



LEGACY

ENVIRONMENTAL
MANAGEMENT
CONSULTING

**PROPOSED DEVELOPMENT OF A BULK SEWER PIPELINE ON
ERF NO. 23324, PORTION 60, PORTION 64 & PORTION 15 OF
FARM HAASENDAL NO. 222, KUILS RIVER**

DRAFT BASIC ASSESSMENT REPORT

FOR COMMENT

APRIL 2026

REF NO: 22041-HAAS-GES-002

PO Box 12410 • Die Boord 7613 • South Africa •
www.legacyemc.co.za

PROJECT DETAILS

TITLE	Proposed Development of a Bulk Sewer Pipeline on Erf No. 23324, Portion 60, Portion 64 & Portion 15 of Farm Haasendal No. 222, Kuils River
COMPETENT AUTHORITY REF. NO.	TBC
REPORT TYPE	Basic Assessment Report
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LEGACY REF. NO.	22041-HAAS-GES-002
REVISION	2
AUTHOR	Kim Pontac
PEER REVIEWED BY	
CLIENT REF. NO.	-

APPLICANT DETAILS

K2018307676 (South Africa) (Pty) Ltd / Combined Developers

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Disclaimer

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Letter of Undertaking and Statement of Independence

The Author / Environmental Assessment Practitioner (EAP) herewith confirms the correctness of the information provided in this Report, including supporting documents and reports, to the best of his/ her knowledge.

Neither Legacy EMC nor any of the authors of this Report have any material present or contingent interest in the outcome of this Project, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of Legacy EMC.

Legacy EMC has no beneficial interest in the outcome of the assessment which is capable of affecting its independence.

A handwritten signature in black ink, appearing to read 'Pontac'.

Kim Pontac

(Environmental Assessment Practitioner)

Signature of the Environmental Assessment Practitioner

Legacy Environmental Management Consulting (Pty) Ltd.

Name of the Company

14 April 2026

Date



**Western Cape
Government**

Department of Environmental Affairs and
Development Planning

BASIC ASSESSMENT REPORT

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

APRIL 2024



BASIC ASSESSMENT REPORT

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

APRIL 2024

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

GENERAL PROJECT DESCRIPTION

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

THE PROPOSED DEVELOPMENT OF A BULK SEWER PIPELINE ON ERF NO. 23324, PORTION 60 OF FARM HAASENDAL NO. 222, PORTION 64 OF FARM HAASENDAL NO. 222 AND PORTION 15 OF FARM HAASENDAL NO. 222, KUILSRIVER

The proposed development comprises the installation of a bulk sewer pipeline on Erf No. 23324, Portions 15, 60 and 64 of Farm Haasendal No. 222, Kuils River, within the City of Cape Town.

The proposed Haasendal Bulk Sewer Pipeline forms part of the City of Cape Town's approved Sewer Master Plan for the Bottelary Corridor and is required to support planned urban development within the Kuils River area. The need for the pipeline originates from rezoning conditions associated with Portion 15 of Farm Haasendal No. 222 (Arnim's Place), which required the provision of bulk sewer infrastructure in accordance with the City's Master Planning framework. The project is further supported through Development Contributions associated with surrounding developments, including Mooiberge, thereby aligning with the City's infrastructure planning and funding mechanisms.

The Applicant, K2018307676 (South Africa) (Pty) Ltd., proposes the installation of approximately 2,215 m of bulk sewer pipeline to increase sanitation service capacity in the area. The pipeline will connect to existing bulk sewer infrastructure at either end, forming part of the expansion of the City's sewer network required to accommodate approved and future development within the urban edge.

The pipeline alignment traverses a predominantly transformed environment, including areas associated with the Kuils River Golf Course, disturbed open land, existing servitudes, and urban edge interfaces. The alignment has been refined to follow existing servitudes and previously disturbed areas wherever feasible, thereby minimising environmental disturbance.

Importantly, the alignment was refined in consultation with the City of Cape Town to address comments raised during the previous environmental authorisation (EA) application process, as well as the interdepartmental meeting held on 11 December 2025. Key refinements included the avoidance of the proposed Haasendal Conservation Area expansion, avoidance of the Haasendal River Park, minimisation of impacts on the Bottelary River corridor and associated tributaries,

and the relocation of manholes outside of sensitive areas. The updated engineering layouts and meeting minutes were circulated to all relevant City departments in March 2026 for confirmation, and no further comments were received. Furthermore, the alignment is therefore considered to reflect the agreed position of the City.

From a technical perspective, the proposed pipeline is designed as a gravity bulk sewer system and will not require new pump stations, thereby reducing operational risks associated with mechanical failure and overflow. The pipeline will cross non-perennial (seasonal) tributaries associated with the Bottelary River system, but does not traverse the main Bottelary River channel itself. Trenchless construction methods will be implemented at watercourse crossings to minimise disturbance to aquatic features and associated riparian zones.

The development constitutes linear bulk infrastructure within a largely transformed landscape, and anticipated impacts are localised, temporary, and readily rehabilitated following construction. No permanent above-ground infrastructure will be located within sensitive conservation areas, and ecological connectivity within the broader landscape, including components of the City's Green Infrastructure Network, will be maintained.

The pipeline will operate as a closed system conveying wastewater and will not generate effluent, operational waste, or ongoing water use. Construction-related waste will be minimal and managed in accordance with standard environmental management practices.

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

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.
2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".
3. *Submission of documentation, reports and other correspondence:*

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

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

DEADPEIAAdmin@westerncape.gov.za

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

DEADPEIAAdmin.George@westerncape.gov.za

Directorate: Development Management (Region 3):
Garden Route District Municipal area and Central Karoo District Municipal area

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

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

4. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.
5. All applicable sections of this BAR must be completed.
6. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.
7. This BAR is current as of **April 2024**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at <http://www.westerncape.gov.za> to check for the latest version of this BAR.
8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.
9. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.

10. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.
11. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.
12. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.
13. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.
14. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link <https://screening.environment.gov.za/screeningtool> to generate the Screening Tool Report. The screening tool report must be attached to this BAR.
15. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA'), the submission of the Report must also be made as follows, for-

Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

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

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

MAPS

Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.	
Locality Map:	The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following: • an accurate indication of the project site position as well as the positions of the alternative sites, if any; • road names or numbers of all the major roads as well as the roads that provide access to the site(s) • a north arrow; • a legend; and • a linear scale. For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken. Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.
Provide a detailed site development plan/site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.	
Site Plan:	Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following: • The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale. • The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan. • On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided. • The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan. • The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan. • Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development must be clearly indicated on the site plan. • Servitudes and an indication of the purpose of each servitude must be indicated on the site plan. • Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): ○ Watercourses / Rivers / Wetlands ○ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable); ○ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"); ○ Ridges; ○ Cultural and historical features/landscapes; ○ Areas with indigenous vegetation (even if degraded or infested with alien species). • Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted. • North arrow A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.
Site photographs	Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as Appendix C. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.

Biodiversity Overlay Map:	A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as Appendix D .
Linear activities or development and multiple properties	GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system. Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix. For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as Appendix A3.

ACRONYMS

BAR:	Basic Assessment Report
BSP:	Biodiversity Spatial Plan
CBA	Critical Biodiversity Area
CoCT	City of Cape Town
CSIR	Council for Scientific Research
DFFE:	Department of Forestry, Fisheries and the Environment
DEA:	Department of Environmental Affairs
DEA&DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EA:	Environmental Authorisation
EAP:	Environmental Assessment Practitioner
ECO:	Environmental Control Officer
EIS:	Ecological Importance and Sensitivity
EMPr:	Environmental Management Programme
ESA	Ecological Support Area
FFP:	Fossil Finds Procedure
GA:	General Authorisation
HWC:	Heritage Western Cape
MMP:	Maintenance Management Plan
NEMA:	National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended
NEMBA:	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), as amended
NFEPA:	National Freshwater Ecosystem Protection Assessment
NHRA:	National Heritage Resources Act, 1999 (Act No. 25 of 1999), as amended
NSBA:	National Spatial Biodiversity Assessment
NWA:	National Water Act, 1998 (Act No. 36 of 1998), as amended
TOR:	Terms of Reference
WCBSP:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government
WCCCRS	Western Cape Climate Change Response Strategy of 2014
WULA:	Water Use License Application

ATTACHMENTS

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

The following checklist of attachments must be completed.

APPENDIX			✓ (Tick) or x (cross)
Appendix A:	Maps		
	Appendix A1:	Locality Map	✓
	Appendix A2:	Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning	N/A
	Appendix A3:	Map with the GPS co-ordinates for linear activities	✓
Appendix B:	Appendix B1:	Site development plan(s)	✓
	Appendix B2	A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;	✓
Appendix C:	Photographs		✓
Appendix D:	Biodiversity overlay map		✓
Appendix E:	Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.		
	Appendix E1:	Final comment/ROD from HWC	✓
	Appendix E2:	Copy of comment from Cape Nature	None received
	Appendix E3:	Final Comment from the DWS – no final comment received from DWS, instead proof of submission of request for consultation for the Pre-Application Water Use Enquiry by the freshwater specialist is attached.	None received
	Appendix E4:	Comment from the DEA: Oceans and Coast	N/A
	Appendix E5:	Comment from the DFFE	N/A
	Appendix E6:	Comment from WCG: Transport and Public Works	None received
	Appendix E7:	Comment from WCG: DoA	None received
	Appendix E8:	Comment from WCG: DHS	N/A
	Appendix E9:	Comment from WCG: DoH	N/A
	Appendix E10:	Comment from DEA&DP: Pollution Management	None received
	Appendix E11:	Comment from DEA&DP: Waste Management	N/A
	Appendix E12:	Comment from DEA&DP: Biodiversity	N/A
	Appendix E13:	Comment from DEA&DP: Air Quality	N/A
	Appendix E14:	Comment from DEA&DP: Coastal Management	N/A
	Appendix E15:	Comment from the local authority	None received

	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	N/A
	Appendix E17:	Comment from the District Municipality	N/A - refer to Appendix E15
	Appendix E18:	Copy of an exemption notice	N/A
	Appendix E19:	Pre-approval for the reclamation of land	N/A
	Appendix E20:	Proof of agreement/TOR of the specialist studies conducted.	Refer to specialist reports [Appendix G]
	Appendix E21:	Proof of land use rights – Zoning Map	✓
	Appendix E22:	Proof of public participation agreement for linear activities	N/A
	Appendix E23:	Comment from DEA&DP on the NOI (including agreement with SVR)	N/A
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements and any other public participation information as is required.		
	F1:	I&AP Database (Pro-active and Registered)	✓
	F2:	Media Notice and Tear Sheet Proof of Placement	✓
	F3:	Site Notice and Background Information and Letter Drop Proof	✓
	F4:	Executive Summary Document / Background Information Document	✓
	F5:	Comments and Responses Report	To be included in the FBAR
	F6:	Other Comments Received (not included in Appendix E)	To be included in the FBAR
	F7:	Notes of DEA&DP Pre-application Meeting	N/A – no pre-application meeting was held
	F8:	Public Participation Plan	N/A
	F9:	Proof of Notification	To be included in the FBAR
	F10:	Minutes of Meetings with the City of Cape Town	✓
Appendix G:	Specialist Report(s)		
	G1:	NID form to Heritage Western Cape	✓
	G2:	Aquatic Impact Assessment Report	✓
	G3 :	Botanical and Terrestrial Biodiversity Assessment	✓
Appendix H:	EMPr		✓
Appendix I:	I1:	DFFE Screening Tool Report	✓
	I2:	Site Sensitivity Verification Report	✓
Appendix J:	The impact and risk assessment for each alternative		✓
Appendix K:	Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA IEM Guideline		Refer to Section E of the FBAR
Appendix L:	Proof of submission of the water use authorisation application		✓
Appendix M:	EA for the mixed-use development on Erf 23324		✓

SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE: REGION 1		GEORGE OFFICE: REGION 3
	(City of Cape Town, West Coast District)	(Cape Winelands District & Overberg District)	(Central Karoo District & Garden Route District)
Duplicate this section where there is more than one Proponent Name of Applicant/Proponent: Name of contact person for Applicant/Proponent (if other): Company/ Trading name/State Department/Organ of State: Company Registration Number: Postal address: Telephone: E-mail:	Mr. Marco Kriek		
	K2018307676 (SOUTH AFRICA) (Pty) Ltd.		
	N/A		
	2018 / 307676 / 07		
	PO BOX 3667; 3rd Floor HQ, 4 Bridal Close, Tyger Falls		
	Bellville	Postal code:	7536
	+27(0) 21 914 8066	Cell: -	
	info@combineddev.com ; and Marco@combineddev.com	Fax:	()
	Legacy Environmental Management Consulting (Pty) Ltd.		
	EAP name:	Kim Pontac	
Postal address:	PO Box 12410, Die Boord		
	Stellenbosch	Postal code:	7613
Telephone:	(021) 887 4000	Cell: -	082 4100998
E-mail:	info@legacyemc.co.za	Fax:	(021) 205 1966
Qualifications:	Kim: ND (Oceanography), BTech Environmental Management, LLM Environmental Law.		
EAP registration no:	Kim Pontac (Review EAP) - 2019/1269		
Duplicate this section where there is more than one landowner			
<u>Erf No. 23324:</u> Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: Email:	Amphoria (Pty) Ltd		
	Anton Mulder		
	PO Box 11338, Bloubergstrand		
		Postal code:	7443
	()	Cell: -	+27(0) 87 942 2771
	anton@antonmulder.com etienne@antonmulder.com	Fax:	
	City of Cape Town		
<u>Portion 60 of Farm Haasendal No. 222:</u> Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: Email:	East Region: Property Holding Branch – Property Transactions Department; Economic Growth Directorate: Melissa Prins and Allison Ford		
	Private Bag X9181, Cape Town		
		Postal code:	8000
	+27(0) 21 444 4989 / 5872	Cell: -	
	Melissa.prins@capetown.gov.za ; Allison.Ford@capetown.gov.za	Fax:	

Portion 64 of Farm Haasendal No. 222: Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: Email:	City of Cape Town		
	East Region: Property Holding Branch – Property Transactions Department; Economic Growth Directorate: Melissa Prins and Allison Ford		
	Private Bag X9181, Cape Town		
		Postal code:	8000
		Cell: -	
		Fax:	
Portion 15 of Farm Haasendal No. 222: Name of landowner: Name of contact person for landowner (if other): Postal address: Telephone: Email:	K2018307676 (South Africa) (Pty) Ltd		
	Lynette de Kock		
	3rd Floor, Madison Square, Cnr Carl Cronje & Tyger Falls Boulevard, Tyger Falls,		
	Bellville	Postal code:	7530
		Cell: -	
		Fax:	021 914 9748
Name of Person in control of the land: Name of contact person for person in control of the land: Postal address: Telephone: E-mail:	Refer to the above-mentioned landowners.		
		Postal code:	
	()	Cell: -	
		Fax:	()

Duplicate this section where there is more than one Municipal Jurisdiction Municipality in whose area of jurisdiction the proposed activity will fall: Name of contact person for person in control of the land: Postal address: Telephone: E-mail:	City of Cape Town: Environmental and Heritage Management Branch [Central: Cape Town to Bellville / Kuils River]		
	Maurietta Stewart		
	Civic Centre, Cnr Voortrekker and Tallent Roads		
	Strand	Postal code:	7500
		Cell: -	
		Fax:	()

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

1.	Is the proposed development (please tick):	New		Expansion	✓
2.	Is the proposed site(s) a brownfield or greenfield site? Please explain.				
The proposed site for the Haasendal Bulk Sewer Pipeline is classified as a brownfield site. This classification is based on the following considerations: • Existing Land Use: The pipeline traverses areas that are already developed or significantly altered from their natural state, including the Kuils River Golf Course on Portions 60 and 64 of Farm Haasendal No. 222, urban edge interfaces, and disturbed open areas. • Developed Sections: Portions of the alignment, particularly on Portion 15 of Farm Haasendal No. 222 (Arnim's Place), occur within areas that have already been subject to approved development and associated land use modification. • Historical Agricultural Use: Erf 23324 and surrounding areas have historically been utilised for agricultural purposes, indicating prior disturbance and transformation of the natural environment. • Existing Infrastructure: The pipeline is, where feasible, aligned within existing or previously disturbed servitudes, reinforcing the use of already modified corridors for infrastructure placement. In addition, the pipeline alignment was refined in consultation with the City of Cape Town to avoid environmentally sensitive areas, including the proposed Haasendal Conservation Area expansion, the Haasendal River Park, and key ecological features associated with the Bottelary River corridor. Based on the above, the site does not represent a pristine or undisturbed environment and is therefore not considered greenfield. The proposed development is appropriately located within a transformed landscape consistent with brownfield conditions.					
3.	For Linear activities or developments				
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:				
The proposed bulk sewer pipeline is approximately 2,215 m in length and will traverse the following properties: 1. Portion 60 of Farm No. 222; 2. Portion 64 of Farm Haasendal No. 222; 3. Portion 15 of Farm Haasendal No. 222; and 4. Erf 23324.					
3.2.	Development footprint of the proposed development for all alternatives.				6 645 m ²
Bulk sewer main: Approx. 2 215 m x 3 m excavation width = 6 645 m ² .					
3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.				
The Applicant, K2018307676 (South Africa) (Pty) Ltd., proposes the installation of a portion of the bulk sewer main, approximately 2,215 m in length, to increase sanitation services capacity in the Kuils River area (hereafter referred to as "the pipeline"). The proposed development forms part of the City of Cape Town's sewer infrastructure upgrade strategy and supports planned urban growth within the Bottelary Corridor. The proposed pipeline forms part of the City of Cape Town's approved Sewer Master Plan and is required to provide bulk sanitation services to approved developments in the area. The project is aligned with the City's infrastructure planning and Development Contribution framework. The pipeline will traverse the following properties: Portion 15, Portion 60 and Portion 64 of Farm Haasendal No. 222, and Erf 23324 (collectively referred to as "the site"). The alignment is located within a predominantly transformed environment and has been designed to follow existing servitudes, City-owned land, and previously disturbed areas wherever feasible, thereby minimising environmental disturbance.					

The alignment was refined in consultation with the City of Cape Town to address comments raised during the previous environmental authorisation process and the interdepartmental meeting held on 11 December 2025. These refinements included:

- Avoidance of the proposed Haasendal Conservation Area expansion;
- Consideration of the Haasendal River Park as a sensitive area, with the alignment refined to avoid direct encroachment;
- Minimisation of impacts on the Bottelary River corridor and associated tributaries; and
- Relocation of manholes outside of sensitive areas.

The updated engineering layouts and meeting minutes were circulated to relevant City departments in March 2026, and no further comments were received. The alignment is therefore considered to reflect the agreed position of the City.

The pipeline route is described as follows (refer to **Figure 1** and **Figure 2**, below):

- **Starting Point:** The pipeline begins at Portion 15 of Farm Haasendal No. 222, where it connects to an existing bulk sewer manhole.
- **Middle Section:** The alignment proceeds northward, crossing Bottelary Road and continuing through Portions 60 and 64 of Farm Haasendal No. 222 within the Kuils River Golf Course, following the western and northern boundaries of these properties.
- **End Point:** The pipeline terminates on Erf 23324, located north of the Bottelary River and adjacent to Greystone Village, where it connects to an existing manhole near Halleria Street (Saxdowns Road).

The pipeline will cross non-perennial tributaries associated with the Bottelary River system but does not traverse the main Bottelary River channel. Trenchless construction methods will be implemented at watercourse crossings to minimise disturbance to aquatic features and associated riparian areas.

In addition, the proposed bulk sewer pipeline will enable the decommissioning of the existing pump station located within the Kuils River Golf Course, which has historically experienced operational and maintenance challenges. The replacement of this infrastructure with a gravity-based bulk sewer system represents a significant improvement in system reliability and operational resilience, while reducing the risk of mechanical failure, sewer overflows, and potential impacts on surrounding sensitive environments.

In response to specific comments from the City of Cape Town's Biodiversity Management Branch, a portion of the alignment intersecting Erf 222/64 (associated with the proposed Haasendal Conservation Area expansion) has been subject to targeted design and mitigation measures. These include:

- Relocation of the previously proposed manhole outside of the Conservation Area boundary;
- Implementation of a closed pipeline system through this section, with no above-ground infrastructure permitted;
- Designation of the affected area as a no-go / no-service area post-construction; and
- Commitment to ecological rehabilitation, including search and rescue of species, reinstatement of natural vegetation, and monitoring.

These measures ensure that no long-term impacts occur within the proposed Conservation Area and support the City's objectives for ecological restoration and connectivity within the Bottelary River corridor.

Technical Specifications

- **Pipeline Length:** approximately 2 215 m.
- **Excavation Width:** approximately 3 m.
- **Infrastructure components:** Installation of bulk sewer pipeline and associated manholes for maintenance access and support operational efficiency.

The proposed development constitutes linear bulk infrastructure within a transformed landscape. Anticipated impacts are localised and temporary, and all disturbed areas will be rehabilitated in accordance with the approved EMP.

The pipeline will operate as a closed system conveying wastewater and will not generate effluent, operational waste, or ongoing water use.

The Haasendal Bulk Sewer Pipeline is a critical component of the City's bulk infrastructure network, required to enhance wastewater management capacity and support planned urban development in the Kuils River area. The Locality Map (**Figure 1**) provides a visual representation of the proposed pipeline alignment.



Figure 1: Locality Map depicting the portion of the bulk sewer main to be constructed is indicated by the red line.¹

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

Access to the development site and pipeline route is largely already established, as the majority of the proposed alignment is located within the Kuils River Golf Course and traverses areas with existing internal access infrastructure. The pipeline will also cross Bottelary Road at its northern extent.

Access to the site will be obtained using the following existing routes:

Existing Internal Access Roads:

Access will be gained through internal roads within the Kuils River Golf Course, which will facilitate movement along the majority of the pipeline route. These roads are already in use for golf course maintenance and operational activities, thereby eliminating the need for the construction of new access roads within this section of the alignment.

Primary Access Points:

Primary access to the site will be obtained via the surrounding road network, including:

- Haasendal Boulevard, which provides access to the central portion of the pipeline route; and
- Pugsley Road and Blomendal Road, which provide access to the south-western extent of the alignment.

These existing access routes will be used for construction vehicles, personnel, and maintenance activities.

¹ Source: CapeFarmMapper, <https://gis.elsenburg.com/apps/cfm/#>, 14/04/2026.

The use of existing internal roads and established access points ensures that access to the pipeline route can be achieved efficiently while minimising disturbance to surrounding areas. No new permanent access roads are required as part of the proposed development.																						
3.5.	SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives	C	0	6	7	0	0	1	3	0	0	0	2	3	3	2	4	0	0	0	0	
		C	0	6	7	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	6	4
		C	0	6	7	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	6	0
		C	0	6	7	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	1	5

3.6.

Coordinates Map



Legend

Point	Latitude [S]	Longitude [E]
0	33°54'05.3"	018°42'32.0"
1	33°54'08.5"	018°42'32.4"
2	33°54'11.7"	018°42'32.6"
3	33°54'14.9"	018°42'33.1"
4	33°54'17.4"	018°42'35.0"
5	33°54'20.5"	018°42'35.6"
6	33°54'22.6"	018°42'34.3"
7	33°54'25.5"	018°42'32.7"
8	33°54'28.7"	018°42'33.1"
9	33°54'31.8"	018°42'31.9"
10	33°54'33.7"	018°42'29.2"
11	33°54'34.8"	018°42'25.5"
12	33°54'35.4"	018°42'21.7"
13	33°54'34.8"	018°42'17.9"
14	33°54'33.8"	018°42'14.2"
15	33°54'32.7"	018°42'11.0"
16	33°54'34.2"	018°42'08.7"
17	33°54'37.4"	018°42'09.2"
18	33°54'38.8"	018°42'05.8"
19	33°54'40.1"	018°42'02.3"
20	33°54'41.2"	018°41'58.6"
21	33°54'42.9"	018°41'55.4"

Map Center: Lon: 18°42'20.7"E
Lat: 33°54'24.1"S
Scale: 1:9,028
Date created: 2026/14/04
 Western Cape Government
FOR YOU

Figure 2: Map of the proposed Haasendal bulk sewer pipeline route with coordinates indicated for every 100 m along the route.²

Starting point co-ordinates for all alternatives			
Latitude (S)	33°	54'	5.18"
Longitude (E)	18°	42'	31.91"

Middle point co-ordinates for all alternatives	
Latitude (S)	Due to the length of the proposed sewer pipeline, refer to Figure 2 or Appendix A3 for detailed coordinates provided at 100-meter intervals along the route.
Longitude (E)	

End point co-ordinates for all alternatives			
Latitude (S)	33°	54'	42.94"
Longitude (E)	18°	41'	55.46"

Note:

The proposed bulk sewer pipeline follows a single preferred alignment, informed by the City of Cape Town’s approved Sewer Master Plan and existing bulk infrastructure network. No feasible or reasonable alternative alignments were identified, as the route is constrained by topography, hydraulic requirements, the decommissioning of the existing pump station, and the need to connect to existing manholes at fixed locations. The alignment has furthermore been refined in consultation with the City of Cape Town to minimise environmental impacts, avoid sensitive areas, and reflect the agreed position of the City.

Note: The proposed bulk sewer pipeline follows a single preferred alignment, informed by the City of Cape Town's approved Sewer Master Plan and existing bulk infrastructure network. No feasible or reasonable alternative alignments were identified, as the route is constrained by topography, hydraulic requirements, the decommissioning of the existing pump station, and the need to connect to existing manholes at fixed locations. The alignment has furthermore been refined in consultation with the City of Cape Town to minimise environmental impacts, avoid sensitive areas, and reflect the agreed position of the City.

² Source: CapeFarmMapper, <https://gis.elsenburg.com/apps/cfm/#>, 14/04/2026.

Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.																			
4.	Other developments																		
4.1.	Property size(s) of all proposed site(s):																		
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):																		
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:																		
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).																		
4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.																		
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:																		
4.7.	Coordinates of the proposed site(s) for all alternatives:																		
	Latitude (S)																		
	Longitude (E)																		

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

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

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	NO
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2. Is the following legislation applicable to the proposed activity or development.

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

3. Other legislation

List any other legislation that is applicable to the proposed activity or development.
- City of Cape Town Municipal Planning By-law (2019), as amended - City of Cape Town Stormwater Management By-law (2005), as amended - City of Cape Town Nature Reserves By-law (2020) - City of Cape Town Bioregional Plan (2015) - City of Cape Town Biodiversity Network / Biodiversity Policy (as amended) - City of Cape Town Wayleave By-law (2025), as amended - City of Cape Town Integrated Development Plan (2022–2027) - City of Cape Town Municipal Spatial Development Framework (MSDF) - Tygerberg District Spatial Development Framework (2023) The above legislation, policies and planning instruments have informed the design, refinement and assessment of the proposed development, including alignment with the City of Cape Town's environmental and infrastructure planning frameworks.

4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.
The following policies and planning frameworks have been considered in the design, refinement, and assessment of the proposed development: <u>City of Cape Town Floodplain and River Corridor Management Policy (2009), as amended</u> This policy aims to reduce flood risks, protect ecological integrity, and guide development within flood-prone areas and river corridors. The proposed pipeline complies with this policy through its alignment within a predominantly transformed

corridor and by avoiding permanent infrastructure within floodplains. Where watercourse crossings are required, trenchless construction methods will be implemented, and appropriate rehabilitation measures will be undertaken to maintain the ecological functioning of riparian systems.

City of Cape Town Management of Urban Stormwater Impacts Policy (2009), as amended

This policy promotes sustainable stormwater management and the protection of water quality. The proposed development aligns with this policy by minimising disturbance to natural drainage patterns, avoiding significant wetland areas, and implementing erosion and sediment control measures during construction. The design ensures that stormwater ingress into the sewer system is minimised, thereby supporting system efficiency and reducing the risk of overloading during peak rainfall events.

City of Cape Town Municipal Spatial Development Framework (MSDF)

(aligned with the Integrated Development Plan (2022–2027))

The MSDF establishes the City's spatial vision for compact growth, infrastructure efficiency, and sustainable urban development within the urban edge. The proposed pipeline supports these objectives by reinforcing bulk sanitation capacity within an existing urban service corridor and enabling planned development in accordance with the City's growth strategy.

Tygerberg District Spatial Development Framework (2023)

The District SDF provides localised spatial and environmental guidance for the Kuils River and Bottelary area. It identifies the area as suitable for infill development while emphasising the protection of ecological corridors associated with the Bottelary River. The proposed alignment responds to this by utilising existing servitudes, avoiding the proposed Haasendal Conservation Area expansion, and minimising impacts on ecological features through design refinement and rehabilitation commitments.

City of Cape Town Sewer Master Plan (2018) – Bottelary Corridor

The Sewer Master Plan identifies required bulk wastewater infrastructure upgrades to service planned growth within the Bottelary catchment. The proposed pipeline forms part of this approved network and is required to provide bulk sanitation capacity to support existing approvals (rezoning and service-agreement conditions linked to Arnim's Place and Mooiberge Estates) and future development. The alignment and design are therefore directly informed by the City's infrastructure planning framework.

City of Cape Town Environmental Management Framework (EMF, 2016)

The EMF identifies environmental sensitivities and guides compatible land uses. The proposed alignment occurs within a largely transformed environment; with portions intersecting areas of medium sensitivity associated with the Bottelary River corridor. Mitigation measures, including avoidance of sensitive areas, relocation of infrastructure, and post-construction rehabilitation, ensure alignment with the EMF.

City of Cape Town Biodiversity Network and Bioregional Plan (2015)

The City's Biodiversity Network and Bioregional Plan identify Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), and guide the protection of ecological corridors. The proposed alignment intersects ESA areas and limited CBA components; however, impacts have been minimised through alignment refinement, including avoidance of the proposed Haasendal Conservation Area expansion and relocation of infrastructure outside sensitive areas. Rehabilitation and monitoring measures will ensure that ecological connectivity is maintained.

City of Cape Town Green Infrastructure Network (GIN)

The Green Infrastructure Network (GIN) identifies interconnected ecological and open space systems that support ecosystem services and biodiversity. While the proposed pipeline intersects components of the GIN, the development is linear, underground, and temporary in nature during construction. With the implementation of mitigation and rehabilitation measures, the development will not compromise the integrity or functionality of the network.

City of Cape Town Wayleave By-law (2025), as amended

The Wayleave By-law regulates the installation of services within municipal land and servitudes. The proposed pipeline complies with this by-law by following existing servitudes and City-owned land where feasible. All required wayleave

approvals will be obtained prior to construction, ensuring coordination with existing services and long-term maintenance requirements.

City of Cape Town Climate Change Strategy (2021)

This strategy promotes climate-resilient infrastructure and adaptive design. The proposed pipeline supports these objectives through the use of a gravity-based system, which reduces reliance on mechanical infrastructure, improves system resilience, and reduces the risk of failure under extreme conditions.

City of Cape Town Water Strategy: Our Shared Water Future (2020)

The Water Strategy promotes sustainable water and sanitation services. The proposed pipeline supports this strategy by improving bulk sanitation capacity, enhancing service reliability, and contributing to the City's long-term wastewater management objectives.

Western Cape Provincial Spatial Development Framework (PSDF, 2023)

The PSDF promotes infrastructure investment within existing settlements and supports sustainable urban development. The proposed development aligns with these principles by providing essential bulk infrastructure within the urban edge, supporting densification and efficient service delivery.

Western Cape Biodiversity Spatial Plan (WCBSP, 2023)

The WCBSP identifies biodiversity priority areas and informs land use decision-making. The proposed alignment intersects ESAs and limited CBAs; however, no permanent loss of these areas will occur. Mitigation measures, including avoidance, rehabilitation, and monitoring, ensure that ecological function and connectivity are maintained in accordance with the WCBSP.

City of Cape Town Integrated Development Plan (IDP, 2022–2027)

The IDP sets out the City's strategic objectives for infrastructure delivery and service provision. The proposed pipeline supports these objectives by providing critical bulk sanitation infrastructure required to accommodate planned growth and improve service delivery within the Kuils River area.

5. Guidelines

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

The following guidelines have been considered in the assessment of the proposed development and have informed the approach to the Basic Assessment process:

“One Environmental Management System” and the 2014 EIA Regulations (DEA Circular: EADP 0028/2014)

The proposed development has been assessed in accordance with the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations, 2014 (as amended), applying the principles of the “One Environmental Management System”. This ensures an integrated and coordinated environmental assessment process aligned with national regulatory requirements.

DEA Public Participation Guidelines in terms of the NEMA EIA Regulations (2017)

The Public Participation Process (PPP) has been undertaken in accordance with Regulation 41 of the EIA Regulations and informed by the DEA Public Participation Guidelines. Stakeholder engagement was conducted in a structured and transparent manner to ensure that Interested and Affected Parties (I&APs) and relevant authorities were provided with an opportunity to comment on the proposed development.

DEA&DP Guideline on Need and Desirability (2013)

This guideline has informed the assessment of need and desirability for the proposed development, ensuring that the project is evaluated within the context of spatial planning, infrastructure requirements, and environmental sustainability. The outcomes of this assessment are presented in Section E12 of this report.

DEA Guideline for Environmental Management Programmes (2005)

This guideline informed the preparation of the Environmental Management Programme (EMPr), ensuring that appropriate mitigation measures, monitoring requirements, and management actions are identified to address potential environmental impacts associated with the proposed development.

DEA&DP Guideline on Alternatives (2013)

This guideline informed the identification and assessment of alternatives considered as part of the Basic Assessment process. The evaluation of alternatives has taken into account site-specific constraints, engineering requirements, and environmental sensitivities to determine the most feasible and environmentally acceptable alignment.

These guidelines collectively ensured that the Basic Assessment process was undertaken in a structured, transparent, and policy-aligned manner.

6. Protocols

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

The proposed development has been assessed in accordance with the applicable environmental protocols as identified through the National Web-Based Environmental Screening Tool. A Site Verification Report has been compiled by a qualified Environmental Assessment Practitioner and is included as **Appendix I**.

The outcomes of the Site Verification Report have informed the scope of specialist studies undertaken as part of this Basic Assessment process, including aquatic and terrestrial biodiversity assessments. No additional specialist studies were identified as being required beyond those included in this report.

SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 1	Describe the portion of the proposed development to which the applicable listed activity relates.
19	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;	The Applicant proposes the installation of a portion of the bulk sewer main, covering a total development footprint of approximately 6,645 m², based on an estimated trench width of 3 m along the pipeline alignment. The proposed pipeline will cross non-perennial tributaries associated with the Bottelary River system. These crossings will be undertaken using trenchless construction methods (including directional drilling), which have been specifically selected to minimise disturbance to the watercourses and associated riparian areas. Although trenchless installation is intended to minimise direct impacts within the watercourses, the activity may still constitute the infilling or depositing of material within a watercourse, as defined in Listing Notice 1, Activity 19. This is due to the potential displacement and movement of material exceeding 10 m³ within the vicinity of the watercourses during construction. The activity therefore triggers Listing Notice 1, Activity 19. These impacts are anticipated to be localised and temporary in nature and will be managed through the implementation of mitigation measures as outlined in the EMPr.
Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Listing Notice 3	Describe the portion of the proposed development to which the applicable listed activity relates.
None.		
Note: - The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted. - Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.		

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

Activity No(s):	Provide the relevant Basic Assessment Activity(ies) as set out in Category A	Describe the portion of the proposed development to which the applicable listed activity relates.
Not Applicable.		

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

Activity No(s):	Provide the relevant Listed Activity(ies)	Describe the portion of the proposed development to which the applicable listed activity relates.
Not Applicable.		

SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.
	The proposed bulk sewer pipeline comprises a single preferred alignment, approximately 2,215 m in length, extending from Portion 15 of Farm Haasendal No. 222 to Erf 23324, where it connects to existing bulk sewer infrastructure. The alignment is illustrated in Figures 1 and 2. The preferred alignment has been identified as the most technically feasible, environmentally responsible, and spatially appropriate option. No feasible or reasonable alternative alignments have been identified due to site-specific constraints, including topography, hydraulic requirements, the need to connect to existing bulk sewer infrastructure at fixed locations, and the requirement to decommission the existing pump station within the Kuils River Golf Course, which has historically experienced operational challenges. Alternative alignments within the broader corridor were considered during the planning and design process. However, these were not found to be feasible due to a combination of engineering constraints, environmental sensitivities, and the requirement to connect to existing bulk sewer infrastructure at fixed locations. The proposed development is therefore required to ensure reliable sanitation service delivery and to support approved and planned development within the Kuils River area, in accordance with the City of Cape Town's infrastructure planning framework. The alignment has been designed to follow existing servitudes, City-owned land, and previously disturbed areas wherever feasible, while also avoiding properties identified for future development and preventing the sterilisation of these parcels. This approach minimises environmental disturbance and supports efficient long-term land use planning. The route was further refined in consultation with the City of Cape Town to address environmental considerations, including: • Avoidance of the proposed Haasendal Conservation Area expansion; • Recognition of the Haasendal River Park as a sensitive area, with the alignment refined to avoid direct encroachment; • Minimisation of impacts on the Bottelary River corridor and associated tributaries; and • Relocation of infrastructure outside of environmentally sensitive areas. This application represents a revised submission informed by previous authority engagement, including input from the City of Cape Town and DEA&DP. Key concerns raised during the previous process have been addressed through: • refinement of the pipeline alignment to avoid environmentally sensitive areas, including the Haasendal Conservation Area expansion and river corridors; • relocation of infrastructure (e.g. manholes) outside of sensitive areas; • confirmation of trenchless construction methods at watercourse crossings; • incorporation of aquatic and terrestrial biodiversity specialist recommendations; and • strengthening of EMPr mitigation and management measures. These refinements have been integrated into the project design, impact assessment, and environmental management measures presented in this BAR. A detailed description of the preferred alignment is provided in Section B (3.3) and (3.4). The preferred Site Development Plan is included in Appendix B1. Planning Context and Need The preferred alignment forms part of the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor), which identifies the Haasendal Bulk Sewer Pipeline as a required bulk infrastructure upgrade to service approved and planned development within the Northern District. The pipeline gives effect to rezoning and service agreement conditions applicable to Portion 15 of Farm Haasendal No. 222 (Annim's Place), as well as associated developments such as Mooiberge Estate, which require the provision of

downstream bulk sanitation infrastructure. The development is therefore embedded within the City's infrastructure planning, funding mechanisms, and long-term service delivery framework.

In addition, the proposed pipeline will enable the decommissioning of the existing pump station within the Kuils River Golf Course, replacing it with a gravity-based system. This represents a significant improvement in system reliability and operational resilience and reduces the risk of mechanical failure, sewer overflows, and associated environmental impacts.

The preferred alignment is therefore considered the most appropriate option as it:

- Responds to an identified infrastructure need within the City's approved planning framework;
- Supports existing development rights and planned urban growth within the urban edge;
- Improves system reliability through the replacement of ageing and failure-prone infrastructure;
- Minimises environmental impacts through alignment refinement and use of disturbed corridors; and
- Ensures efficient and reliable service delivery to the area.

2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.
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The proposed installation of the bulk sewer pipeline is consistent with the existing land use rights applicable to the affected properties. The current zoning permits infrastructure development, including the provision of engineering services such as sewer networks, which are considered ancillary to the primary land use.

The proposed development supports the broader planning objectives for the area by enabling the provision of bulk sanitation infrastructure required to service approved developments. It does not conflict with existing land use rights or zoning provisions and is aligned with the applicable municipal planning frameworks.

Furthermore, the alignment has been designed to follow existing servitudes and City-owned land where feasible, thereby ensuring compatibility with existing land use patterns and minimising potential land use conflicts.

The proposed pipeline does not alter the primary land use of the affected properties and will not result in any permanent land use change.

Proof of the existing land use rights granted for the properties, confirming the permitted uses under the applicable zoning scheme, is provided in **Appendix E21**.

3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.
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An EA for a mixed-use development on Erf 23324, forming part of the Haasendal Estate, was approved by the Department of Environmental Affairs and Development Planning (DEA&DP) under Reference No. 16/3/3/1/A8/74/3044/19. This EA, issued in 2021, is included in **Appendix M** for reference.

The approved EA relates specifically to the mixed-use development on Erf 23324 and does not include the proposed bulk sewer pipeline, which constitutes a separate municipal engineering service with a distinct purpose, design, and footprint. The bulk sewer pipeline is therefore being assessed independently through this Basic Assessment process.

There is no conflict between the proposed bulk sewer pipeline and the existing EA. The proposed development does not compromise the implementation of the approved mixed-use development or the conditions of the existing authorisation.

Furthermore, the proposed pipeline forms part of the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor) and gives effect to rezoning and Service Agreement conditions applicable to Portion 15 of Farm Haasendal No. 222 (Arnim's Place), as well as associated developments such as Mooiberge Estate. The development is therefore consistent with the City's infrastructure planning and spatial approval framework.

The proposed development has been reviewed in the context of existing approvals and is considered fully compatible with the approved mixed-use development and broader municipal planning objectives.

4.	Explain how the proposed development will be in line with the following?
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4.1	The Provincial Spatial Development Framework.
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The Western Cape Provincial Spatial Development Framework (PSDF, 2023) promotes sustainable development through the efficient use of existing infrastructure, the consolidation of development within the urban edge, and the protection of ecological systems.

The proposed Haasendal Bulk Sewer Pipeline aligns with these principles as it constitutes essential bulk infrastructure required to support approved and planned development within the Kuils River area, which falls within the designated urban edge. The development facilitates improved sanitation service delivery and enables sustainable urban growth in line with provincial and municipal planning frameworks.

From an environmental perspective, the proposed alignment is located within a predominantly transformed landscape and has been designed to utilise existing servitudes, City-owned land, and disturbed areas wherever feasible. Sensitive environmental features, including the proposed Haasendal Conservation Area expansion, Haasendal River Park and the Bottelary River corridor, have been avoided or minimised through alignment refinement undertaken in consultation with the City of Cape Town.

The development therefore supports the PSDF's objectives of:

- Promoting infrastructure investment within existing urban areas;
- Supporting compact and efficient urban development;
- Protecting ecological corridors through avoidance and mitigation; and
- Ensuring long-term sustainability through resilient infrastructure design.

In addition, the proposed pipeline will enable the decommissioning of an existing pump station within the Kuils River Golf Course, replacing it with a gravity-based system. This improves infrastructure reliability and reduces the risk of environmental impacts associated with system failure, further supporting the PSDF's sustainability objectives.

The proposed development is therefore considered to be fully consistent with the principles and objectives of the PSDF.

4.2	The Integrated Development Plan of the local municipality.
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The proposed development is aligned with the City of Cape Town's Integrated Development Plan (IDP) (2022–2027), which prioritises the provision of reliable and efficient basic services as a foundation for sustainable urban development.

The IDP identifies the upgrading and expansion of bulk infrastructure, including wastewater systems, as critical to supporting population growth, enabling economic development, and protecting public health. The Kuils River area has experienced significant development pressure, increasing the demand for sanitation services.

The proposed bulk sewer pipeline directly supports these objectives by increasing bulk sanitation capacity and improving the reliability of the sewer network. In particular, the development will enable the decommissioning of an existing pump station within the Kuils River Golf Course, replacing it with a gravity-based system. This will reduce the risk of mechanical failure and sewer overflows, thereby improving environmental protection and service delivery.

The proposed development therefore contributes to the City's strategic objectives by:

- Enhancing the provision of essential services;
- Supporting approved and planned urban development within the urban edge;
- Improving infrastructure resilience and operational efficiency; and
- Promoting public health and environmental protection.

The development is therefore considered to be fully aligned with and supportive of the objectives of the City of Cape Town's IDP.

4.3.	The Spatial Development Framework of the local municipality.
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The proposed development is aligned with the City of Cape Town's Municipal Spatial Development Framework (MSDF) and the Tygerberg District Spatial Development Framework (2023), which guide spatial planning, infrastructure provision, and sustainable urban development within the municipal area.

These frameworks identify the Kuils River area as a growth node within the urban edge, where the provision of bulk infrastructure is required to support approved development and ongoing urbanisation. The upgrading and expansion of

wastewater infrastructure is specifically recognised as critical to enabling sustainable development and maintaining service delivery standards.

The proposed bulk sewer pipeline directly supports these objectives by providing the bulk sanitation capacity required to service approved developments within the area. The alignment has been designed to follow existing servitudes, City-owned land, and previously disturbed areas, thereby ensuring compatibility with existing land use patterns and minimising environmental impacts.

In addition, the alignment was refined in consultation with the City of Cape Town to avoid sensitive environmental features, including the proposed Haasendal Conservation Area expansion, Haasendal River Park and to minimise impacts on the Bottelary River corridor. This supports the SDF's objective of protecting ecological corridors while enabling appropriate development within the urban edge.

The proposed development therefore:

- Supports infrastructure-led growth within the urban edge;
- Enables approved and planned development in the Kuils River area;
- Aligns with integrated spatial and infrastructure planning objectives; and
- Balances development needs with environmental protection.

The proposed development is therefore considered to be fully consistent with the spatial planning objectives of the MSDF and the Tygerberg District SDF.

4.4. The Environmental Management Framework applicable to the area.

The Environmental Management Framework (EMF) provides guidance on environmental sensitivities and appropriate land use within the municipal area. The City of Cape Town's Environmental Management Framework is incorporated into the Tygerberg District Spatial Development Framework (2023) and informs environmental planning within the Kuils River and Bottelary River corridor.

According to the Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool (refer to **Appendix I1**), the proposed development site does not fall within a mapped EMF area. As such, no specific EMF zones or restrictions are directly applicable to the proposed development.

Notwithstanding the above, the broader Northern District EMF identifies the Bottelary River corridor as an ecological support area where infrastructure development should be carefully managed and confined to existing servitudes and disturbed areas. The proposed alignment is consistent with these principles, as it follows existing service corridors and has been refined to minimise impacts on ecological features.

In addition, the Haasendal River Park was identified during engagement with the City of Cape Town as a sensitive area requiring consideration. In response, the alignment was refined to avoid direct encroachment into the park and to minimise potential impacts on associated ecological and recreational functions.

In response to comments from the City of Cape Town, the alignment has further been adjusted to avoid the proposed Haasendal Conservation Area expansion and to relocate infrastructure outside of sensitive areas. The EMP includes rehabilitation, monitoring, and ecological management measures to ensure that ecological function within the Bottelary River corridor is maintained.

The proposed development is therefore consistent with the intent and management principles of the applicable Environmental Management Framework, responds to City-identified environmental sensitivities, and does not require any additional EMF-related authorisation.

5. Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.

The proposed development has been informed by specialist studies, as well as comments received from the DEA&DP and the City of Cape Town, particularly the Biodiversity Management Branch. All comments received during the previous environmental authorisation process have been addressed and incorporated into the project design.

Specialist input confirmed that the site is predominantly transformed, with vegetation largely comprising degraded grassland and invasive alien species. Although the site is mapped within threatened vegetation types (Cape Flats Sand

Fynbos and Swartland Granite Renosterveld), **no remnant indigenous vegetation representative of these ecosystems remains along the proposed alignment** (refer to **Appendix G3**).

Aquatic assessments confirmed that the pipeline will cross non-perennial tributaries associated with the Bottelary River, with the main river system located nearby and identified as having moderate ecological importance. The smaller tributaries on site are largely modified. The specialist concluded that, with the implementation of appropriate mitigation measures, impacts on aquatic ecosystems would be of **low to very low significance**, following the implementation of mitigation measures (refer to **Appendix G2**).

Comments from the City of Cape Town's Biodiversity Management Branch and DEA&DP resulted in the following key refinements to the proposed development:

- Relocation of a manhole previously located within the proposed Haasendal Conservation Area expansion boundary to outside of the boundary;
- Refinement of the pipeline alignment to avoid direct encroachment into sensitive areas, including the Haasendal River Park;
- Limiting construction within sensitive areas to existing servitudes where feasible;
- Incorporation of site-specific rehabilitation, erosion control, and alien vegetation management measures into the EMP; and
- Commitment to post-construction monitoring to ensure reinstatement of ecological function.

In addition, the proposed alignment responds to broader ecological planning frameworks, including the City's Biodiversity Network (BioNet) and the Western Cape Biodiversity Spatial Plan (2023), by avoiding areas of higher ecological sensitivity and maintaining ecological connectivity along the Bottelary River corridor.

The revised design ensures that no permanent infrastructure is located within the proposed Haasendal Conservation Area expansion and that construction-related disturbance is temporary and fully rehabilitated.

Based on the above refinements, the City of Cape Town's Biodiversity Management Branch confirmed that the proposed development, with mitigation, is acceptable and that residual impacts on terrestrial and aquatic biodiversity are of **low significance**. No additional specialist studies were required.

6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
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The proposed development has been assessed in accordance with the Western Cape Biodiversity Spatial Plan (WCBSP, 2023) and the City of Cape Town's Biodiversity Network (BioNet, 2024), which guide land use planning in relation to biodiversity priority areas and ecological corridors.

The WCBSP identifies portions of the study area as Critical Biodiversity Areas (CBA1) and Ecological Support Areas (ESA), associated with the Bottelary River corridor and the proposed Haasendal Conservation Area expansion. These designations informed the assessment and refinement of the pipeline alignment.

Field verification and specialist studies confirmed that, despite the mapped sensitivity, the proposed alignment traverses a predominantly transformed environment with **no remaining indigenous vegetation** representative of the mapped threatened ecosystems. This finding was critical in confirming that the development could be accommodated within the identified corridor, subject to appropriate mitigation.

In response to the WCBSP and BioNet requirements, the following key design and mitigation measures were incorporated:

- Refinement of the pipeline alignment to avoid intact and higher sensitivity areas, including the proposed Haasendal Conservation Area expansion;
- Relocation of infrastructure, including manholes, outside of sensitive areas;
- Restriction of construction activities to existing servitudes where feasible;
- Implementation of rehabilitation, alien vegetation control, and monitoring measures in accordance with WCBSP guidelines; and
- Maintenance of ecological connectivity along the Bottelary River corridor.

These measures ensure that the proposed development does not result in the permanent loss of CBA or ESA areas and that ecological function is maintained post-construction. The proposed development is therefore consistent with the objectives of the WCBSP (2023) and the City's BioNet (2024), as it accommodates essential bulk infrastructure within a transformed landscape while avoiding sensitive areas and maintaining ecological connectivity.	
7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA. Not applicable. The proposed development is not located within the coastal zone as defined in terms of the Integrated Coastal Management Act, 2008 (Act No. 24 of 2008).
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I. The DFFE Screening Tool Report has not changed from the version submitted together with the Application Form and is included as Appendix I.
9.	Explain how the proposed development will optimise vacant land available within an urban area. The proposed development is located within the urban area³ of Kuils River, which is experiencing ongoing growth and densification. The pipeline is aligned within existing servitudes, City-owned land, and previously disturbed areas, thereby optimising the use of already transformed land and avoiding the need for new development corridors. As linear underground infrastructure, the proposed bulk sewer pipeline does not result in the permanent occupation or sterilisation of land. The installation is temporary in nature, and all disturbed areas will be rehabilitated post-construction, allowing the land to continue supporting its existing or planned land uses. The development enables the provision of essential bulk sanitation infrastructure required to support approved and future development within the area. In doing so, it facilitates efficient use of land within the urban edge by ensuring that vacant and underutilised land can be developed without infrastructure constraints. The alignment has been specifically designed to avoid environmentally sensitive areas and to minimise impacts on ecological features, thereby supporting sustainable urban development while maintaining ecological function. The proposed development is therefore consistent with the principles of efficient land use, infrastructure-led development, and urban densification as promoted in the City of Cape Town's spatial planning frameworks.
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure. The proposed development represents an extension and upgrade of the City of Cape Town's existing bulk sewer network, designed to enhance sanitation service delivery within the Kuils River area. The pipeline will connect to existing manholes at both ends, ensuring integration with the current municipal infrastructure network. By utilising and expanding existing infrastructure, the development optimises the use of available resources and avoids the need for redundant or duplicated systems. The alignment has been designed to follow existing servitudes and infrastructure corridors where feasible, further supporting efficient infrastructure planning and minimising additional disturbance. In addition, the proposed pipeline will enable the decommissioning of the existing pump station within the Kuils River Golf Course, replacing it with a gravity-based system. This represents a more efficient and reliable use of infrastructure, reducing maintenance requirements, operational costs, and the risk of system failure. The proposed development therefore: • Enhances the capacity and efficiency of the existing sewer network; • Optimises the use of existing municipal infrastructure and servitudes; • Reduces reliance on mechanical infrastructure through a gravity-based system; and • Improves long-term operational efficiency and resilience. The development is therefore consistent with the principles of resource efficiency and integrated infrastructure planning.

³ Listing Notice 1 (GNR 327 of 2017), as amended, defines "urban areas" as "areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas". The site falls within the urban edge as defined by the City of Cape Town within the Urban Development and Coastal Edge Report (2019-2022 Review Period, Map 1., pg. 3).

11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
	The proposed development forms part of the City of Cape Town's municipal bulk sewer infrastructure network and is aligned with the City's approved Sewer Master Plan (2018 – Bottellary Corridor). The project is intended to increase bulk wastewater conveyance capacity within the Kuils River area and therefore supports the City's long-term service planning. The proposed pipeline connects to existing municipal infrastructure at both ends and functions as a bulk conveyance system. It does not generate additional wastewater or place demand on municipal treatment capacity, but rather improves the efficiency and capacity of the existing network. In terms of service requirements, the following is noted: • Water: A small quantity of non-potable water will be required during the construction phase for activities such as dust suppression and concrete works. • Wastewater: The development does not generate wastewater, but facilitates the conveyance of sewage from <u>existing</u> and <u>approved</u> developments to the municipal treatment system. • Solid Waste: Minor quantities of construction waste will be generated and will be reused or disposed of at a licensed waste disposal facility. No operational waste will be generated. • Electricity: No permanent electrical connection is required. Temporary power, if needed during construction, will be supplied by the contractor. Given the nature of the development as linear bulk infrastructure designed to extend and improve existing municipal services, the project does not require additional service allocation or place demand on spare municipal capacity. The proposed development has been reviewed by the City of Cape Town's relevant departments as part of the engineering design and planning process. The alignment and design are consistent with the City's approved infrastructure network and planning parameters, confirming that sufficient service capacity is available within the existing system. The proposed development therefore utilises and enhances existing municipal infrastructure and does not place additional demand on service capacity.
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
	In accordance with the Department of Environmental Affairs and Development Planning's Guideline on Need and Desirability (2013), the proposed development has been assessed in terms of both timing (need) and location (desirability), taking into account broader spatial planning, service delivery, and environmental considerations. In the opinion of Legacy EMC, the proposed bulk sewer pipeline is both needed at this time and desirable at the proposed location, for the reasons set out below. Need (Is this the right time?) The Kuils River area is experiencing ongoing urban growth and densification, resulting in increased pressure on existing wastewater infrastructure. Current capacity constraints within the sewer network, including the reliance on an ageing pump station within the Kuils River Golf Course, highlight the need for upgraded bulk sanitation infrastructure. The proposed development addresses this need by increasing bulk wastewater conveyance capacity and improving the reliability of the sewer network. Importantly, the pipeline will enable the decommissioning of the existing pump station located within the Kuils River Golf Course, replacing it with a gravity-based system. This reduces reliance on mechanical infrastructure, thereby lowering the risk of system failure, sewer overflows, and associated environmental and public health impacts. The project is not developer-driven but is derived from the City of Cape Town's approved Sewer Master Plan (2018 – Bottellary Corridor) and is required to give effect to rezoning and Service Level Agreement conditions associated with approved developments, including Annim's Place and Mooiberge Estate. The proposed development is therefore required at this time to:

- Address existing and future capacity constraints within the sewer network;
- Ensure reliable and efficient sanitation service delivery;
- Reduce the risk of system failure and associated environmental impacts; and
- Support approved development and planned urban growth.

Desirability (Is this the right place?)

The proposed alignment is located within an urban area and has been designed to follow existing servitudes, City-owned land, and previously disturbed areas. This ensures that the development avoids sensitive environmental features as far as practicable and does not result in unnecessary disturbance to intact natural habitat.

Although portions of the site are mapped within CBA and ESA areas, specialist studies confirmed that the alignment traverses a transformed landscape with no remaining indigenous vegetation representative of the mapped ecosystems. Aquatic assessments similarly confirmed that impacts on watercourses will be of low significance with mitigation.

The alignment was further refined in consultation with the City of Cape Town to:

- Avoid the proposed Haasendal Conservation Area expansion;
- Avoid direct encroachment into the Haasendal River Park;
- Minimise impacts on the Bottelary River corridor; and
- Relocate infrastructure outside of sensitive areas.

As linear underground infrastructure, the pipeline does not sterilise land and allows for continued or future land use post-construction. The development therefore represents an efficient and appropriate use of land within the urban edge.

The proposed development is **both needed and desirable**, as it:

- Supports critical bulk infrastructure requirements identified in municipal planning;
- Enables approved development and sustainable urban growth;
- Improves infrastructure reliability and reduces environmental risk;
- Minimises environmental impacts through careful alignment and mitigation; and
- Optimises the use of existing infrastructure and transformed land.

The development is therefore consistent with the principles of sustainable development and is considered appropriate in terms of both timing and location.

13.	As per DEA&DPs comment on the Nol Form, it is required to show how the proposed development complies with the principles contained in Section 2 of the NEMA.
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The proposed development has been assessed in accordance with the principles contained in Section 2 of the National Environmental Management Act (NEMA), 1998. These principles have informed the planning, design, and assessment of the project and are reflected throughout this Basic Assessment Report (refer to Section E: Need and Desirability).

Section 2 of NEMA, states the following, inter alia: (2) Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.	The proposed development serves the public interest by expanding the City of Cape Town's bulk sewer infrastructure to support ongoing urban growth within the Kuils River area. The project contributes to improved sanitation services, which are essential for public health, environmental protection, and human dignity. The development will provide long-term benefits to local communities by enabling reliable access to essential municipal services and supporting sustainable urban development. Interested and Affected Parties (I&APs) and relevant authorities have been afforded the opportunity to participate in the assessment process.
(3) Development must be socially, environmentally and economically sustainable	The proposed development is consistent with the principles of sustainable development, taking into account environmental, social, and economic considerations. Environmental Sustainability (Ecological Integrity): The alignment has been designed to avoid sensitive areas

	where possible and to utilise existing servitudes and disturbed land. Specialist assessments confirmed that the site is largely transformed, with limited ecological sensitivity along the route. Impacts are expected to be low and will be mitigated through the implementation of the EMPr, including rehabilitation and monitoring measures. Social Sustainability (Social Equity): The project addresses a critical service delivery need by improving sanitation infrastructure in a rapidly growing urban area. Reliable wastewater services are essential to protect public health and ensure equitable access to basic services. Economic Sustainability (Prosperity and Efficiency): The development optimises existing infrastructure by integrating with the City's bulk sewer network and enabling the decommissioning of an ageing pump station. This improves system efficiency, reduces operational costs, and supports long-term economic development.
4(a) Sustainable development requires the consideration of all relevant factors including the following:	
(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	The proposed pipeline traverses a predominantly transformed landscape, including golf course areas, previously developed land, and historically cultivated areas. Specialist assessments confirmed that no remnant indigenous vegetation or species of conservation concern occur along the alignment. The routing has been refined to: • Avoid the proposed Haasendal Conservation Area expansion; • Avoid direct encroachment into the Haasendal River Park; and • Minimise impacts on the Bottelary River corridor and associated tributaries. Potential impacts are localised and temporary, and mitigation measures in the EMPr will ensure that impacts are avoided, minimised, and rehabilitated.
(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;	The development will not result in significant pollution or degradation. The pipeline is a closed system and will not generate operational waste or effluent. Construction-related risks (e.g. dust, erosion, hydrocarbons) will be managed through: • Implementation of the EMPr; • Erosion and sediment control; • Spill prevention and response measures; and • ECO monitoring and compliance auditing.
(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;	The development is located within a transformed urban environment with low likelihood of impacting heritage resources. A Notice of Intent to Develop (NID) was submitted and Heritage Western Cape confirmed that: • No significant heritage resources will be impacted; and • No further heritage studies are required. The development therefore complies with the NHRA.

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;	Waste generated during construction will be: • Minimized at source; • Reused or recycled where feasible; and • Disposed of at licensed facilities where required. Waste management will be undertaken in accordance with applicable legislation and municipal requirements.
(v) That the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource.	Not applicable. The development does not involve the extraction or use of non-renewable natural resources.
(vi) That the development, use and exploitation of renewable resources and the ecosystem of which they are part do not exceed the level beyond which their integrity is jeopardized.	Measures included in the EMPr will ensure responsible use of resources such as water and soil during construction, maintaining ecological integrity.
(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and	A precautionary approach has been applied through: • Specialist input and technical assessments; • Avoidance of sensitive areas (including the Haasendal River Park and conservation expansion area); and • Refinement of the alignment to minimise environmental risk.
(viii) That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.	Potential impacts have been identified and assessed. Where impacts cannot be avoided, they will be mitigated through the EMPr to ensure that they are minimised and managed.
(b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.	The assessment integrates environmental, social, and technical considerations. Specialist studies informed the alignment and mitigation measures, ensuring a balanced and sustainable outcome.
(c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.	The development will not result in unfair distribution of impacts. Instead, it improves access to sanitation services, supporting public health and benefiting surrounding communities.
(d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human well-being must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.	Not directly applicable. However, the development indirectly supports equitable access to basic services by improving sanitation infrastructure.
(e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.	The Applicant will be responsible for environmental compliance throughout the project lifecycle. Implementation of the EMPr and compliance with OHSA will ensure protection of both workers and the environment.
(f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.	A PPP will be undertaken in accordance with the EIA Regulations. All I&APs will be afforded the opportunity to participate and provide input into the process.
(g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this	Inputs from I&APs and authorities have been considered and incorporated into the project design and assessment.

includes recognizing all forms of knowledge, including traditional and ordinary knowledge.	
(h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.	The PPP will facilitate access to information and participation in decision-making, supporting community awareness and engagement.
(i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.	Environmental, social, and economic impacts have been assessed in a structured manner, and mitigation measures have been identified to support informed decision-making.
(j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.	Health and safety risks will be managed in accordance with OHSA. Workers will be informed of risks and appropriate safety procedures.
(k) Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.	The process has been conducted in an open and transparent manner, with information shared with I&APs and opportunities provided for review and comment.
(l) There must be intergovernmental co-ordination and harmonisation of policies, legislation and actions relating to the environment.	Relevant authorities have been consulted, including DEA&DP and City of Cape Town departments. Comments have informed project refinement.
(m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.	No conflicts of interest have been identified.
(n) Global and international responsibilities relating to the environment must be discharged in the national interest.	Not directly applicable.
(o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.	The development serves the public interest by improving sanitation infrastructure while ensuring environmental protection through mitigation measures.
(p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.	The Applicant will be responsible for any environmental damage and for implementing remedial measures where required.
(q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.	The PPP will ensure inclusive participation, providing opportunities for all stakeholders to engage in the process.
(r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.	Sensitive features, including watercourses and ecological corridors, have been identified and avoided or minimised through alignment refinement. Mitigation and rehabilitation measures will ensure protection of ecological function.
The table below describes how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been considered:	
Section 23 of NEMA states the following:	
(2) The general objective of integrated environmental management is to:	
(a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;	The BA process has integrated the principles of environmental management set out in Section 2 of NEMA into project planning and decision-making. This included: • Specialist input informing alignment selection;

	• Avoidance of sensitive areas (including the Haasendal Conservation Area expansion and Haasendal River Park); and • Incorporation of mitigation measures into the EMPr. Relevant municipal policies and environmental planning instruments were also considered in the project design.
(b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;	Potential environmental, social, and heritage impacts have been identified, assessed, and evaluated as part of the BA process. • Impact significance (pre- and post-mitigation) is detailed in Appendix J; • Practical mitigation measures have been identified to minimise impacts and enhance benefits; and • Design refinements were informed by specialist input and authority comments.
(c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;	Environmental impacts have been assessed prior to decision-making through a structured impact assessment process. Mitigation measures have been incorporated into the project design and EMPr to ensure that impacts are appropriately managed before implementation.
(d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;	An adequate and appropriate PPP will be undertaken in accordance with the EIA Regulations. • I&APs and authorities will be given opportunity to comment. • Comments will be recorded, responded to, and incorporated into the project. • Outcomes informed refinement of the proposed development.
(e) ensure the consideration of environmental attributes in management and decision making which may have a significant effect on the environment; and	Environmental attributes of the site have been identified and assessed through specialist studies. The findings of these assessments have informed: • Alignment selection; • Impact mitigation measures; • The EMPr. This ensures that environmental considerations are appropriately integrated into decision-making.
(f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.	Appropriate environmental management measures have been identified and formalised in the EMPr. • The Applicant will be required to implement the EMPr; • Compliance will be monitored by an Environmental Control Officer (ECO); and • Measures address all phases of the project (construction, operation, rehabilitation).

SECTION F: PUBLIC PARTICIPATION

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

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

Not applicable. The PPP for this application is being undertaken in accordance with the requirements of the NEMA EIA Regulations, 2014 (as amended), and does not form part of a separate agreement with the competent authority specific to linear activities.

Notwithstanding the above, inputs received during the previous application process, including authority comments and the interdepartmental technical engagement with the City of Cape Town (11 December 2025), have been taken into consideration in the refinement of the proposed pipeline alignment.

These inputs informed key design revisions, including:

- Avoidance of the proposed Haasendal Conservation Area expansion;
- Consideration of the Haasendal River Park as a sensitive area;
- Minimisation of impacts on the Bottelary River corridor; and
- Relocation of infrastructure outside of environmentally sensitive areas.

The outcomes of this engagement have been incorporated into the current application and are reflected in the revised project description and layout. The current PPP is therefore being undertaken on an informed basis, addressing previously raised concerns.

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

The PPP will be undertaken in accordance with Regulation 41 of the NEMA EIA Regulations, 2014 (as amended).

The PPP for this application includes the following:

- Fixing of site notice boards at conspicuous and accessible locations along the site boundary, including near the corner of Pugsli and Saxdowns Roads and along the Kuils River Golf Course boundary;
- Written notification to all identified Interested and Affected Parties (I&APs), including adjacent landowners and occupiers, the ward councillor, the local municipality, and relevant organs of state;
- Placement of a formal advertisement in a local newspaper (*Tygerburger*) on Wednesday, **15 April 2026**;
- Availability of the Draft Basic Assessment Report (BAR) for public review at the Kuils River Public Library, located at 12 Carinus Street, Kuils River, Cape Town, 7580, and via an online platform on the following website: <http://legacyemc.co.za/public-participation/>; and
- Provision of a public comment period (from **16 April to 18 May 2026**) in accordance with the EIA Regulations.

Proof of compliance with the PPP requirements, including all notices, correspondence, and the I&AP register, is included in **Appendix F**.

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

Legacy Environmental Management Consulting (Legacy EMC) has undertaken consultation with the competent authority and relevant Organs of State in accordance with the NEMA EIA Regulations, 2014 (as amended).

Consultation with the competent authority, the Department of Environmental Affairs and Development Planning (DEA&DP), was initiated through the submission of the Application Form, followed by the submission of the Draft Basic Assessment Report (BAR), and associated documentation.

In addition, the following specialist-led authority engagements were undertaken:

- A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC), which confirmed that no further heritage studies are required; and

- A Water Use Authorisation (WUA) process was initiated with the Department of Water and Sanitation (DWS) — refer to **Appendix L**.

The following Organs of State and State Departments were notified of, and provided with an opportunity to comment on, the application and associated reports:

- DEA&DP: Development Management (Competent Authority)
- DEA&DP: Pollution and Chemicals Management
- DEA&DP: Waste Management
- Department of Agriculture, Land Reform and Rural Development
- Western Cape Department of Agriculture (Elsenburg)
- DWS
- Heritage Western Cape
- CapeNature
- City of Cape Town Municipality

All comments received from Organs of State will be incorporated and responded to in the Final BAR.

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

Not applicable. All State Departments and Organs of State identified in the application form were formally notified of the application and afforded an opportunity to comment during the public participation process.

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

Not Applicable at this stage of the project. The unresponsive Organs of State and State Departments will be confirmed in the Final BAR.

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

All comments received on the Draft BAR will be included in a Comments and Responses Report (C&RR) for attachment to the Final BAR.

Note:

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

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

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

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

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

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

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

SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

1. Groundwater

1.1.	Was a specialist study conducted?	YES	NO
1.2.	Provide the name and or company who conducted the specialist study.		
Not Applicable.			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
The proposed development is located within a fractured aquifer system associated with the Cape Granite Suite (Kuil's River–Helderberg Batholith). While a major aquifer is present in the broader area, it is not classified as a Strategic Water Source Area. The aquifer is characterised by generally low yields and limited abstraction potential. Given the nature of the proposed development as a linear, closed bulk sewer system, no direct abstraction of groundwater is required, and the design does not rely on groundwater resources. As such, the presence of the aquifer has not imposed significant constraints on the development.			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
According to CapeFarmMapper and regional hydrogeological data, the site is underlain by a low-yield fractured aquifer system, with typical yields ranging between approximately 0.5 and 2.0 litres per second. The area is characterised by gently sloping topography toward the Bottelary River and is underlain by granitic geology of the Cape Granite Suite. Soils within the project area comprise predominantly grey aeolian sands, which are generally well-drained. The combination of soil conditions and fractured bedrock indicates limited groundwater storage and low connectivity to surface water features. Given the shallow trench excavation (approximately 3 m depth), the absence of groundwater abstraction, and the use of trenchless construction methods at watercourse crossings, the proposed development is not anticipated to result in significant impacts on groundwater resources. Potential risks, such as contamination during construction, will be mitigated through the implementation of the EMP, including measures for spill prevention, appropriate material handling, and rehabilitation of disturbed areas. Overall, the proposed development is considered to pose a low risk to groundwater resources, and no specialist groundwater assessment was deemed necessary.			

2. Surface water

2.1.	Was a specialist study conducted?	YES	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
Toni Belcher and Dana Grobler for BlueScience (Aquatic Impact Assessment, Appendix G2).			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		
The site contains several aquatic features, including the middle to lower reaches of the Bottelary River, two unnamed tributaries, and associated wetland areas forming part of the Kuil's/Eerste River system. These features have significantly influenced the design and routing of the proposed bulk sewer pipeline. An Aquatic Impact Assessment confirmed that the Bottelary River is in a largely to seriously modified ecological condition due to historical urban and agricultural pressures. However, the river retains moderate ecological importance and sensitivity, requiring careful consideration in project planning. The unnamed tributaries and associated wetlands are similarly modified but contribute to the broader ecological functioning of the river corridor. In response, the pipeline alignment has been designed to: Avoid direct encroachment into the Bottelary River channel;			

- Minimise disturbance to tributaries and associated wetland areas; and
- Follow existing servitudes and disturbed corridors wherever feasible.

Watercourse crossings will be undertaken using **trenchless construction methods (including directional drilling)** to avoid in-stream disturbance and reduce impacts on riparian and aquatic habitat.

The specialist assessment concluded that, with the implementation of recommended mitigation measures, the proposed development will result in a **low negative impact** on aquatic ecological integrity.

Further refinement of the alignment was undertaken in response to comments from the City of Cape Town's Biodiversity Management Branch. The revised (March 2026) engineering layout confirms that:

- Infrastructure has been relocated outside the proposed Haasendal Conservation Area expansion boundary;
- Construction within Erf 222/64 is confined to existing servitudes; and
- The alignment avoids the Bottellary River floodplain and maintains riparian buffer integrity.

In addition, the proximity of the Haasendal River Park, identified during interdepartmental engagement as a sensitive planning and ecological feature, was considered in the alignment refinement. The final route avoids direct encroachment into this area, thereby reducing potential impacts on planned ecological and recreational functions associated with the river corridor.

Overall, the presence and condition of surface water features have directly informed the alignment, construction methodology, and mitigation approach, ensuring that impacts are minimised and ecological connectivity along the Bottellary River corridor is maintained in accordance with the City's Floodplain and River Corridor Management Policy (2009), as amended.

3. Coastal Environment

3.1.	Was a specialist study conducted?	YES	NO
3.2.	Provide the name and/or company who conducted the specialist study.		
	Not Applicable.		
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
	Not Applicable.		
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
	Not Applicable.		
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
	Not Applicable.		

4. Biodiversity

4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
	Adam Labuschagne of Bergwind Botanical Surveys & Tours CC.		
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		
	A range of biodiversity planning tools and datasets were consulted to inform the assessment and design of the proposed development, including: • Vegetation Map of South Africa (VegMap, 2018); • Western Cape Biodiversity Spatial Plan (WCBSP, 2023); • City of Cape Town Biodiversity Network (BioNet, 2024);		

- National Freshwater Ecosystem Priority Areas (NFEPA);
- National Wetland Map (NWM5); and
- National List of Threatened Ecosystems (2022).

According to VegMap (2024), the site is mapped as Cape Flats Sand Fynbos and Swartland Granite Renosterveld, both listed as threatened ecosystems. However, site verification undertaken as part of the Terrestrial Biodiversity Assessment (**Appendix G3**) confirmed that the affected areas are highly transformed, with no remnant indigenous vegetation or Species of Conservation Concern (SCC) present within the development footprint.

The WCBSP (2023) and BioNet (2024) identify portions of Erf 222/64 as CBA and ESA, forming part of the Bottelary River ecological corridor and the proposed Haasendal Conservation Area expansion. In response, the pipeline alignment has been refined in the most recent revision (March 2026) to:

- Remain within an existing sewer servitude;
- Avoid intact or sensitive habitat; and
- Exclude infrastructure from the proposed conservation area expansion boundary.

Freshwater planning tools (NFEPA and NWM5) identified aquatic features associated with the Bottelary River system, which informed the adoption of trenchless construction methods at crossings to minimise ecological disturbance.

Overall, the integration of these biodiversity informants has ensured that the proposed development avoids sensitive features where feasible and aligns with spatial biodiversity planning objectives.

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.
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The WCBSP (2023) and BioNet (2024) have informed the refinement of the pipeline alignment and mitigation approach. Although the site is mapped within biodiversity priority areas, field verification confirmed that the affected footprint is already transformed and does not support intact habitat.

In response to these planning tools and City comments:

- Infrastructure has been relocated outside the proposed Haasendal Conservation Area expansion;
- Construction is restricted to existing disturbed servitudes; and
- Rehabilitation and alien vegetation management measures have been incorporated into the EMPr.

In addition, the ecological linkage associated with the Bottelary River corridor, including areas identified for the Haasendal River Park, has been recognised as a sensitive planning feature. The final alignment avoids direct encroachment into these areas and supports the maintenance of ecological connectivity.

The development is therefore considered consistent with the intent of the WCBSP and BioNet, by enabling infrastructure within a transformed landscape while safeguarding ecological corridors.

4.5.	Explain what impact the proposed development will have on the site-specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.
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The proposed development is not expected to result in significant impacts on mapped biodiversity categories, given the transformed nature of the site and the refinement of the alignment to avoid sensitive areas.

Importantly:

- No infrastructure is located within the proposed Haasendal Conservation Area expansion;
- Works within Erf 222/64 are confined to an existing servitude; and
- Ecological connectivity along the Bottelary River corridor will be maintained.

Rehabilitation of disturbed areas and implementation of mitigation measures in the EMPr will ensure that residual impacts remain low and localised.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.
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Not applicable – the site is not located within a formally protected area.

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.
The site is highly transformed and does not provide suitable habitat for sensitive or conservation-dependent fauna. Any fauna present are likely to be common, disturbance-tolerant species capable of relocating during construction. No significant impacts on faunal species are anticipated, and no additional faunal specialist input is considered necessary. This is supported by both specialist findings and City of Cape Town Biodiversity Branch comments.	

5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.	
The site is characterised by a gentle southerly slope from Bottelary Road toward the Bottelary River and is underlain by geological formations of the Cape Granite Suite, specifically the Kuils River–Helderberg Batholith. The soil profile comprises predominantly grey aeolian sands, which are generally well-drained. These geographical characteristics—including slope, soil conditions, and underlying geology—have been taken into account in the design and alignment of the proposed pipeline. The linear nature and limited excavation depth (approximately 3 m) ensure that the development footprint remains localised. No significant impacts on the site's geological or geomorphological characteristics are anticipated. The proposed development has been designed to accommodate site conditions, ensuring that construction methods and engineering design are compatible with the terrain and subsurface conditions.	

6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	NO
6.2.	Provide the name and/or company who conducted the specialist study.		
CTS Heritage (Jenna Lavin)			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
A Notice of Intent to Develop (NID) was submitted to Heritage Western Cape (HWC) in terms of Section 38(1)(a) of the National Heritage Resources Act (Act No. 25 of 1999). HWC reviewed the submission and confirmed that there is no reason to believe that the proposed development will impact on heritage resources, and that no further heritage studies are required. The HWC response is included in Appendix E1 .			
Based on the findings of the heritage practitioner and the HWC decision, no sensitive heritage resources were identified within the development footprint, and heritage considerations have therefore not imposed constraints on the alignment or design of the proposed pipeline.			
Notwithstanding the above, a Fossil Finds Procedure and general chance-find protocol have been included in the EMPr (Appendix H) to ensure that any previously unidentified heritage resources encountered during construction are appropriately managed in accordance with legislative requirements.			

7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.	
Based on the findings of the appointed heritage practitioner and the outcome of the NID, no culturally or historically significant elements, as defined in Section 2 of the National Heritage Resources Act (Act No. 25 of 1999), are expected to be affected by the proposed development. HWC, in its response dated 22 July 2025 (refer to Appendix E1), confirmed that there is no reason to believe that the proposed development will impact heritage resources and that no further heritage studies are required.	

Accordingly, historical and cultural considerations have not influenced the design, layout, or scope of the proposed development. No additional mitigation measures are required beyond the inclusion of a chance-find procedure in the EMPr to address any previously unidentified resources that may be encountered during construction.

8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
The proposed development is located within the City of Cape Town Metropolitan Municipality, specifically within the Kuils River area, which forms part of the rapidly growing northern and eastern urban corridor. The City of Cape Town is a key economic hub within the Western Cape, with ongoing population growth and increasing demand for municipal services and infrastructure. The Kuils River area has experienced notable residential and commercial expansion, placing pressure on existing bulk infrastructure, particularly sanitation services. At a local scale, the surrounding area comprises a mix of residential neighbourhoods, commercial developments, and institutional land uses, including the Kuils River Golf Course and nearby estates such as Greystone Village. The area is generally well serviced, with access to basic services such as water, sanitation, electricity, and waste removal. However, existing bulk wastewater infrastructure in the broader catchment—served by the Zandvliet Wastewater Treatment Works—has been identified as constrained in terms of capacity. Continued growth within the Kuils River and Bottelary corridor is therefore dependent on the upgrading and expansion of bulk sanitation infrastructure.	
8.2.	Explain the socio-economic value/contribution of the proposed development.
The proposed bulk sewer pipeline will provide critical infrastructure required to support ongoing and planned urban development within the Kuils River area. While the development is not directly revenue-generating, it plays a fundamental enabling role by: • Increasing bulk wastewater conveyance capacity; • Supporting approved development rights; • Improving service reliability; and • Reducing the risk of sewer overflows and associated environmental and public health impacts. Importantly, the proposed pipeline will enable the decommissioning of the existing pump station within the Kuils River Golf Course, which has historically experienced operational and maintenance challenges. The replacement of this infrastructure with a gravity-based system will significantly improve system reliability and reduce long-term operational risks. During construction, the project will generate short-term employment opportunities, particularly for low- and semi-skilled workers, with a preference for local labour where feasible. Overall, the development contributes to: • Improved public health and environmental protection; • Infrastructure resilience and service efficiency; and • Long-term economic growth through enabling development.	
8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
The proposed development is infrastructure-focused and is not intended as a standalone social development initiative. However, the construction phase will create temporary employment opportunities and may contribute to local economic upliftment through job creation and skills development. In the longer term, improved sanitation infrastructure will indirectly support community well-being by enhancing public health, dignity, and quality of life within the Kuils River area.	
8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.

The proposed development is not expected to result in significant long-term negative impacts on people's health or well-being.

During the construction phase, temporary impacts may occur, including:

- Increased noise levels;
- Dust generation; and
- Short-term visual disturbance.

These impacts will be localised, temporary, and of low significance, and will be managed through the implementation of mitigation measures contained in the EMPr, including dust suppression, noise control, and construction management practices.

The operational phase of the pipeline will be entirely subsurface and will not generate noise, odours, or visual impacts.

Overall, the development is expected to result in a net positive socio-economic outcome, through improved service delivery, reduced environmental risk, and enhanced infrastructure capacity within a growing urban area.

SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred property and site alternative.	
While no materially different property or site alternatives were identified as feasible, a range of alignment options within the broader corridor were considered during the planning and design process. Refer to Appendix B1_7. The identification of alternatives is inherently constrained by the nature of the proposed development, which comprises a linear bulk sewer pipeline required to connect to existing municipal infrastructure (i.e. manholes) at both ends. The alignment is therefore informed by the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the strategic routing of bulk sewer infrastructure within the Kuils River catchment. Additional constraints influencing the consideration of alternatives include existing pipeline servitudes, land ownership, topography, and the need to utilise already transformed or disturbed areas while avoiding environmentally sensitive features where possible. Within these constraints, the pipeline alignment was iteratively refined in consultation with engineers and environmental specialists. This process included adjustments to: • Avoid or minimise encroachment into sensitive ecological areas; • Maintain appropriate buffer distances from freshwater features; • Follow existing servitudes where feasible; and • Incorporate trenchless construction methods at watercourse crossings. Importantly, the preferred alignment enables the decommissioning of the existing pump station within the Kuils River Golf Course, replacing it with a gravity-based system. This significantly improves operational reliability and reduces environmental risk, including the potential for mechanical failure and sewer overflows. As such, although no distinctly separate property or site alternatives were identified, the preferred alignment represents the most practical, technically feasible, and environmentally responsible option, achieving the required infrastructure objectives while minimising environmental impacts.	
Provide a description of any other property and site alternatives investigated.	
No materially different property or site alternatives were identified as feasible. This is due to the constrained nature of the proposed development, which must connect to existing municipal sewer infrastructure at both ends, align with the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor), and support the decommissioning of existing pump infrastructure in favour of a gravity-based system. Within these constraints, the alignment was refined through an iterative design process to ensure that it follows, as far as practicable, existing servitudes and already transformed or disturbed areas, while avoiding environmentally sensitive features where possible. As such, the preferred alignment represents the most practical, technically feasible, and environmentally responsible option, and no alternative property or site options were identified that would achieve the project objectives with a lower environmental impact.	
Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.	
The preferred property and site alternative was identified through an iterative planning and design process, informed by engineering requirements, environmental constraints, and specialist input. The proposed bulk sewer pipeline forms part of the expansion of the City of Cape Town's existing sewer infrastructure network and is required to connect to existing municipal manholes at both ends of the alignment. The routing is further guided by the City's approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the strategic bulk sewer infrastructure required to service the Kuils River catchment.	

In addition to meeting service delivery requirements, the proposed development facilitates the decommissioning of an existing pump station, thereby supporting a transition toward a gravity-based system. This reduces long-term operational risks, maintenance requirements, and potential environmental risks associated with pump failure or sewer overflows.

The preferred alignment was selected to follow, as far as practicable, an existing pipeline servitude and to traverse already transformed or disturbed areas, including sections of the Kuils River Golf Course and Haasendal Estate. This approach minimises potential environmental impacts and construction-related disturbance.

Furthermore, in response to comments received from the City of Cape Town's Biodiversity Management Branch, the alignment was refined under the latest revision (March 2026) to relocate a previously proposed manhole outside the boundary of the proposed Haasendal Conservation Area expansion and to restrict construction within Erf 222/64 to the existing registered servitude.

Given the linear and Master Plan-driven nature of the project, a formal site selection matrix was not applied. However, the iterative refinement of the alignment—guided by engineering feasibility, environmental considerations, and specialist studies—effectively served as a qualitative alternatives assessment.

As such, the preferred alignment represents the most practical, technically feasible, and environmentally responsible option, and no alternative property or site options were identified that would achieve the project objectives with a lower environmental impact.

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

The preferred alternative was identified through an iterative planning and design process informed by engineering requirements, environmental constraints, and specialist input.

Alternative alignments within the broader corridor were considered during this process. However, these were not found to be feasible due to a combination of engineering constraints, environmental sensitivities, and the requirement to connect to existing bulk sewer infrastructure at fixed locations. The preferred alignment therefore represents the most suitable option within the available corridor.

The process was guided by the need to connect to existing municipal sewer infrastructure at both ends of the alignment, in accordance with the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the strategic bulk sewer routing within the Kuils River catchment.

During the planning phase, a range of alignment options within the broader corridor were considered and progressively refined to ensure that the final route is both technically feasible and environmentally responsible. Key factors influencing the selection of the preferred alignment included:

- The location of existing municipal manholes and infrastructure;
- Existing pipeline servitudes and land ownership constraints;
- The need to utilise already transformed or disturbed areas;
- Avoidance of environmentally sensitive features, particularly watercourses and associated buffers; and
- Input and recommendations from specialist studies, including aquatic and terrestrial biodiversity assessments.

The alignment was further refined through an iterative design process to minimise environmental impacts, including maintaining buffer distances from watercourses, incorporating trenchless construction methods at crossings, and responding to comments from the City of Cape Town's Biodiversity Management Branch through the latest revision (March 2026) updates.

In addition, the proposed development supports the decommissioning of an existing pump station, thereby contributing to a more efficient and lower-risk gravity-based sewer system.

The final alignment follows, as far as practicable, an existing pipeline servitude and traverses predominantly transformed or disturbed areas, making it the most practical, technically feasible, and environmentally responsible option. No alternative alignment within the site was identified that would achieve the project objectives with a lower environmental impact.

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

While no materially different property or site alignment alternatives were identified as feasible, the selection of the preferred route was informed by a range of engineering, environmental, and planning considerations.

The proposed development involves the expansion of the City of Cape Town's bulk sewer infrastructure network within the Kuils River area and is required to connect to existing municipal manholes and sewer infrastructure located at either end of the alignment. As such, the routing is inherently constrained by functional and engineering requirements, as well as the City's approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the strategic bulk sewer network for the area.

Within these constraints, alignment options within the broader corridor were considered and iteratively refined to ensure that the preferred route is both technically feasible and environmentally responsible. This included consideration of existing servitudes, land availability, and the need to utilise already transformed or disturbed areas while avoiding environmentally sensitive features where possible.

The preferred alignment follows, as far as practicable, an existing pipeline servitude and traverses predominantly transformed or developed areas, thereby minimising potential environmental impacts and construction-related disturbance.

In addition, the proposed development facilitates the decommissioning of an existing pump station, supporting a transition to a gravity-based system and reducing long-term operational and environmental risks.

As such, no alternative property or site alignments were identified that would meet the infrastructure objectives with a lower environmental impact, and the preferred alignment is considered to be the most practical, technically feasible, and environmentally responsible option.

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

Positive Impacts of the Preferred Property and Site Alternative:

- The development site is already highly transformed due to historical and existing land-use activities, which significantly reduces the likelihood of disturbing intact or sensitive natural habitats.
- The proposed development is located within the urban edge of Kuils River and utilises vacant and previously disturbed land, thereby optimising land use without encroaching on pristine areas.
- The project forms part of the expansion of the City of Cape Town's existing bulk sewer network, promoting efficient use of existing municipal infrastructure through connection to existing manholes at both ends of the pipeline.
- The proposed pipeline will increase sanitation service capacity within the Kuils River area, supporting ongoing residential and commercial growth and improving service delivery.
- The alignment follows, where feasible, an existing pipeline servitude, thereby limiting unnecessary disturbance and aligning with sustainable infrastructure planning principles.
- The refinement of the alignment under the latest revision (March 2026) ensures that infrastructure is located outside of the proposed Haasendal Conservation Area expansion boundary, thereby aligning with the City's biodiversity planning requirements.
- The development aligns with the Western Cape Biodiversity Spatial Plan (2023) and the City of Cape Town Biodiversity Network (BioNet, 2024), supporting the ecological functioning of the Bottelary River corridor through rehabilitation and management measures included in the EMPr.
- The project facilitates the decommissioning of an existing pump station, enabling a shift to a gravity-based system, which reduces long-term operational risks, energy requirements, and potential environmental failure risks.
- The installation of the bulk sewer pipeline fulfils planning and service delivery obligations associated with approved rezoning conditions, Service Level Agreements (SLAs), and Development Contribution Agreements, in line with the City's Sewer Master Plan (2018 – Bottelary Corridor).
- The project demonstrates responsiveness to the site's historical ecological context by incorporating rehabilitation and alien vegetation management measures to enhance ecological resilience within the broader Bottelary River corridor.

Negative Impacts of the Preferred Property and Site Alternative:

- The pipeline alignment occurs in proximity to freshwater features, including the Bottelary River and two unnamed tributaries, requiring careful design and mitigation to prevent potential impacts on aquatic systems.
- The freshwater specialist confirmed that, although the pipeline follows portions of the river corridor, the impact on aquatic ecosystems is expected to be of low significance, provided that recommended mitigation measures

are implemented. Trenchless installation methods (e.g., directional drilling) will be applied at key crossings to minimise disturbance to riparian and aquatic habitats. • The botanical specialist confirmed that the site is highly disturbed, with minimal remnant indigenous vegetation. Accordingly, direct impacts on terrestrial biodiversity and plant species are expected to be low, provided that mitigation measures are implemented. • Temporary construction-related impacts (e.g., noise, dust, movement of machinery, and localised disturbance) may occur; however, these impacts are short-term in nature and will be managed through the implementation of the EMP. For further detail on the potential environmental impacts of the proposed development, refer to Section I of the BAR and Appendix J (Impact Assessment).	
1.2.	Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred activity alternative.	
The preferred activity alternative is the installation of approximately 2 215 metres of bulk sewer main infrastructure required to support the increased sanitation service capacity within the Kuils River area. The pipeline will traverse the following properties: Erf 23324, Portion 64 of Farm Haasendal No. 222, Portion 60 of Farm Haasendal No. 222, and Portion 15 of Farm Haasendal No. 222 (collectively referred to as “the site”). This activity forms part of the expansion and upgrading of the City of Cape Town’s existing bulk sewer infrastructure network, and includes the decommissioning of an existing pump station, enabling a transition to a gravity-based system. This improves long-term operational efficiency, reduces maintenance and energy requirements, and lowers the risk of system failures. The proposed pipeline alignment connects directly to existing municipal manholes at both ends of the route and has been informed by the City of Cape Town’s approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the strategic routing of bulk sewer infrastructure within the Kuils River catchment. The alignment makes use of an existing pipeline servitude for portions of its extent and traverses predominantly transformed or developed areas. This approach minimises environmental disturbance, avoids sensitive ecological features where possible, and ensures that the infrastructure can be implemented in a manner that is both technically feasible and environmentally responsible.	
Provide a description of any other activity alternatives investigated.	
No materially different activity alternatives were identified as feasible. This is due to the nature of the proposed development, which constitutes the expansion of the City of Cape Town’s existing bulk sewer infrastructure network. The activity is required to connect to existing municipal manholes and infrastructure at both ends of the alignment and is informed by the City’s approved Sewer Master Plan (2018 – Bottelary Corridor), which defines the required infrastructure intervention for the area. As such, the proposed activity—namely the installation of a gravity bulk sewer pipeline (including the decommissioning of the existing pump station)—represents the only technically feasible and functionally appropriate solution to achieve the required increase in sanitation service capacity. Alternative activity types would not meet the infrastructure objectives, service delivery requirements, or long-term operational efficiencies identified for the Kuils River area.	
Provide a motivation for the preferred activity alternative.	
The Kuils River area and its surrounds have experienced significant urban growth, as documented in the Tygerberg District Spatial Development Framework (SDF), Volume 1: Baseline and Analysis Report. This growth has resulted in increased demand for essential municipal services, particularly sanitation infrastructure, and has placed pressure on existing bulk sewer capacity. In response, the preferred activity alternative involves the installation of a bulk sewer pipeline to expand and upgrade the City of Cape Town’s existing sewer infrastructure network within the Kuils River catchment. The proposed development will increase sanitation service capacity to support both existing and future development, thereby contributing to sustainable urban growth, improved public health, and enhanced infrastructure resilience.	

Importantly, the activity includes the decommissioning of an existing pump station and the transition to a gravity-based system. This represents a more sustainable and reliable long-term solution, reducing operational risks, maintenance requirements, and energy consumption associated with pumped systems.

The alignment of the pipeline has been strategically selected to minimise environmental impacts by following, where feasible, an existing pipeline servitude and traversing predominantly transformed or developed areas. This approach avoids sensitive environmental features as far as practicable and ensures that the activity can be implemented in a technically feasible and environmentally responsible manner.

Furthermore, the proposed development is not a new or standalone intervention, but rather a direct implementation of the City of Cape Town's approved Sewer Master Plan (2018 – Bottellary Corridor), as well as associated Service Level Agreements and Development Contribution Agreements applicable to Portion 15 of Farm Haasendal No. 222 (Arnim's Place) and the Mooiberge Estate developments. These planning instruments establish the requirement for downstream bulk sewer infrastructure to support approved development rights.

As such, the preferred activity alternative represents a mandated municipal infrastructure intervention that gives effect to existing planning approvals and service delivery commitments. No alternative activity type would achieve the same infrastructure objectives or align with the City's long-term planning framework.

Provide a detailed motivation if no activity alternatives exist.

No materially different activity alternatives were identified as feasible, as the proposed development involves the installation of a bulk sewer pipeline that is required to increase the capacity of the City of Cape Town's existing sewer infrastructure within the Kuils River area.

The proposed activity is specifically designed to connect to existing municipal manholes and integrate with the City's established sewer network at both ends of the alignment. As such, it represents the most practical and technically appropriate solution to address current and future sanitation service demands. Alternative activity types would not meet the required infrastructure objectives or align with the City's long-term planning framework for service delivery within this growing urban node.

In addition, the activity includes the decommissioning of an existing pump station and the transition to a gravity-based system, which improves long-term operational efficiency, reduces maintenance requirements, and lowers the risk of environmental incidents associated with mechanical failure.

Furthermore, the proposed development gives effect to obligations established through approved rezoning conditions, Service Level Agreements (SLAs), and Development Contribution Agreements applicable to Portion 15 of Farm Haasendal No. 222 (Arnim's Place) and the Mooiberge Estate developments. These agreements require the implementation of downstream bulk sewer infrastructure in accordance with the City of Cape Town's approved Sewer Master Plan (2018 – Bottellary Corridor).

Accordingly, the proposed activity constitutes a mandated municipal infrastructure intervention and represents the only feasible, policy-aligned, and functionally appropriate option to achieve compliance with the City's planning, engineering, and service delivery requirements.

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

Positive Impacts of the Preferred Activity Alternative:

- The proposed activity supports the City of Cape Town's objective to increase the capacity of sewer services within the Kuils River area, thereby facilitating sustainable urban development and improved service delivery.
- The pipeline expansion aligns with the City's broader goals to upgrade and manage infrastructure in support of economic growth and modernised municipal services, particularly sanitation.
- The activity includes the decommissioning of an existing pump station and transition to a gravity-based system, which reduces long-term operational risks, energy consumption, maintenance requirements, and the potential for environmental incidents associated with mechanical failure.
- Necessary specialist and technical assessments have been undertaken to ensure that the proposed activity is feasible, reasonable, and environmentally responsible, particularly in relation to nearby freshwater features.
- The botanical assessment confirmed that the pipeline route is already highly disturbed, with little to no remaining natural vegetation, thereby reducing the potential ecological impact of the preferred activity.
- The development optimises the use of an existing pipeline servitude for portions of its extent and traverses predominantly disturbed land, minimising the need to impact new or sensitive areas.

- The proposed activity implements existing municipal infrastructure obligations established under the City of Cape Town's Sewer Master Plan (2018 – Bottellary Corridor), as well as approved rezoning conditions, Service Level Agreements (SLAs), and Development Contribution Agreements, thereby supporting integrated infrastructure planning and service delivery commitments.

Negative Impacts of the Preferred Activity Alternative:

- The pipeline alignment occurs in proximity to freshwater features, including the Bottellary River and unnamed tributaries, which introduces a potential risk to aquatic ecosystem integrity if not appropriately managed.
- The freshwater specialist confirmed that, although portions of the alignment follow a river corridor, the anticipated impact on aquatic systems is of low significance, provided that recommended mitigation measures are implemented. Trenchless construction methods (e.g. directional drilling) will be applied at key crossings to minimise disturbance to riparian and aquatic habitats.
- The botanical specialist confirmed that, due to the highly disturbed nature of the site, direct impacts on terrestrial biodiversity and plant species are expected to be low, with no significant indirect impacts identified, subject to implementation of mitigation measures.
- The heritage specialist confirmed that no heritage resources will be impacted by the proposed activity, and no additional heritage studies are required.
- Temporary construction-related impacts (including noise, dust, increased traffic, and localised disturbance) may occur during the construction phase. These impacts are expected to be short-term and of low significance and will be effectively managed through the implementation of the EMP.

For further detail on the potential impacts of the proposed development, refer to **Section I** of the BAR and **Appendix J** (Impact Assessment).

1.3.	Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts
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Provide a description of the preferred design or layout alternative.

The preferred design and layout alternative has been developed through an iterative process in consultation with the appointed specialists, particularly the freshwater and botanical specialists, to ensure that potential environmental impacts are avoided where reasonably practicable and mitigated where avoidance is not possible, in accordance with the mitigation hierarchy.

The pipeline alignment has been carefully configured to follow, where feasible, an existing pipeline servitude and to traverse predominantly transformed or developed areas. This approach minimises disturbance to sensitive environmental features, including intact vegetation and natural wetland systems.

Where watercourse crossings are unavoidable, the design incorporates trenchless installation methods (e.g. directional drilling) to minimise direct disturbance to aquatic and riparian habitats and maintain ecological integrity.

As such, the preferred—and only—layout alternative is the proposed bulk sewer pipeline alignment as currently designed. This alignment represents the best practicable environmental option, balancing engineering feasibility, environmental sensitivity, and service delivery requirements.

Furthermore, the alignment refinement implemented under the latest revision (March 2026) ensures consistency with the City of Cape Town's planning and biodiversity guidelines. Notably, the previously proposed manhole has been relocated outside of the proposed Haasendal Conservation Area expansion boundary, and construction within Erf 222/64 will be confined to the existing registered sewer servitude. These refinements were undertaken in direct response to comments from the City's Biodiversity Management Branch and CapeNature, and confirm that the final layout aligns with the City's Sewer Master Plan (2018 – Bottellary Corridor) and the objectives of the City's Biodiversity Network (BioNet, 2024).

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

No materially different design or layout alternatives were identified as feasible.

This is due to the constrained nature of the proposed development, which is required to connect to existing municipal sewer infrastructure at both ends of the alignment and to align with the City of Cape Town's approved Sewer Master Plan (2018 – Bottellary Corridor). These constraints limit the extent to which alternative layouts can be meaningfully considered.

Within these parameters, the pipeline alignment was refined through an iterative design process involving the project engineers and appointed environmental specialists. This process focused on avoiding sensitive environmental features where reasonably practicable, maintaining appropriate buffer distances from watercourses, and making use of existing servitudes and previously disturbed areas wherever possible.

Accordingly, the current design represents the most feasible, least environmentally intrusive, and operationally efficient layout. No alternative design or layout options were identified that would better achieve the project objectives while further reducing environmental impacts.

Provide a motivation for the preferred design or layout alternative.

The preferred design and layout alternative has been determined through a collaborative and iterative process, incorporating the recommendations and inputs of the appointed specialists, particularly the aquatic and botanical specialists. The alignment has been informed by the application of the mitigation hierarchy, ensuring that impacts are avoided where reasonably practicable and minimised where avoidance is not possible.

The pipeline alignment largely follows the buffer recommendations of the aquatic specialist, namely:

- Remaining above the 1-in-50-year floodline;
- Maintaining, where feasible, a minimum setback of 20 metres from the top of bank of the Bottelary River; and
- Maintaining a 10-metre buffer from the top of bank of unnamed tributaries.

Exceptions to these buffers occur only where constrained by site-specific conditions, including:

- The crossing of an unnamed tributary within the golf course, where the existing road alignment must be utilised to ensure continuity of the pipeline route;
- The crossing of a second unnamed tributary opposite Pugsley Road; and
- A constrained section near the Saxdowns Road bridge, where the alignment shifts closer to the top of bank to avoid existing infrastructure associated with the Greystone Residential Village, which is not under the Applicant's control.

The layout has been further shaped by a range of environmental and physical constraints, including:

- Existing infrastructure and site constraints;
- Surface and groundwater resources and associated sensitivities;
- Aquatic and terrestrial biodiversity, including flora and fauna; and
- Heritage resources, as assessed through the NID process.

These constraints informed the commissioning of specialist studies to identify potential environmental impacts and assess their significance. Where avoidance was not feasible, appropriate mitigation measures were developed and incorporated into the design and EMP to reduce impacts to acceptable levels.

The refinement of the alignment under the latest revision (March 2026) further ensures consistency with the City of Cape Town's planning framework and biodiversity management objectives. Notably, the previously proposed manhole has been relocated outside of the proposed Haasendal Conservation Area expansion boundary, and all works within Erf 222/64 are confined to the existing registered sewer servitude. These refinements were undertaken in direct response to comments from the City's Biodiversity Management Branch and CapeNature and confirm alignment with the City's Sewer Master Plan (2018 – Bottelary Corridor), as well as the applicable rezoning conditions, Service Level Agreements (SLAs), and Development Contribution Agreements associated with Portion 15 of Farm Haasendal No. 222 (Arnim's Place) and the Mooiberge Estate developments.

Accordingly, the preferred design and layout represent the best practicable environmental option, appropriately balancing technical feasibility, infrastructure requirements, and environmental protection.

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

No materially different design or layout alternatives were identified as feasible, as the proposed pipeline alignment is functionally required to connect to existing City of Cape Town sewer infrastructure at both ends of the route and is informed by the City's approved Sewer Master Plan (2018 – Bottelary Corridor).

The alignment is therefore inherently constrained by engineering, service delivery, and infrastructure requirements, which limit the extent to which alternative layouts can be meaningfully considered.

Within these constraints, the pipeline routing was refined through an iterative design process to minimise environmental impacts as far as reasonably practicable. Although sections of the alignment encroach on the freshwater specialist's recommended buffer areas, these areas are largely already transformed or degraded, and the routing has been designed to remain within such disturbed areas wherever possible and to avoid sensitive riparian features.

Specialist assessments confirmed that the ecological condition of aquatic systems within the project footprint is already modified, and that, with the implementation of appropriate mitigation measures, the proposed development would result in impacts of low significance. Similarly, the botanical specialist confirmed that the route traverses highly disturbed terrain with limited remnant natural vegetation, resulting in low ecological sensitivity.

In response to feedback from the City of Cape Town's Biodiversity Management Branch and CapeNature (September 2025), the alignment was further refined under the latest revision (March 2026) to reduce potential ecological conflict. This included relocating the previously proposed manhole outside of the proposed Haasendal Conservation Area expansion boundary and restricting works within Erf 222/64 to the existing registered sewer servitude. These refinements ensure alignment with the City's biodiversity planning objectives and confirm consistency with the Sewer Master Plan and associated rezoning and service delivery obligations.

Accordingly, the preferred design and layout represent the most feasible, environmentally acceptable, and policy-aligned option. No alternative design or layout was identified that would better achieve the required infrastructure objectives while further reducing environmental impacts.

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

Positive Impacts of the Preferred Design/Layout Alternative:

- The preferred layout supports the City of Cape Town's objective to increase sewer service capacity within the Kuils River area, thereby addressing infrastructure demands associated with ongoing urban development.
- The design enables the efficient bulk transport of sewage and aligns with the City's broader objectives to upgrade and manage infrastructure in support of economic growth and modernised service delivery.
- The layout has been informed by specialist input and refined through an iterative design process to avoid or minimise impacts on sensitive environmental features, particularly aquatic and terrestrial habitats.
- The botanical assessment confirmed that much of the route traverses highly degraded areas with little to no naturally occurring indigenous vegetation, thereby reducing the potential ecological impact of the development.
- The use of existing servitudes and previously disturbed areas, where feasible, limits the overall ecological footprint and reflects a pragmatic and environmentally sensitive design approach.
- The refinement of the alignment under the latest revision (March 2026), in response to input from the City of Cape Town and CapeNature, resulted in the relocation of infrastructure outside of the proposed Haasendal Conservation Area expansion boundary and the restriction of works within Erf 222/64 to the existing servitude. This ensures consistency with the City's Sewer Master Plan (2018 – Bottelary Corridor) and supports biodiversity planning objectives, including ecological corridor functionality.
- The design facilitates the decommissioning of an existing pump station and the transition to a gravity-based system, thereby reducing long-term environmental risks associated with mechanical failure, as well as lowering energy consumption and maintenance requirements.

Negative Impacts of the Preferred Design/Layout Alternative:

- The alignment traverses river corridors and crosses unnamed tributaries, which introduces a potential risk to aquatic ecosystem integrity if not appropriately managed.
- The freshwater specialist confirmed that, although portions of the alignment occur within or near watercourses, the anticipated impact on aquatic systems is of low significance, provided that recommended mitigation measures are implemented. Trenchless installation methods (e.g. directional drilling) will be applied at key crossings to minimise disturbance to riparian and aquatic habitats.
- The botanical specialist confirmed that, due to the highly disturbed nature of the site, direct impacts on terrestrial biodiversity and plant species are expected to be of low significance, with no indirect impacts identified, subject to the implementation of mitigation measures.
- The heritage specialist confirmed that no significant heritage resources will be impacted by the proposed design, and no additional heritage-related impacts are anticipated.
- Temporary construction-related impacts (including noise, dust, and localised disturbance) may occur during the construction phase. These impacts are expected to be short-term and of low significance and will be managed through the implementation of the EMPr.

For additional details on the anticipated environmental impacts, refer to Section I of the BAR and Appendix J (Impact Assessment).	
1.4.	Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred technology alternative:	
No materially different technology alternatives were identified as feasible for assessment, as the proposed development involves the installation of a bulk sewer pipeline, which relies on established and standard engineering methods and materials widely used in municipal sanitation infrastructure. However, within these conventional approaches, appropriate construction technologies have been selected to minimise environmental impacts and optimise resource efficiency. In particular, the design incorporates best-practice construction methodologies, including trenchless installation techniques (e.g. directional drilling) at sensitive watercourse crossings. These methods significantly reduce surface disturbance, limit impacts on aquatic and riparian habitats, and improve overall construction efficiency. In addition, the proposed transition from a pumped system to a gravity-based sewer system (through the decommissioning of the existing pump station) represents a more sustainable technological solution. This reduces long-term energy consumption, operational complexity, and the risk of environmental incidents associated with mechanical failure. The selected construction and operational technologies are consistent with the City of Cape Town's engineering design standards and are supported by the mitigation measures outlined in the EMPr. Accordingly, the preferred technology represents the most appropriate, efficient, and environmentally responsible solution for the site-specific conditions and project objectives.	
Provide a description of any other technology alternatives investigated.	
No materially different technology alternatives were identified as reasonable or feasible for the proposed development. The nature of the activity—being the installation of a bulk sewer pipeline—necessitates the use of conventional, proven civil engineering technologies that are compatible with existing municipal infrastructure. However, within these established approaches, a range of construction methodologies were considered and applied where appropriate to reduce environmental impacts. This includes the adoption of trenchless installation techniques (e.g. directional drilling) at sensitive watercourse crossings, as opposed to conventional open trench excavation. Given the functional requirements of the project, including the need to connect to existing municipal manholes and integrate with the City of Cape Town's sewer network, no alternative technologies were identified that would better meet the project objectives or provide materially improved environmental or operational outcomes.	
Provide a motivation for the preferred technology alternative.	
The preferred technology approach for the proposed development is based on the use of conventional, proven civil engineering methods appropriate for bulk sewer infrastructure, combined with the selective application of low-impact construction techniques where required. While no distinctly different technology alternatives were identified as feasible, the design incorporates best practice methodologies to minimise environmental impacts. In particular, trenchless installation techniques (e.g. directional drilling) will be implemented at sensitive watercourse crossings to reduce disturbance to aquatic systems and riparian areas. This approach represents the most practical, technically feasible, and environmentally responsible solution, ensuring compatibility with existing municipal infrastructure while minimising construction-related impacts.	
Provide a detailed motivation if no alternatives exist.	
No materially different technology alternatives were considered feasible due to the functional and engineering requirements of the proposed development. The installation of a bulk sewer pipeline must comply with established municipal engineering standards and connect to existing sewer infrastructure at fixed points (i.e. existing manholes). These constraints necessitate the use of conventional construction technologies that are reliable, cost-effective, and compatible with the City of Cape Town's sewer network.	

As such, no alternative technologies were identified that would achieve the project objectives more effectively or with a lower environmental risk.

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

Positive Impacts of the Preferred Technology Approach:

- The use of trenchless construction methods at watercourse crossings significantly reduces disturbance to aquatic habitats and riparian zones.
- Conventional and proven construction techniques ensure efficient implementation and reduced risk of construction failure or environmental incidents.
- The approach supports minimisation of the construction footprint, particularly in environmentally sensitive areas.

Negative Impacts of the Preferred Technology Approach:

- Conventional trenching methods may result in temporary disturbance to soils and vegetation along the pipeline route.
- Construction activities may generate short-term impacts, including noise, dust, and increased vehicle movement.
- There remains a low risk of disturbance to freshwater features, although this is expected to be of low significance with the implementation of mitigation measures and trenchless techniques where required.

For additional details on the anticipated environmental impacts, refer to **Section I** of the BAR and **Appendix J** (Impact Assessment).

1.5.	Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
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Provide a description of the preferred operational alternative.

The preferred operational alternative is for the proposed bulk sewer pipeline to function as an integral component of the City of Cape Town's existing bulk sewer network, conveying wastewater via a gravity system to downstream infrastructure.

The pipeline will operate in accordance with standard municipal operational procedures and maintenance protocols, including routine inspection, maintenance of associated infrastructure (e.g. manholes), and implementation of corrective measures where required.

Operational management will be guided by the provisions of the Environmental Management Programme (EMPr) and the City's applicable operational and maintenance frameworks, ensuring that environmental impacts are avoided or minimised throughout the operational lifespan of the infrastructure.

This approach represents the most practical and appropriate operational scenario, as it ensures efficient wastewater conveyance, system reliability, and alignment with established municipal service delivery requirements.

Provide a description of any other operational alternatives investigated.

No materially different operational alternatives were identified or considered feasible for the proposed development. The bulk sewer pipeline is required to function as part of the City of Cape Town's existing sewer network, with its operation governed by established municipal standards and protocols.

While no alternative operational scenarios exist in terms of how the infrastructure functions, environmental considerations have been incorporated into the operational framework through the implementation of the EMPr. This includes measures for routine maintenance, monitoring, and the management of potential risks (e.g. blockages or leaks), ensuring that operational impacts are effectively avoided or minimised.

As such, the proposed operational approach represents the only practical and appropriate option for ensuring reliable service delivery while maintaining environmental compliance.

Provide a motivation for the preferred operational alternative.

The preferred operational alternative is motivated by the need to ensure reliable, efficient, and safe conveyance of wastewater as part of the City of Cape Town's bulk sewer network.

The proposed pipeline is designed to operate as a gravity system connected to existing municipal infrastructure at fixed points, which necessitates adherence to standardised municipal operational and maintenance protocols. This ensures

system integrity, reduces the risk of failures such as overflows or blockages, and supports effective long-term service delivery.

Furthermore, the operational approach is aligned with the City's infrastructure planning and management frameworks, ensuring consistency with broader service delivery objectives for the Kuils River area.

Environmental considerations are embedded within this operational approach through the implementation of the EMPr, which provides for ongoing maintenance, monitoring, and management of potential risks. This ensures that operational impacts are minimised and that the infrastructure remains compliant with applicable environmental and municipal requirements over its lifespan.

As such, the preferred operational alternative represents the most practical, technically feasible, and environmentally responsible approach.

Provide a detailed motivation if no alternatives exist.

No alternative operational approaches were identified as feasible for the proposed development. The bulk sewer pipeline is required to operate as an integral component of the City of Cape Town's existing sewer network, which is governed by standardised municipal operational and maintenance requirements.

The infrastructure must connect to existing municipal manholes and convey wastewater in accordance with the City's established engineering design and operational standards. These functional and system integration requirements do not allow for alternative operational scenarios.

In addition, the pipeline forms part of the implementation of the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor) and associated service delivery obligations linked to approved developments in the area. As such, the manner in which the infrastructure operates is predetermined by these planning and engineering frameworks.

Environmental management during the operational phase is addressed through the implementation of the EMPr and the City's maintenance protocols, ensuring that potential risks are appropriately managed and that impacts remain low and acceptable.

Accordingly, no reasonable or practicable operational alternatives exist that would achieve the required infrastructure objectives or provide improved environmental outcomes.

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

Positive Impacts of the Preferred Operational Approach:

- The gravity-based operation of the pipeline ensures efficient and reliable conveyance of wastewater, reducing the likelihood of system failures such as overflows or blockages.
- The decommissioning of the existing pump station reduces long-term environmental risks, including potential spills, mechanical failures, and associated contamination of surrounding environments.
- The removal of reliance on pump infrastructure also results in reduced energy consumption and maintenance requirements, contributing to improved environmental sustainability.
- Ongoing operation and maintenance in accordance with municipal standards and the EMPr ensure long-term environmental compliance and monitoring, thereby minimising potential impacts over the lifespan of the infrastructure.

Negative Impacts of the Preferred Operational Approach:

- There is a low risk of localised environmental impacts in the event of infrastructure failure (e.g. leaks, blockages, or pipe damage), although this risk is considered minimal and manageable through routine maintenance and monitoring.
- Periodic maintenance activities may result in temporary, localised disturbance, including access-related impacts or minor excavation works.

For additional details on the anticipated environmental impacts, refer to **Section I** of the BAR and **Appendix J** (Impact Assessment).

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

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

The No-Go Alternative would entail maintaining the status quo, whereby the proposed bulk sewer pipeline is not implemented and the existing sewer infrastructure within the Kuils River area remains unchanged.

The Kuils River area is experiencing ongoing urban growth, and the current sewer infrastructure is already under capacity pressure. Failure to implement the proposed bulk sewer pipeline would therefore perpetuate and likely exacerbate existing infrastructure constraints, limiting the City of Cape Town's ability to meet current and future sanitation service demands.

From a service delivery perspective, the No-Go Option would hinder the City's objectives of upgrading and expanding essential infrastructure, thereby constraining planned residential and commercial development within the area. It would also be inconsistent with the City's approved Sewer Master Plan (2018 – Bottelary Corridor) and associated service level and development contribution agreements applicable to the Haasendal, Arnim's Place and Mooiberge Estate developments.

From an environmental perspective, the No-Go Option may result in increased risk of sewer system failures, including overflows and associated pollution of nearby watercourses, particularly the Bottelary River and its tributaries. In addition, the botanical specialist has indicated that the site is already highly transformed and dominated by invasive alien vegetation; without intervention and rehabilitation measures associated with the proposed development, these conditions are unlikely to improve and may further deteriorate.

Accordingly, the No-Go Option would result in both socio-economic and environmental disadvantages, and does not represent a reasonable or feasible alternative. The implementation of the proposed development is therefore preferred, as it supports infrastructure capacity requirements, reduces environmental risk associated with failing systems, and aligns with municipal planning and service delivery objectives.

1.7.	Provide an explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.
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The assessment of alternatives for the proposed development considered property/site, activity, design/layout, technology, and operational aspects, as required by the EIA Regulations, 2014 (as amended).

Due to the nature of the proposed development—being a linear bulk sewer pipeline required to connect to existing municipal infrastructure at fixed points—no materially different or feasible alternatives were identified across these categories. The alignment and design are constrained by engineering requirements, existing servitudes, land availability, and the need to integrate with the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor).

Within these constraints, the preferred alignment and design were iteratively refined in consultation with environmental specialists and relevant authorities to avoid and minimise environmental impacts as far as reasonably practicable. This included:

- Avoiding sensitive ecological areas where possible;
- Maintaining appropriate buffer distances from watercourses;
- Limiting construction to existing servitudes and already disturbed areas; and
- Incorporating trenchless construction methods at watercourse crossings to reduce disturbance to aquatic systems.

In addition, specialist studies (aquatic, botanical, and heritage) informed the identification and implementation of appropriate mitigation measures, which have been incorporated into the project design and EMPr.

As such, while no distinctly separate alternatives were identified as feasible, the design process itself incorporated alternative considerations and refinements to ensure that the proposed development represents the most practical, technically feasible, and environmentally responsible option.

Accordingly, no reasonable or feasible alternatives exist that would achieve the project objectives while resulting in a lower environmental impact.

1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
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The preferred alternative is the installation of approximately 2 215 metres of bulk sewer pipeline within the Kuils River area, following the alignment reflected in **Appendix B1**. The pipeline traverses Erf 23324 (Haasendal Estate), Portion

64 and Portion 60 of Farm Haasendal No. 222, and connects to existing municipal infrastructure on Portion 15 of Farm Haasendal No. 222.

The preferred property/site, activity, design/layout, technology, and operational approaches have been selected based on engineering feasibility, integration with existing municipal infrastructure, and alignment with the City of Cape Town's approved Sewer Master Plan (2018 – Bottelary Corridor).

The alignment has been iteratively refined in response to specialist input and authority feedback to avoid and minimise environmental impacts, including maintaining buffer distances from watercourses where feasible, limiting construction to existing servitudes and disturbed areas, and incorporating trenchless installation techniques at watercourse crossings.

No other reasonable or feasible alternatives were identified that would achieve the required infrastructure objectives while resulting in a lower environmental impact.

The No-Go alternative is not preferred, as it would perpetuate existing capacity constraints in the sewer network, increase the risk of environmental degradation associated with infrastructure failure, and undermine planned service delivery and development within the area.

Accordingly, the preferred alternative represents the most practical, technically feasible, and environmentally responsible option, ensuring that the proposed development proceeds in a manner that is aligned with municipal planning frameworks and environmental management objectives.

2. "No-Go" areas

Explain what "no-go" area(s) have been identified during identification of the alternatives and provide the co-ordinates of the "no-go" area(s).

No formally delineated "no-go" areas, with defined spatial coordinates, were identified by the botanical or freshwater specialists during the assessment process.

However, the freshwater specialist identified sensitive aquatic features and associated buffer zones along the Bottelary River and its tributaries, which informed the design and routing of the proposed pipeline. While not defined as absolute "no-go" areas, these zones were treated as environmentally sensitive areas to be avoided where feasible, or carefully managed where avoidance was not possible.

Key constraints and precautionary measures incorporated into the design include:

- Maintaining the pipeline alignment above the 1-in-50-year floodline where feasible;
- Maintaining a minimum buffer of approximately 20 metres from the top of bank of the Bottelary River, and 10 metres from smaller tributaries, where practicable;
- Limiting construction within riparian and wetland areas as far as possible;
- Implementing trenchless construction methods (e.g. directional drilling) at watercourse crossings to minimise disturbance; and
- Ensuring appropriate rehabilitation of disturbed areas following construction.

In addition, where infrastructure occurs within flood-prone areas, appropriate design measures (e.g. protective encasing and watertight manhole covers) will be implemented to reduce environmental risk.

Although no specific "no-go" areas were mapped, the pipeline alignment has been iteratively refined (March 2026) to follow existing servitudes and previously disturbed areas, and to avoid sensitive environmental features as far as reasonably practicable.

Accordingly, environmentally sensitive areas have been effectively avoided or minimised through design, and no areas requiring absolute exclusion were identified. Residual impacts are expected to be of low significance with the implementation of the recommended mitigation measures.

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

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.

The assessment of impacts was undertaken using a standardised impact assessment methodology, as detailed in **Appendix J** of this Basic Assessment Report.

Potential impacts associated with the proposed development and its alternatives were identified and evaluated by the EAP and relevant specialists. Each impact was assessed based on a combination of key criteria, including:

- Nature of the impact;
- Extent (spatial scale);
- Duration (temporal scale);
- Intensity/Severity of the impact;
- Probability of occurrence; and
- Reversibility and potential for irreplaceable loss of resources.

These criteria were used to assign a significance rating to each identified impact, both before (pre-mitigation) and after (post-mitigation) the implementation of recommended mitigation measures.

The significance of impacts was determined through a rating system that combines consequence and probability to derive an overall significance category (e.g. low, medium, or high). This approach enables a consistent and transparent evaluation of potential environmental risks and informs decision-making regarding the acceptability of impacts.

The detailed methodology, including the rating scales and assessment framework applied, is provided in **Appendix J**.

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

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

Refer to Appendix J for the Impact Assessment Methodology.

SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.
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As part of the Basic Assessment process, specialist studies were undertaken to inform the environmental assessment and guide the design of the proposed bulk sewer pipeline. These included a Botanical and Terrestrial Biodiversity Impact Assessment, an Aquatic Impact Assessment and Risk Assessment, and a Heritage Screening Assessment (NID).

Key Findings

Botanical and Terrestrial Biodiversity Assessment

The botanical specialist identified the original vegetation types along the pipeline route as Cape Flats Sand Fynbos (Critically Endangered) and Swartland Granite Renosterveld (Endangered). However, no intact remnants of these vegetation types were observed on-site, and the area was confirmed to be highly disturbed or transformed, particularly along the Kuils River Golf Course and surrounding infrastructure.

Key findings include:

- The vegetation is highly degraded, with a high prevalence of alien invasive species and little to no remaining natural vegetation.
- There is no remaining vegetation that can be classified as Cape Flats Sand Fynbos nor Swartland Granite Renosterveld (classified as Critically Endangered and Endangered respectively) on the site
- The site does not fall within any mapped CBAs or ESAs.
- No SCC were observed.
- The removal and control of invasive alien vegetation, particularly *Acacia saligna*, was strongly recommended.
- Rehabilitation and vegetation management measures should be implemented post-construction.

With implementation of the recommended mitigation measures, direct botanical impacts are expected to be of **low significance**, and no indirect impacts were identified.

Aquatic Impact Assessment and Risk Assessment

The freshwater specialist identified potential short-term impacts during construction, including aquatic habitat disturbance, habitat modification, and water quality risks, particularly in proximity to the Bottelary River and its unnamed tributaries. However, the aquatic systems in the area were confirmed to be disturbed and degraded, with much of the pipeline route located in already transformed areas.

Key findings include:

- Construction-related impacts are expected to result in temporary, localised disturbance of degraded aquatic habitat.
- The greatest long-term risk is the potential for sewage spills during pipeline operation, which could affect water quality and aquatic integrity.
- The No-Go alternative may result in continued undercapacity of existing sewer infrastructure, leading to increased operational failures and degradation of aquatic habitats.

Mitigation measures include:

- Use of trenchless construction techniques (e.g., directional drilling) at sensitive crossings.
- Maintaining buffer zones: ≥20 m from the Bottelary River and ≥10 m from unnamed tributaries where possible.
- Concrete encasement and watertight manhole covers in flood-prone areas.
- Monitoring and maintenance to prevent operational failures.

If implemented effectively, the aquatic impacts of the proposed development are expected to be of **low significance**.

Heritage Screening and NID

The heritage practitioner concluded that the proposed development is unlikely to impact significant heritage resources. HWC confirmed this finding and indicated that no further studies are required.

Key Mitigation and Management Measures

The following measures have been incorporated into the project design and EMPr:

- Avoidance of sensitive features and alignment through already disturbed areas;
- Maintenance of buffer distances from watercourses where feasible (± 20 m for the Bottelary River and ± 10 m for tributaries);
- Use of trenchless construction methods (e.g. directional drilling) at watercourse crossings;
- Implementation of rehabilitation measures and alien invasive species control post-construction;
- Design measures in flood-prone areas (e.g. encasing and watertight manholes); and
- Ongoing monitoring and maintenance to minimise operational risks.

Influence on Project Design

Specialist findings directly informed the refinement of the pipeline alignment and design, including:

- Routing the pipeline within existing servitudes and transformed areas to avoid ecological sensitivities;
- Refinement of the alignment (March 2026) to avoid the proposed Haasendal Conservation Area expansion;
- Incorporation of buffer zones and low-impact construction techniques at watercourse crossings; and
- Confirmation that no heritage constraints influence the layout.

In conclusion, the integration of specialist input and mitigation measures has ensured that the proposed development avoids or minimises environmental impacts as far as reasonably practicable. Residual impacts are anticipated to be of **low significance**, and the proposed development is considered to be environmentally acceptable and aligned with the **best practicable environmental option**.

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| 2. | List the impact management measures that were identified by all Specialist that will be included in the EMPr |
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The impact management (mitigation) measures recommended by the appointed specialists have been incorporated into the EMPr (refer to **Appendix H**). These measures are aimed at avoiding, minimising, and remediating potential environmental impacts associated with the proposed bulk sewer pipeline.

Botanical and Terrestrial Biodiversity Impact Mitigation Measures:

- Removal and control of invasive alien vegetation, particularly *Acacia saligna*, to prevent further spread and support ecological rehabilitation;
- Rehabilitation of disturbed areas using locally indigenous vegetation, including topsoil management to facilitate natural recovery;
- Limitation of heavy machinery use in sensitive areas, particularly near watercourses, to reduce soil compaction and disturbance;
- Implementation of search and rescue, where applicable, for any remaining indigenous plant species; and
- Post-construction rehabilitation and monitoring to ensure successful vegetation establishment and erosion control.

Aquatic Ecosystem Impact Mitigation Measures:

- Maintenance of buffer zones from watercourses where feasible (approximately 20 m from the Bottelary River and 10 m from tributaries);
- Use of trenchless construction methods (e.g. directional drilling) at watercourse crossings to minimise disturbance to aquatic habitats;
- Limitation of construction within riparian and wetland areas as far as possible, with rehabilitation of affected areas post-construction;

- Prevention of contaminated runoff entering watercourses, including appropriate stormwater and erosion control measures;
- Proper storage and handling of materials, and safe waste disposal practices;
- Placement of ablution facilities at least 30 m from watercourses and regular servicing thereof;
- Where infrastructure occurs within flood-prone areas, implementation of protective design measures (e.g. encasing of pipelines and watertight manholes above flood levels); and
- Ongoing inspection, monitoring, and maintenance to minimise the risk of leaks, blockages, or overflows during operation.

Heritage Impact Mitigation Measures:

- Immediate cessation of work and notification of Heritage Western Cape if any heritage resources or human remains are encountered during construction;
- Implementation of a Fossil Finds Procedure (FFP) to guide the management of any chance fossil discoveries; and
- Induction of construction personnel on heritage awareness and chance find procedures.

Conclusion

These mitigation measures have been integrated into the project design, construction methodology, and operational framework, and will be implemented through the EMP. Their application ensures that potential impacts are reduced to acceptable levels and that the proposed development complies with relevant environmental and heritage legislation.

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

The specialist investigations undertaken are listed in **Section I(1)** above. All recommended impact management (mitigation) measures have been incorporated into the EMP (**Appendix H**) and will be implemented as part of the proposed development.

No specialist-recommended mitigation measures have been excluded. The project design and construction methodology have been refined to accommodate all feasible and reasonable mitigation measures identified through the specialist studies.

Where recommendations are dependent on site-specific conditions (e.g. final positioning within servitudes or method selection at crossings), these have been incorporated as **performance-based requirements** within the EMP to ensure implementation during construction and operation.

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

While the primary objective of the proposed development is to expand the bulk sewer infrastructure network rather than directly deliver socio-economic development, the project is expected to have a **neutral to positive impact on surrounding communities**.

During the construction phase, the project will generate temporary employment opportunities, particularly for low- and semi-skilled workers. Where feasible, employment will be sourced locally, resulting in short-term socio-economic benefits through job creation, income generation, and skills development.

During operation, the proposed bulk sewer pipeline will significantly enhance sanitation service capacity within the Kuils River area, which is experiencing rapid urban expansion. This will contribute to improved service delivery, reduced risk of system failures, and enhanced public and environmental health outcomes.

In the longer term, the development will indirectly benefit surrounding communities by supporting sustainable urban growth, improving infrastructure resilience, and enabling future residential and commercial development in line with the City of Cape Town's planning frameworks (including the Sewer Master Plan and Tygerberg District Spatial Development Framework).

Potential negative impacts on surrounding communities are expected to be limited to the construction phase and may include temporary disturbances such as noise, dust, traffic disruptions, and visual intrusion. These impacts will be short-term and localised, and will be managed through the implementation of mitigation measures contained in the EMPr.

Overall, the proposed development is anticipated to result in a low, predominantly positive impact on surrounding communities, with short-term construction-related disturbances that are temporary and manageable, and long-term benefits associated with improved infrastructure capacity, service delivery, and environmental health.

5. Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

Two key considerations are relevant when assessing climate change within a Basic Assessment process—namely climate change mitigation and climate change adaptation:

- *Mitigation* refers to reducing or limiting greenhouse gas emissions associated with the project; and
- *Adaptation* refers to incorporating measures that enhance the project's resilience to the anticipated effects of climate change, including increased flooding, extreme rainfall events, and temperature variability.

Given the increasing frequency and intensity of storm events, as well as projected long-term shifts in rainfall patterns, the proposed bulk sewer pipeline has been assessed in relation to both mitigation and adaptation requirements.

According to the **Western Cape Climate Change Response Strategy (WCCCRS, 2014)** and **The Green Book: Adapting South African Settlements to Climate Change (CSIR, 2019)**, the City of Cape Town is expected to experience higher temperatures, longer dry periods, and more intense rainfall events, resulting in increased flood risk and pressure on municipal infrastructure. The project area falls within the Cape Town–Winelands Agro-Climatic Zone, characterised by winter rainfall and hot, dry summers.

The primary climate-related risks associated with the proposed development include:

- Localised flooding and soil erosion during extreme rainfall events;
- Potential damage to infrastructure under prolonged heat or drought conditions; and
- Reduced material durability due to fluctuating moisture and temperature cycles.

To address these risks and enhance climate resilience, the following **adaptation measures** have been incorporated into the project design and EMPr:

- Pipeline sections within the 1:100-year floodline of the Bottelary River will be encased in concrete to protect against flood damage;
- Watertight manhole covers and frames will be installed above flood levels to prevent stormwater ingress;
- Trenchless (directional drilling) techniques will be used at watercourse crossings to minimise erosion and disturbance;
- The alignment avoids steep slopes and unstable areas to reduce erosion and sedimentation risks; and
- Disturbed areas will be rehabilitated post-construction using appropriate vegetation to stabilise soils and maintain floodplain function.

In terms of **climate change mitigation**, the proposed development is not expected to generate significant greenhouse gas emissions during either construction or operation. However, the following measures will be implemented to minimise emissions and improve resource efficiency:

- Efficient use of electricity during construction, including switching off equipment when not in use;
- Optimisation of vehicle use, including minimising idling and maintaining vehicles to improve fuel efficiency; and
- Use of durable, corrosion-resistant materials to reduce long-term maintenance requirements and resource consumption.

By integrating these mitigation and adaptation measures, the proposed development aligns with the principles of climate-resilient infrastructure planning and supports the City of Cape Town's broader objectives of sustainable development and environmental protection.

The design and placement of the pipeline—particularly the flood protection and erosion control measures—ensure that the infrastructure will remain functional under projected future climate conditions.

6.	Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.
There are no conflicting recommendations identified between the specialist studies undertaken for this project. The findings of the botanical, freshwater, and heritage specialists are consistent and complementary, collectively supporting the proposed development subject to the implementation of the recommended mitigation measures. Where sensitivities were identified—particularly in relation to freshwater features—these have been addressed through alignment refinement, design adjustments, and the incorporation of appropriate mitigation measures into the EMPr. The absence of significant heritage constraints and the confirmation of a highly transformed terrestrial environment further support the compatibility of the specialist findings. Accordingly, no conflicts required resolution, and all specialist recommendations have been integrated into the project design and EMPr.	
7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.
The findings and recommendations of the specialist studies have been integrated into the design, layout, and mitigation measures proposed for the development, and have been incorporated into the EMPr (Appendix H). Specifically: • The freshwater specialist's recommendations informed the refinement of the pipeline alignment to avoid sensitive aquatic features where feasible, maintain appropriate buffer distances from the Bottelary River and associated tributaries, and implement trenchless construction methods (e.g. directional drilling) at watercourse crossings to minimise disturbance. • The botanical specialist's findings confirmed that the site is highly transformed, allowing the alignment to be confined to already disturbed areas and existing servitudes. Recommendations relating to the removal of invasive alien vegetation and post-construction rehabilitation have been incorporated into the EMPr. • The heritage screening and NID process confirmed that no significant heritage resources would be impacted, and therefore no changes to the design were required. However, precautionary measures, including the implementation of a Chance Finds Protocol, have been included in the EMPr. In addition, specialist input contributed to key design refinements, including the incorporation of flood protection and erosion control measures. All specialist-recommended mitigation measures have been embedded within the EMPr and will be implemented during construction and operation to ensure that potential environmental impacts are avoided or reduced to acceptable levels.	
8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.
The mitigation hierarchy (avoid, minimise, rehabilitate, and offset – refer to Figure 3) has been applied throughout the planning and design process to arrive at the Best Practicable Environmental Option (BPEO) for the proposed development. Avoidance: Avoidance was prioritised during the early planning and design phase through the selection and refinement of the pipeline alignment. Screening of the development site confirmed that the proposed pipeline does not traverse any CBAs or ESAs, with the nearest mapped CBA2 located approximately 150 m south of the alignment and OESA areas located further south of the Bottelary River. Site verification by the botanical specialist confirmed that the route traverses predominantly disturbed areas characterised by grasses and weedy species, with little to no remaining natural vegetation. As such, the alignment was selected to follow already transformed areas and existing servitudes, thereby avoiding sensitive terrestrial biodiversity features. In addition, sensitive freshwater features were avoided where feasible through alignment refinement, with the pipeline largely positioned within disturbed areas and away from the main river channel. Heritage investigations further confirmed that no significant heritage resources would be impacted, and therefore no avoidance of heritage-sensitive areas was required.	

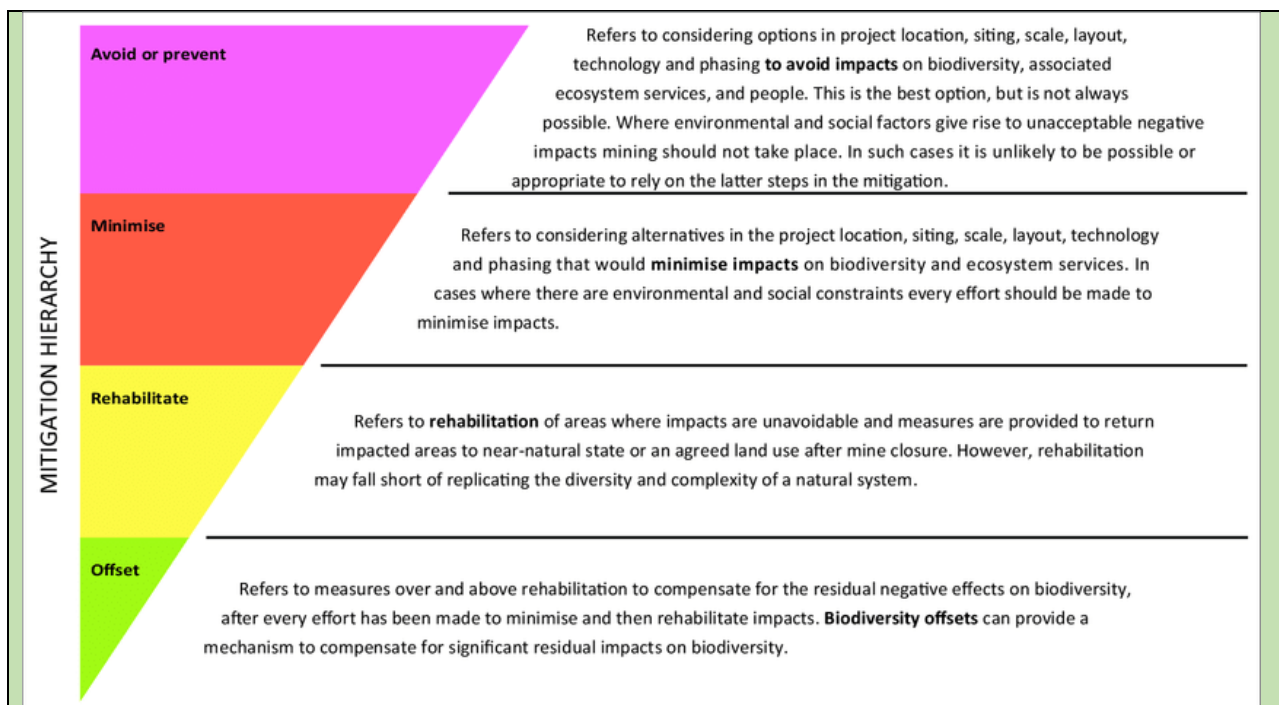


Figure 3: Mitigation Hierarchy (DEA et al., 2013).

Minimisation:

Where impacts could not be entirely avoided, they have been minimised through design and construction measures. These include maintaining buffer distances from the Bottellary River and associated tributaries where feasible, implementing trenchless construction methods (e.g. directional drilling) at watercourse crossings, and limiting construction activities to existing disturbed areas.

Specialist studies confirmed that both terrestrial and aquatic environments within the project footprint are already degraded. Accordingly, with the implementation of recommended mitigation measures, direct impacts on terrestrial biodiversity and aquatic ecosystems are anticipated to be of low negative significance, with no indirect impacts identified.

Rehabilitation:

Disturbed areas will be rehabilitated post-construction to restore ecological function and stability. This includes re-vegetation with appropriate indigenous species, stabilisation of soils, and the removal and management of invasive alien vegetation. These measures are aimed at improving site condition and supporting ecological functioning within the Bottellary River corridor.

Offset/Compensation:

No biodiversity offset or compensatory measures are considered necessary, as the site is highly transformed, does not traverse CBAs or ESAs, and residual impacts are anticipated to be of low significance following mitigation.

Conclusion:

Specialist findings confirm that the proposed development will not result in significant impacts on sensitive biophysical or socio-economic features, nor will it result in a significant loss of biodiversity. Through the application of the mitigation hierarchy, impacts have been avoided or minimised as far as practicable, with residual impacts reduced to low significance.

The proposed development therefore represents the BPEO, balancing environmental protection with the need for essential bulk sanitation infrastructure.

SECTION J: GENERAL

1. Environmental Impact Statement

1.1.	Provide a summary of the key findings of the EIA.
The Basic Assessment process has determined that the proposed bulk sewer pipeline will traverse a largely transformed and disturbed environment, with limited environmental sensitivity. The freshwater specialist confirmed that, although the pipeline crosses sections of the Bottelary River tributaries—which are moderately sensitive and in a largely to seriously modified condition—the anticipated impacts on aquatic ecosystems will be of low significance, provided that recommended mitigation measures are implemented. The botanical assessment confirmed that the site has undergone extensive transformation, with no remaining intact Cape Flats Sand Fynbos or other areas of conservation concern. No CBAs or ESAs are traversed by the proposed alignment. As such, direct impacts on terrestrial biodiversity are expected to be low negative, with no indirect impacts identified following mitigation. The heritage specialist confirmed that no significant heritage resources are likely to be impacted and that no further heritage studies are required. Overall, the potential environmental impacts associated with the proposed development are assessed to be of low significance after mitigation, with no fatal flaws identified. The No-Go alternative would result in continued pressure on the City of Cape Town's existing sewer infrastructure, which is already operating under capacity constraints. This would increase the risk of system failures, sewage spills, and associated impacts on public health and aquatic environments, while also constraining sustainable urban development in the Kuils River area. The proposed development will enable the decommissioning of the existing pump station, thereby reducing long-term operational risks and the potential for sewer overflows. Accordingly, the proposed development is considered to be the most feasible and environmentally acceptable option, representing the Best Practicable Environmental Option, as it balances the need for essential bulk sanitation infrastructure with the avoidance and minimisation of environmental impacts.	
1.2.	Provide a map that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)
Refer to Appendix D .	
1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.
The potential positive and negative impacts and risks associated with the proposed development are summarised below: Construction Phase Negative Impacts: • Disturbance and loss of already transformed terrestrial vegetation, with a risk of propagation of invasive alien plant species if not properly managed; • Temporary disturbance to aquatic ecosystems at watercourse crossings, including localised habitat modification and potential water quality impacts; • Temporary nuisances such as noise, dust, and increased traffic during construction; and • Localised soil disturbance and erosion risks, particularly in proximity to freshwater features. Positive Impacts: • Creation of temporary employment opportunities, particularly for low- and semi-skilled workers; and • Short-term economic benefits associated with construction activities.	

Operational/Maintenance Phase

Negative Impacts:

- Potential risk of sewage leaks or spills in the event of infrastructure failure, which could impact surrounding terrestrial and aquatic environments; and
- Ongoing risk of invasive alien vegetation establishment along the pipeline servitude if not properly managed.

Positive Impacts:

- Improved sanitation service capacity and reliability within the Kuils River area;
- Reduced risk of system failures and uncontrolled sewage discharges compared to the No-Go alternative;
- Long-term benefits to public health and environmental quality through improved wastewater management; and
- Support for sustainable urban development and infrastructure resilience in the area.

The identified negative impacts are primarily short-term and localised to the construction phase, and can be effectively mitigated through the implementation of the EMPr. Operational risks are considered low and manageable with appropriate maintenance and monitoring.

Overall, the proposed development is anticipated to result in **low negative impacts** and **moderate positive benefits**, with impacts reduced to **low significance after mitigation**.

For further detail on impact significance ratings, refer to **Appendix J** (Impact Assessment Tables).

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

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr
Impact management outcomes for the proposed development have been informed by the findings of the Basic Assessment process, including specialist studies and the impact assessment undertaken. These outcomes are aimed at ensuring that identified environmental impacts are appropriately avoided, minimised, managed, and rehabilitated across all phases of the project, namely the pre-construction, construction, and operational phases. The impact management outcomes have been incorporated into the EMPr (Appendix H), which serves as the primary tool for environmental management throughout the project lifecycle. The EMPr outlines specific management objectives and actions required to achieve the desired environmental outcomes, including compliance with applicable environmental legislation and best practice. The key impact management outcomes include: • Avoidance and minimisation of disturbance to sensitive environmental features, including aquatic and terrestrial habitats; • Protection of water resources through the implementation of appropriate construction controls and stormwater management measures; • Prevention of pollution (including waste, spills, and contamination) through the implementation of good housekeeping and site management practices; • Rehabilitation of disturbed areas to restore ecological function and minimise long-term impacts; • Ensuring that all construction activities are undertaken within defined development footprints and in accordance with approved method statements; • Ongoing monitoring and adaptive management to address any unforeseen environmental impacts. These outcomes are supported by the findings of the specialist assessments, which indicate that impacts can be effectively mitigated through the implementation of the recommended measures.	
2.2.	Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

The findings of the environmental assessment and specialist studies are generally conditional on the implementation of the recommended impact management actions and mitigation measures.

No fatal flaws were identified during the assessment process; however, the acceptability of the proposed development is dependent on the following:

- The implementation of all mitigation measures as outlined in the EMPr and specialist reports;
- Adherence to recommended buffers and no-go areas, particularly in relation to aquatic features and sensitive biodiversity areas;
- Application of construction best practices to minimise disturbance, erosion, and pollution risks;
- Ongoing environmental monitoring to ensure compliance and to allow for adaptive management where required.

These conditions have been incorporated into the EMPr and must be included as conditions of Environmental Authorisation to ensure that potential impacts remain within acceptable limits.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.
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The EAP is of the opinion that the proposed development can be authorised, subject to the implementation of appropriate mitigation and management measures.

Based on the findings of the BAR, including specialist studies and the impact assessment undertaken, the anticipated environmental impacts associated with the proposed development are not expected to result in unacceptable long-term negative impacts. This is contingent on the diligent implementation of the recommended mitigation and monitoring measures as outlined in the BAR and incorporated into the EMPr.

The EMPr provides detailed impact management actions and outcomes for the pre-construction, construction, and operational phases of the development, ensuring that potential environmental risks are appropriately avoided, minimised, and managed.

It is therefore recommended that Environmental Authorisation be **granted** for the proposed development, subject to the following key conditions:

- The EMPr must be implemented in full and form part of the conditions of authorisation;
- An ECO must be appointed to monitor compliance with the EMPr and conditions of approval;
- Regular environmental compliance monitoring and reporting must be undertaken, including submission of ECO compliance documentation to the competent authority;
- All mitigation measures identified in the BAR and specialist studies must be implemented throughout the project lifecycle.

With the above measures in place, the proposed development is considered environmentally acceptable and aligned with the principles of sustainable development as set out in the NEMA.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.
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The following assumptions, limitations, and uncertainties apply to this Basic Assessment Report (BAR) and the associated impact assessment:

- Information provided by the Applicant and specialist consultants has been assumed to be accurate and reliable, unless otherwise stated. Legacy EMC does not accept responsibility for inaccuracies or omissions in data supplied by third parties.
- The predictive methods and assessment techniques applied are considered appropriate and sufficient for determining the nature and significance of potential environmental impacts.
- The assessment of impacts assumes that all development activities will be undertaken within the defined project footprint as described in Section B of this BAR, and in accordance with the project description assessed.
- Should there be any material changes to the proposed development, design, or extent of works, the findings of this assessment may need to be revisited and, where necessary, reassessed.
- In instances where detailed information is limited or unavailable, a precautionary and conservative approach has been adopted, whereby potential impacts may be overstated and benefits understated.

- Specific limitations and uncertainties associated with specialist studies are addressed within the respective specialist reports (refer to **Appendix G**).
- It is assumed that the Applicant will implement all recommended mitigation measures in good faith and allocate sufficient resources and suitably qualified personnel to ensure effective environmental management and compliance with the EMPr.
- As this project is subject to a Basic Assessment process, the potential for changes arising from public and authority inputs has been acknowledged; however, no significant uncertainties have been identified that would materially affect the findings of this assessment.

Notwithstanding the above, Legacy EMC is confident that the identified assumptions, limitations, and uncertainties do not compromise the overall findings of the BAR or the conclusion that the proposed development is environmentally acceptable.

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.
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The EA is required for a period of five (5) years from the date of issue, unless an extension of validity is granted by the competent authority.

Construction of the proposed development is anticipated to commence within the validity period of the EA and is expected to be completed within approximately five (5) years from the date of authorisation.

Post-construction monitoring and compliance requirements will continue for a defined period following the completion of construction to ensure that rehabilitation measures are effective and that no residual environmental impacts persist.

In this regard:

- A final ECO site inspection and close-out audit should be undertaken within six (6) months of construction completion;
- All rehabilitation measures must be implemented and monitored until the affected areas are stabilised and functioning as intended;
- Any outstanding non-compliances or corrective actions identified during the construction phase must be resolved prior to project close-out.

The duration of post-construction monitoring may be adjusted, where required, based on site-specific conditions and in consultation with the competent authority.

3. Water

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

The Western Cape is recognised as a water-scarce region; therefore, measures have been incorporated to minimise water use during the construction phase and to avoid unnecessary demand on potable water resources.

A limited quantity of water will be required during the construction phase for activities such as equipment cleaning, dust suppression, and cement mixing, where applicable. Water for construction purposes will be sourced from the municipal supply or other authorised sources.

To minimise water demand and promote efficient use:

- Water use will be restricted to essential construction activities only;
- Dust suppression will be undertaken using the minimum volume of water required;
- Construction personnel will be provided with potable water and encouraged to use water responsibly;
- Where feasible, non-potable water sources (if available and approved) will be utilised for dust suppression and construction-related activities. In accordance with the EMPr, potable water will not be used for dust suppression, and alternative sources such as treated effluent or other approved non-potable sources will be prioritised;

- Measures to prevent contamination of surface and groundwater resources during construction (including spill prevention, appropriate material handling, and erosion and sediment control) will be implemented in accordance with the EMPr.

No operational water demand is associated with the installed bulk sewer pipeline, as it will function as a gravity-fed system forming part of the City's existing sewer network.

4. Waste

Explain what measures have been taken to reduce, reuse or recycle waste.

A relatively small quantity of waste (anticipated to be less than 20 m³, excluding reused excavated material) will be generated during the construction phase. This will primarily consist of building rubble, excavated material, packaging, and general construction waste.

Waste will be managed in accordance with the EMPr and applicable waste management legislation, with the following measures implemented:

- Waste will be minimised at source where possible;
- Excavated material will be reused on-site, where suitable, to reduce waste generation;
- Recyclable materials will be separated and recycled where feasible;
- All remaining waste will be removed from site and disposed of at a licensed waste disposal facility;
- No illegal dumping or burning of waste will be permitted on-site;
- Waste storage areas will be appropriately demarcated and managed to prevent littering and environmental contamination.

No waste generation is expected during the operational phase of the development, as the bulk sewer pipeline will function as a passive, gravity-fed system forming part of the City's existing sewer network.

5. Energy Efficiency

Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

A relatively small quantity of waste (anticipated to be less than 20 m³, excluding reused excavated material) will be generated during the construction phase. This will primarily consist of building rubble, excavated material, packaging, and general construction waste.

Waste will be managed in accordance with the EMPr and applicable waste management legislation, with the following measures implemented:

- Waste will be minimised at source where possible;
- Excavated material will be reused on-site, where suitable, to reduce waste generation;
- Recyclable materials will be separated and recycled where feasible;
- All remaining waste will be removed from site and disposed of at a licensed waste disposal facility;
- No illegal dumping or burning of waste will be permitted on-site;
- Waste storage areas will be appropriately demarcated and managed to prevent littering and environmental contamination.

No waste generation is expected during the operational phase of the development, as the bulk sewer pipeline will function as a passive, gravity-fed system forming part of the City's existing sewer network.

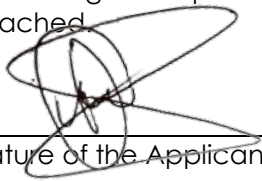
SECTION K: DECLARATION OF THE APPLICANT

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

I, **Marco Kriek** ID Number: **8 8 0 1 2 5 5 1 7 7 0 8 4**
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 it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I 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:

8 April 2026

Date:

K2018307676 (SOUTH AFRICA) (PTY) LTD REGISTRATION NUMBER: **2018/307676/07**
Name of company (if applicable):

DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I Kim Pontac, EAP Registration number 2019/1269 as the appointed EAP hereby declare/affirm the correctness of the:

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


Signature of the EAP:

14 APRIL 2026

Date:

Legacy Environmental Management Consulting (Pty) Ltd

Name of company (if applicable):

DECLARATION OF THE REVIEW EAP

N/A

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

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

Signature of the EAP:

Date:

Name of company (if applicable):

DECLARATION OF THE SPECIALIST

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

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

- In terms of the general requirement to be independent:
 - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
 - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

Signature of the EAP:

Date:

Name of company (if applicable):

**PLEASE REFER TO AQUATIC SPECIALIST'S DECLARATION OF INDEPENDENCE PROVIDED ON PAGE 31 OF APPENDIX G2 (AQUATIC BIODIVERSITY ASSESSMENT) TO THE DRAFT BAR
- THIS DECLARATION FORM WILL, HOWEVER, BE SIGNED BY THE RESPECTIVE SPECIALIST AND APPENDED TO THE FINAL BAR**

DECLARATION OF THE REVIEW SPECIALIST

N/A

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

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

Signature of the EAP:

Date:

Name of company (if applicable):