposed sewer alignment is however located within highly

invaded informal settlements and therefore the purpose of the SANPARKS Garden Route Biodiversity Reserve buffer has already been compromised in the area.

Summary:

The Terrestrial Biodiversity Sensitivity Theme is determined to be '**LOW**' due to the severe degradation of the landscape and the loss of important ecological process that cannot easily be restored.

The Botanical Sensitivity Theme is confirmed to be '**LOW**' due to the highly unlikelihood that any Species of Conservation Concern (SCC) would be able to persist in the proposed development environment. Alternative plant species recommended to be used during rehabilitation post-construction include: *Helichrysum patulum*, *Pelargonium capitatum*, *Nidorella ivifolia*, *Themeda triandra*, *Stenotaphrum secundatum*, and *Osteospermum moniliferum*.

The realignment of the proposed bulk sewer pipeline and additional protection measures will not negatively affect the larger conservation plans in the Western Cape and Garden Route. The proposed bulk sewer upgrades will not compromise or cause the loss of plant species of conservation concern.

## **11. PUBLIC PARTICIPATION & STAKEHOLDER ENGAGEMENT**

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Section 40(2) in Chapter 6 of regulation 982 requires that the public participation process contemplated in this regulation must provide access to all information that reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law and must include consultation with—

- (a) the competent authority;
- (b) every State department that administers a law relating to a matter affecting the environment relevant to an application for an environmental authorisation;
- (c) all organs of state which have jurisdiction in respect of the activity to which the application relates; and
- (d) all potential, or, where relevant, registered interested and affected parties.

In order to comply with this requirement, the proposal has been provided to all parties, listed in subsections a, b and c above, with full digital copies of the Draft Environmental Assessment Report, updated Environmental Management Programme and all specialist studies and plans. Such digital copies have been provided to the competent authority, organs of state and state departments on CD/flashdrive, by post, or via digital platforms such as WeTransfer/Dropbox.

In terms of point d above, all Interested & Affected Parties (I&APs) that are identified, or register as part of the process have been provided access to the Draft Environmental Assessment Report via the following:

1. The digital copy of the documentation was available on the Cape EAPrac website and any other digital platform identified by Cape EAPrac or the recipients such as WeTransfer and / or Dropbox.
2. I&AP's that do not have access to digital platforms, have been offered the option of receiving flashdrives/CDs with the complete reports;



3. Initially all potential and subsequently the registered I&APs have been informed that copies of the documentation can be provided via postal or courier services should it be necessary.

Section 41 in Chapter 6 of regulation 982 details the public participation process that has to take place as part of an environmental process. The table below lists these requirements along with the proposed actions in order to comply with both section 41 in regulation 982 as well as section 5.1 and annexure 2 of regulation 660.

### **SUBMISSIONS and COMMENTING PERIOD**

Given the type of development proposal and the outcome of the site sensitivity verification, this office does not foresee the need to conduct pre-application public participation. As such, provision was not made for a pre-application basic assessment report.

Considering the One-Integrated-System requirements for a parallel comment period of **60 days** for registered I&APs, neighbours & identified stakeholders has been implemented from 13 September 2024 to 12 November 2024.

The draft Environmental Assessment Report has been circulated for comment. Submissions received during this period have been considered by the project team and specialists and responded to.

This final Environmental Assessment Report reflects the outcome of the stakeholder engagement process.

### **MINIMUM REQUIREMENTS AS PER THE REGULATIONS**

**Table 20:** Minimum Public Participation requirements as per the regulations.

<b>Regulated Requirement</b>	<b>Proposed Actions</b>
(1) If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for an environmental authorisation in respect of such activity, obtain the written consent of the landowner or person in control of the land to undertake such activity on that land. (2) Subregulation (1) does not apply in respect of- (a) linear activities;	George Municipality is the registered landowner of the properties on which the proposed development is planned.
The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of an application or proposed application which is subjected to public participation by -	
(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 or proposed application relates is or is to be undertaken; and (ii) any alternative site;	Site notices have placed at strategic points along the proposed pipeline route. The site notices provided all regulated information required for an I&AP to contact the EAP in order to register. The site notice also identified listed activities and stipulates the applicable legislation. No deviation or additional actions in terms of regulation 660 are required.
(b) giving written notice, in any of the manners provided for in section 47D of the Act, to -	
(i) the occupiers of the site and, if the proponent or 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	Information Documents have been shared with the relevant Ward Councillor has distributed to the relevant Ward

Regulated Requirement	Proposed Actions
of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Committees. Ward Committees distributed the information documents to occupiers/residents of the affected area.
(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;	Information Documents have been shared with the relevant Ward Councillor who distributed to the relevant Ward Committees. Ward Committees have distributed the information documents to the Occupiers/residents of the affected area.
(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;	The ward councillor has been notified of this environmental process and have been provided with a copy of the documentation.
(iv) the municipality which has jurisdiction in the area;	The George Municipality (Planning, Technical Services & Environmental) has been notified of this environmental process and has been provided with digital copies of all documentation.
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	All organs of state that have jurisdiction in respect of the activity have been notified of this environmental process and will be provided with digital copies of all documentation.
(vi) any other party as required by the competent authority;	DEA&DP has been given an opportunity to comment on the Draft Environmental Assessment Report and updated EMPr. No other stakeholders were identified during the process.
(c) placing an advertisement in - (i) one local newspaper; or (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;	An advert has been placed in the <i>George Herald</i> calling for I&APs to register and advising on what documentation is available and how to access it. There is currently no official EIA Gazette that has been published specifically for the purpose of providing public notice of applications.
(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: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii);and	Adverts will not be placed in provincial or national newspapers, as the potential impacts will not extend beyond the borders of the municipal area. Noted that it was agreed with the George Municipality and Councillor(s) to follow abide by their communication protocol for municipal projects namely to distribute all correspondence/project information through the Councillor(s), to the Ward Committee(s) who then distribute information to affected residents as agreed to with the Municipality. In addition to the newspaper advert and site notices, a total of 550 flyers (Afrikaans, English and isiXhosa translations) were distributed in the immediate area to residents informing of the process and their right to submit comment. No submissions were received from residents / Ward Committee(s) or Councillor(s) in response to the distributed information.
(e) using reasonable alternative methods, as agreed to by the competent authority, 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.	Notifications include provision for alternative engagement in the event of illiteracy, disability or any other disadvantage. Due to the potential for residents not being literate in this particular area, the agreement was that Councillors and Ward Councillor Committees were to act as liaison with residents to ensure transparency and communication with residents.

Regulated Requirement	Proposed Actions
<p>(3) A notice, notice board or advertisement referred to in subregulation (2) must -</p> <p>(a) give details of the application or proposed application which is subjected to public participation; and</p> <p>(b) state -</p> <p>(i) whether basic assessment or S&amp;EIR procedures are being applied to the application;</p> <p>(ii) the nature and location of the activity to which the application relates;</p> <p>(iii) where further information on the application or proposed application can be obtained; and</p> <p>(iv) the manner in which and the person to whom representations in respect of the application or proposed application may be made.</p>	<p>All notification and adverts comply with this requirement. No deviation or additional actions in terms of regulation 660 are required.</p>
<p>(4) A notice board referred to in subregulation (2) must -</p> <p>(a) be of a size at least 60cm by 42cm; and</p> <p>(b) display the required information in lettering and in a format as may be determined by the competent authority.</p>	<p>Site notices have been placed at strategic points along the proposed pipeline route. The site notices provide all regulated information required for an I&amp;AP to contact the EAP in order to register. The site notice also identifies listed activities, stipulates the applicable legislation.</p>
<p>(5) Where public participation is conducted in terms of this regulation for an application or proposed application, subregulation (2)(a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19(1)(b) or 23(1)(b) or the public participation process contemplated in regulation 21(2)(d), on condition that -</p> <p>(a) such process has been preceded by a public participation process which included compliance with subregulation (2)(a), (b), (c) and (d); and</p> <p>(b) written notice is given to registered interested and affected parties regarding where the -</p> <p>(i) revised basic assessment report or, EMPr or closure plan, as contemplated in regulation 19(1)(b);</p> <p>(ii) revised environmental impact report or EMPr as contemplated in regulation 23(1)(b); or</p> <p>(iii) environmental impact report and EMPr as contemplated in regulation 21(2)(d);</p> <p>may be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due.</p>	<p>This will be complied with if final reports are produced later in the environmental process.</p>
<p>(6) When complying with this regulation, the person conducting the public participation process must ensure that -</p> <p>(a) information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and</p> <p>(b) participation by potential or registered interested and affected parties is facilitated in such a manner that all potential or registered interested and affected parties are</p>	<p>All reports that are submitted to the competent authority have been subject to a public participation process of a minimum of 60 days.</p> <p>These include:</p> <ul style="list-style-type: none"> <li>- Draft Environmental Assessment Report</li> <li>- Draft updated EMPr</li> <li>- All specialist reports that form part of this environmental process.</li> </ul>

Regulated Requirement	Proposed Actions
<p>provided with a reasonable opportunity to comment on the application or proposed application.</p> <p>(7) Where an environmental authorisation is required in terms of these Regulations and an authorisation, permit or licence is required in terms of a specific environmental management Act, the public participation process contemplated in this Chapter may be combined with any public participation processes prescribed in terms of a specific environmental management Act, on condition that all relevant authorities agree to such combination of processes.</p>	

The following public participation process was followed:

- **Key Authorities** were identified according to whether or not they have a mandated interest in the area/site.
- **Local Councillor** was verified with the George Municipality.
- **Physical Meeting** was held with Municipality and Ward Councillor on 08 August 2024 to discuss to proposal and to confirm the process of distributing physical printed information letters to affected occupiers/residents of the area. Information letters translated into English, Afrikaans and Isixhosa.
- **Ward Councillor** distributed 550 x information letters to **Ward Committees** which subsequently distributed the information letters to affected occupiers/residents along the route of the area by hand.
- **George Municipality** physically pegged the proposed pipeline alignment to allow occupiers/residents of the affected areas to physically see where the pipeline will be installed.
- **Site Notices** placed at various strategic locations along the pipeline route calling for I&APs to register and review the **Draft Environmental Assessment Report and WULA Report**.
- **Written notifications** sent to all potential and registered I&APs via email informing of the availability of the Draft Environmental Assessment Report and WULA Report and the opportunity to register as an I&AP.
- **Advert** appeared in the *George Herald* on 12 September 2024 for I&APs to register and submit comment on the Draft Environmental Assessment Report.

No submissions were received back from the Councillor(s), Ward Committee(s) or any residents/occupiers following distribution of the 550 x information flyers.

Comments received in response to Draft Environmental Assessment Report or in request to be registered have been considered and added to the Stakeholder Register and all submissions have been incorporated and reflected in the Final Environmental Assessment Report.

A **stakeholder register** has been opened for this project and has been continuously updated as registrations were received, or changes made to already registered stakeholders.

Preferred **methods of communication** are captured on the database system but were not included in the I&AP list in draft reports in compliance with POPIA. All I&APs are provided with notifications by the following hierarchy: **email or post** (where such details are available to the EAP), as well as by hand (distribution of 550 x flyers). All I&APs were provided with the option

to change their preferences (of communication) at any stage, provided correct information is supplied.

The following organs of state / state departments have been registered:

**George Municipality**

Nosi Bulose

Tel: 044 801 9156

Email: nbulose@george.gov.za

Lionel Daniels

Tel: 044 801 9354

Email: rldaniels@george.gov.za

Delia Power

Tel: 044 801 9117

Email: dpower@george.gov.za

**Breede-Olifants Catchment Management Agency**

Carlo Abrahams

Tel: 023 346 8000

Email: cabrahams@bocma.co.za

**CapeNature**

Megan Simons

Tel: 087 087 3060

Email: msimons@capenature.co.za

**Garden Route District Municipality**

Dr Nina Viljoen

Tel: 044 803 1448

Email: nina@gardenroute.gov.za

**Department of Transport**

Vanessa Stoffels

Tel: 021 483 4669

Email: vanessa.stoffels@westerncape.gov.za

Evan Burger

Tel: 021 483 2180

Email: evan.burger@westerncape.gov.za

**Heritage Western Cape**

Stephanie-Anne Barnardt

Tel: 021 483 5959

Email: stephanie.barnardt@westerncape.gov.za

**Department of Agriculture**

Cor vd Walt

Tel: 021 808 5093

Email: Cor.VanderWalt@westerncape.gov.za

**Department of Health**

Nathan Jacobs

Tel: 044 803 2727

Email: nathan.jacobs@westerncape.gov.za

The following State Departments and Organs of State did not respond:

<b>State Department Approached For Comment During Pre-Application Public Participation</b>	<b>Request For Comment Date</b>	<b>Comment Received</b>
George Municipality	12 September 2024	X
Breede-Olifants Catchment Management Agency	12 September 2024	20 October 2024
CapeNature	12 September 2024 13 November 2024	X
Garden Route District Municipality	12 September 2024	X
Department of Transport	12 September 2024	X
Heritage Western Cape	12 September 2024	17 September 2024
Department of Agriculture	12 September 2024	X
Department of Health	12 September 2024	X
Department of Agriculture, Forestry and Fisheries	12 September 2024	X
Department of Environmental Affairs and Development Planning	12 September 2024	06 November 2024

Please see a summary of the issues / input / comments raised during the public participation period:

Clarity regarding the implementation schedule for the sewerage pipeline infrastructure:

- The implementation schedule is solely dependant on available funding of the George Municipality. It is envisaged that installation of the sewerage pipeline infrastructure is to commence during 2025 (should approval of the Part 2 Amendment be issued), with implementation continuing in phases as funding becomes available.
- The period for which the EA is required:
  - Ten (10) year implementation period to conclusion of development phase from the date of issue of the Amended Environmental Authorisation.

Clarity regarding the inclusion of reno-mattress structures in the original assessment and approval:

- The provision of reno-mattresses above and below gabion walls to prevent undermining and erosion of soil on either side of gabion walls at stream crossings, were included in the Technical Report for Bulk Services compiled by Aurecon in August 2013

(Page 15, Stream crossings (v)), that was included in the original Basic Assessment submission as well as Water Use Licence Application, however the specific details and designs as presented in 2024 by Lukhozi Consulting Engineers (Pty) Ltd as part of this Part 2 Amendment Application was not yet available in 2014. The Technical Report for Bulk Services (Aurecon, 2013) is appended to this Part 2 Amendment Assessment Report as Appendix C.

- It is therefore the considered opinion of the EAP, that the provision of reno-mattress above and below gabion walls were included in the initial assessment and approval Environmental Authorisation (16/3/1/1/D2/50/0060/12).

Clarity regarding the rehabilitation of remnant wetland habitats:

- Please see extract from the Aquatic Impact Assessment undertaken by Confluent Environmental (Pty) Ltd: *"While some of the watercourses may have originally been characteristic of wetlands (although there is no way of knowing this), little to no wetland habitat remains, and the watercourses were assessed as drainage lines in their current state"* (Page 18 under Section 3.4.1 'Present Ecological State' in the Aquatic Impact Assessments).
- *"No mapped wetlands occur in proximity to the realigned pipeline or emergency work area"* (Page 12 under Section 2.5 'Mapped Watercourse' in the Aquatic Impact Assessments).
- Specific rehabilitation measures will not be applied to remnant wetland habitats possibly located downstream and upstream of the proposed amended sewer pipeline route due to the high-level of land invasion, safety of staff, and theft of any demarcation material which cannot be monitored on a daily basis.
- The state of possible remnant wetland habitats downstream and upstream of the proposed amended sewer pipeline route will automatically increase due to the implementation of the proposed sewerage pipeline infrastructure and the connection of additional households to the municipal reticulation network which will ultimately reduce the amount of raw sewage flowing into watercourse habitats.

## 12. CONCLUSION AND RECOMMENDATIONS

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Cape EA Prac is of the opinion that the information contained in this Environmental Assessment Report and the documentation attached hereto, is sufficient to allow the competent authority to consider the potential negative and/or positive impacts associated with the proposed amendment of the approved bulk sewer pipeline alignment, in respect of the activities authorised.

The biophysical impact of the new proposed pipeline route will be similar compared to the impacts assessed for the original environmental authorisation application. The state of the site has degraded significantly since the issue of the ROD in 2014/approved EMP, with uncontrolled invasive alien vegetation along the rivers, extremely high levels of pollution associated with the informal settlement conditions and absence of sewage/solid waste removal services, as well as notably erosion in the tributaries. The realignment of the sewer pipeline route to the south of the 'All Brick' brickworks site will ensure that if this area can also be formalised/serviced in future, should the households in this area be connected to the formal sewage system.

Considering that all specialist assessments and mitigation measures identified were taken into consideration and included in the updated Environmental Management Programme for the proposed amendments, it is the reasoned view of the EAP that the proposed amendments can be considered for authorisation subject to implementation of the updated EMP and compliance with all applicable conditions of the approval.



# 13. DECLARATIONS

## 13.1. DECLARATION OF THE APPLICANT

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

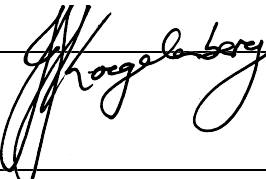
I, JOHANNES FRANCISCUS KOEGELEBERG ID Number: 

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~~in my personal capacity or~~ duly authorised thereto hereby declare/affirm that:

- the information provided or to be provided as part of this Application form, is true and correct;
- 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, as defined in Chapter 5 of NEMA (as amended) and any relevant Specific Environmental Management Acts and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware that is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation ("EA");
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I appointed the Environmental Assessment Practitioner ("EAP") which:
  - meets the requirements of the Section 24H Registration Authority Regulations, 2016, promulgated in terms of NEMA;
  - meets all the requirements in terms of Regulation 13 of the EIA Regulations, 2014;
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the EIA Regulations, 2014;
- I will provide the EAP and 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 EIA Regulations, 2014 and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the EIA Regulations, 2014;
  - costs in respect of specialist reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures; and
- 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 the Applicant or EAP is responsible in terms of the EIA Regulations, 2014 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: 2024/12/02

George Municipality

Name of company (if applicable):

### 13.2. DECLARATION OF THE APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, LOUISE-MARI VAN ZYL EAP Registration Number: 2 0 1 9 / 1 4 4 4  
 as the Appointed EAP hereby declare/affirm that:

- my EAP Registration is current and up to date, and will inform the Applicant and Department if the registration should lapse during this pre-application process;
- the information provided or to be provided as part of this Application form, is true and correct;
- in terms of the general requirement to be independent:
  - other than fair remuneration for work performed/to be 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 EIA Regulations, 2014 have 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/will disclose, 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 form;
- I have ensured/will ensure that information containing all relevant facts in respect of the Application form was/will be distributed or was/will be 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/will be provided with a reasonable opportunity to participate and to provide comments;
- I have ensured/will ensure that the comments of all interested and affected parties were/will be considered, recorded and submitted to the Competent Authority in respect of this Application form;
- I have ensured/will ensure the inclusion of inputs and recommendations from any specialists in respect of the Application form, where relevant;
- I have kept/will keep a register of all interested and affected parties that participated in the public participation process;
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014; and
- All specialist investigations must comment on how the potential impacts relate to climate change concerns.



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Signature of the Appointed EAP: 2 December 2024  
Date:

Cape Environmental Assessment Practitioners  
 Name of company (if applicable):

### 13.3. DECLARATION OF THE ASSISTING CANDIDATE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, FRANCOIS BYLEVELD EAP Registration Number: 2 0 2 3 / 6 7 7 0

as the Assisting Candidate EAP hereby declare/affirm that:

- my EAP Registration is current and up to date, and will inform the Applicant and Department if the registration should lapse during this pre-application process;
- the information provided or to be provided as part of this Application form, is true and correct;
- in terms of the general requirement to be independent:
  - other than fair remuneration for work performed/to be 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 EIA Regulations, 2014 have 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/will disclose, 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 form;
- I have ensured/will ensure that information containing all relevant facts in respect of the Application form was/will be distributed or was/will be 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/will be provided with a reasonable opportunity to participate and to provide comments;
- I have ensured/will ensure that the comments of all interested and affected parties were/will be considered, recorded and submitted to the Competent Authority in respect of this Application form;
- I have ensured/will ensure the inclusion of inputs and recommendations from any specialists in respect of the Application form, where relevant;
- I have kept/will keep a register of all interested and affected parties that participated in the public participation process;
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations, 2014; and
- All specialist investigations must comment on how the potential impacts relate to climate change concerns.

*FByleveld*

2 December 2024

Signature of the Assisting Candidate EAP:

Date:

Cape Environmental Assessment Practitioners

Name of company (if applicable)

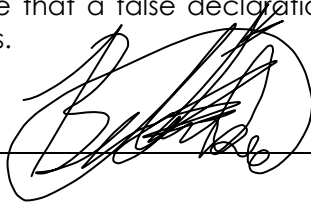
**DECLARATION OF THE SPECIALIST**

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

I.....**Bianke Fouche**....., as the appointed Biodiversity and Botanical 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:



25 November 2024

Date:

**Confluent Environmental (Pty) Ltd**

Name of company (if applicable):

**DECLARATION OF THE SPECIALIST**

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

I.....**Dr Jackie Dabrowski**....., as the appointed Aquatic 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:



30 November 2024

Date:

**Confluent Environmental (Pty) Ltd**

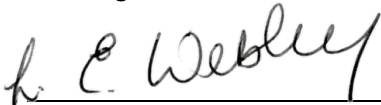
Name of company (if applicable):

**DECLARATION OF THE SPECIALIST**

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

I.....**Dr Lita Webley**...., as the appointed Archaeological 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:

25 November 2024

Date:

**N/A**


Name of company (if applicable):

**DECLARATION OF THE SPECIALIST**

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

I.....**Monica Leitner**....., as the appointed Faunal 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: 

2024-11-26

Date:

**Confluent Environmental (Pty) Ltd**

Name of company (if applicable):

**DECLARATION OF THE SPECIALIST**

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

I.....**Stefan Ethan de Kock**...., as the appointed Heritage 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.



26/11/2024

Signature:

Date:

**Perception Planning**

Name of company (if applicable):