**GEORGE**
**TEL:** +27 (0) 44 873 4923 **FAX:** +27 (0) 44 874 5953
**EMAIL:** info@sescc.net **WEBSITE:** www.sescc.net
**ADDRESS:** Unit 17 Cathedral Square,
Cathedral Street, George, 6530
**PO BOX:** 9087, George, 6530

**CAPE TOWN**
**TEL:** +27 (0) 21 554 5195 **FAX:** +27 (0) 86 575 2869
**EMAIL:** betsy@sescc.net **WEBSITE:** www.sescc.net
**ADDRESS:** Tableview, Cape Town, 7441
**PO BOX:** 443, Milnerton, 7435

# REVISED DRAFT BASIC ASSESSMENT REPORT

FOR THE

## PROPOSED RESIDENTIAL DEVELOPMENT ON ERF 19374 (REMAINDER ERF 6182, ERF 6179, ERF 6156), WITH STORMWATER OUTLET ON ERF 19001 GEORGE, WESTERN CAPE PROVINCE

In terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 (as amended 7 April 2017)

**PREPARED FOR:** Urban Country Estate (Pty) Ltd
No 539 Crossberry Street,
Xanadu Eco Estate,
Hartbeespoort,
Gauteng, 0216

**DATE:** 13 February 2025

**SES REF NO:** 16/UCE/GRG/02/25
**DEA&DP REF.NO.:** 16/3/3/1/D2/6/0034/24

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 residential development on Erf 19374 (Remainder Erf 6182, Erf 6179, Erf 6156), with stormwater outlet on Erf 19001,
George, Western Cape Province.

Urban Country Estate (Pty) proposing to develop Erf 19374 (Remainder Erf 6182, Erf 6179, Erf 6156) into a residential development of approximately 5.6ha consisting of:
79 erven
- 70 group housing erven;
- 1 flats erf;
- 5 private open space erven; (the open space on the west of the property as well as the corner piece of Erf 19001 north of the stormwater structure will be managed in accordance with the management plans compiled for Erf 19001 in order to maintain consistency in the management of this area)
- 3 private road erf.

The proposal will also include:

- Construction of new roadways;
- Construction of new internal water reticulation pipework;
- Construction of new internal waterborne gravity sewer network;
- Construction of new internal stormwater network.
- Construction of two stormwater retention dams and cascading structure to transport stormwater from the development into the Malgas river.

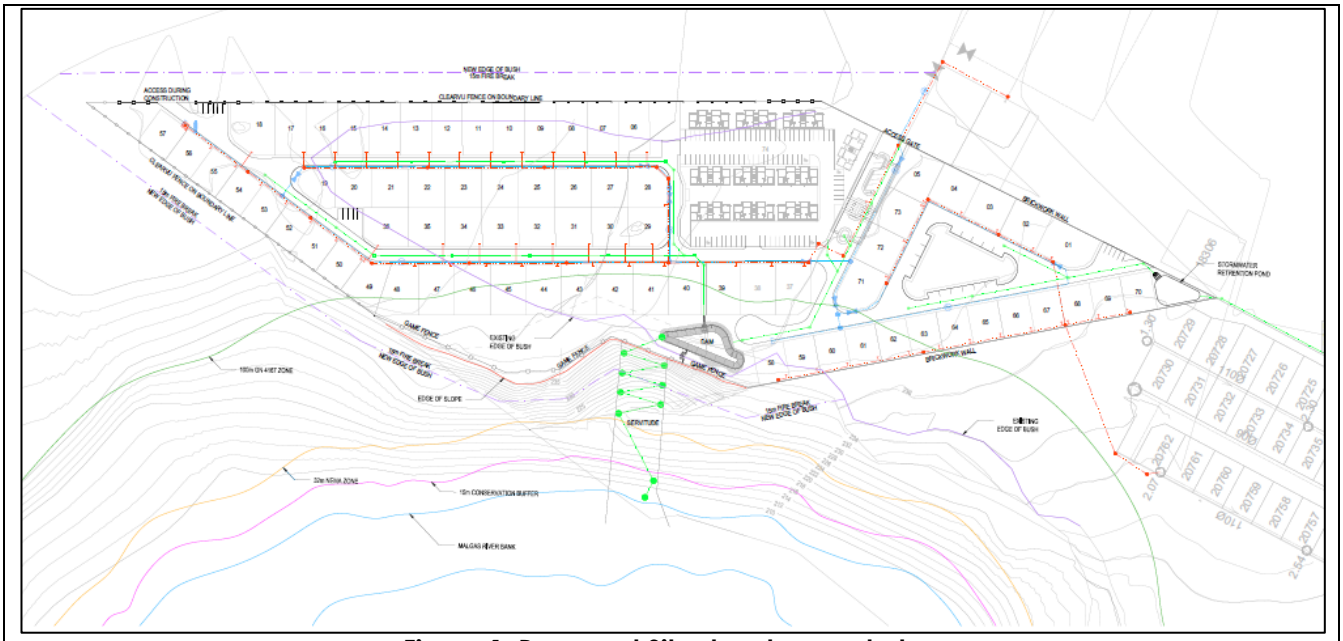


**Figure 1: Proposed Site development plan**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.

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

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

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

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

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

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

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

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

| **DEPARTMENTAL DETAILS** | |
|---|---|
| **CAPE TOWN OFFICE:**<br>**DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 1)**<br>(City of Cape Town, West Coast District,<br>Cape Winelands District & Overberg District) | **GEORGE REGIONAL OFFICE:**<br>**DIRECTORATE: DEVELOPMENT MANAGEMENT (REGION 3)**<br>(Central Karoo District & Garden Route District) |
| The completed Form must be sent via electronic mail to:<br>DEADPEIAAdmin@westerncape.gov.za<br><br>Queries should be directed to the Directorate: Development Management (Region 1) at:<br>E-mail: DEADPEIAAdmin@westerncape.gov.za<br>Tel: (021) 483-5829<br><br>Western Cape Government<br>Department of Environmental Affairs and Development Planning<br>Attention: Directorate: Development Management (Region 1)<br>Private Bag X 9086<br>Cape Town,<br>8000 | The completed Form must be sent via electronic mail to:<br>DEADPEIAAdmin.George@westerncape.gov.za<br><br>Queries should be directed to the Directorate: Development Management (Region 3) at:<br>E-mail: DEADPEIAAdmin.George@westerncape.gov.za<br>Tel: (044) 814-2006<br><br>Western Cape Government<br>Department of Environmental Affairs and Development Planning<br>Attention: Directorate: Development Management (Region 3)<br>Private Bag X 6509<br>George,<br>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.<br>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.<br>The map must indicate the following:<br>• an accurate indication of the project site position as well as the positions of the alternative sites, if any;<br>• road names or numbers of all the major roads as well as the roads that provide access to the site(s)<br>• a north arrow;<br>• a legend; and<br>• 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.<br><br>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:<br>• 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.<br>• The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan.<br>• 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.<br>• 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.<br>• 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.<br>• 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.<br>• Servitudes and an indication of the purpose of each servitude must be indicated on the site plan.<br>• Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to):<br>o Watercourses / Rivers / Wetlands<br>o Flood lines (*i.e.,* 1:100 year, 1:50 year and 1:10 year where applicable);<br>o Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&DP"):<br>o Ridges;<br>o Cultural and historical features/landscapes;<br>o Areas with indigenous vegetation (even if degraded or infested with alien species).<br>• Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted.<br>• North arrow<br><br>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.<br>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.<br>For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as **Appendix A3**. |

## ACRONYMS

| | |
|---|---|
| DAFF: | Department of Forestry and Fisheries |
| DEA: | Department of Environmental Affairs |
| DEA& DP: | Department of Environmental Affairs and Development Planning |
| DHS: | Department of Human Settlement |
| DoA: | Department of Agriculture |
| DoH: | Department of Health |

| | |
|---|---|
| DWS: | Department of Water and Sanitation |
| EMPr: | Environmental Management Programme |
| HWC: | Heritage Western Cape |
| NFEPA: | National Freshwater Ecosystem Protection Assessment |
| NSBA: | National Spatial Biodiversity Assessment |
| TOR: | Terms of Reference |
| WCBSP: | Western Cape Biodiversity Spatial Plan |
| WCG: | Western Cape Government |

## ATTACHMENTS

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

The following checklist of attachments must be completed.

| **APPENDIX** | | | **✓ (Tick) or x (cross)** |
|---|---|---|---|
| **Appendix A:** | **Maps** | | |
| | **Appendix A1:** | **Locality Map** | ✓ |
| | **Appendix A2:** | **Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning** | N/A |
| | **Appendix A3:** | **Map with the GPS co-ordinates for linear activities** | N/A |
| **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 B3:** | **3D renderings of houses** | ✓ |
| **Appendix C:** | **Photographs** | | ✓ |
| **Appendix D:** | **Biodiversity overlay map** | | ✓ |
| **Appendix E:** | **Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.** | | |
| | **Appendix E1:** | **Final comment/ROD from HWC** | ✓ |
| | **Appendix E2:** | **Copy of comment from Cape Nature** | x |
| | **Appendix E3:** | **Final Comment from the DWS** | ✓ |
| | **Appendix E4:** | **Comment from the DEA: Oceans and Coast** | N/A |
| | **Appendix E5:** | **Comment from the DAFF** | ✓ |
| | **Appendix E6:** | **Comment from WCG: Transport and Public Works** | - |

| | | | |
|---|---|---|---|
| | **Appendix E7:** | **Comment from WCG: DoA** | ✓ |
| | **Appendix E8:** | **Comment from WCG: DHS** | N/A |
| | **Appendix E9:** | **Comment from WCG: DoH** | N/A |
| | **Appendix E10:** | **Comment from DEA&DP: Pollution Management** | N/A |
| | **Appendix E11:** | **Comment from DEA&DP: Waste Management** | N/A |
| | **Appendix E12:** | **Comment from DEA&DP: Biodiversity** | - |
| | **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** | - |
| | **Appendix E16:** | **Confirmation of all services (water, electricity, sewage, solid waste management)** | ✓ |
| | **Appendix E17:** | **Comment from the District Municipality** | - |
| | **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.** | ✓ |
| | **Appendix E21:** | **Proof of land use rights** | N/A |
| | **Appendix E22:** | **Proof of public participation agreement for linear activities** | N/A |
| **Appendix F: Public participation information** | **Appendix F1:** | **register of I&APs** | ✓ |
| | **Appendix F2:** | **proof of notices** | ✓ |
| | **Appendix F3:** | **Comments** | ✓ |
| | **Appendix F4:** | **Comments and Responses Report** | ✓ |
| | **Appendix F5:** | **Previous application for EA Comments and Comments and Responses Report** | ✓ |
| **Appendix G: Specialist and other Reports** | • **G1: Botanical Assessment and addendum**<br>• **G2: Freshwater Assessment and addendum**<br>• **G3: Terrestrial Biodiversity & Animal Species Assessment and addendum**<br>• **G4: Heritage Impact Assessment**<br>• **G5: Engineering Services Report**<br>• **G6: Planning Report and addendum**<br>• **G7: Traffic Impact Assessment** | | ✓ |

| | | |
|---|---|---|
| | • **G8: Electrical Service Report**<br>• **G9: Stormwater Management Report**<br>• **G10: Geo technical Report**<br>• **G11: Visual Impact Report**<br>• **G12: Socio-economic report** | |
| **Appendix H:** | **Draft EMPr** | ✓ |
| **Appendix I:** | **Screening tool report** | ✓ |
| **Appendix J:** | **The impact and risk assessment for each alternative** | Section H |
| **Appendix K:** | **Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline** | ✓ |
| **Appendix: L:** | **DFFE (adjacent landowner) letter regarding Fire Breaks and Southern Cape Fire Protection Association's endorsement thereof** | ✓ |

## SECTION A: ADMINISTRATIVE DETAILS

| Highlight the Departmental Region in which the intended application will fall | ~~CAPE TOWN OFFICE:~~ | | **GEORGE OFFICE:** |
|---|---|---|---|
| | ~~REGION 1~~<br><br>~~(City of Cape Town, West Coast District~~ | ~~REGION 2~~<br><br>~~(Cape Winelands District & Overberg District)~~ | **REGION 3**<br>**(Central Karoo District & Garden Route District)** |

| | | |
|---|---|---|
| **Duplicate this section where there is more than one Proponent:**<br>Name of Applicant/Proponent: | Urban Country Estate (Pty) Ltd | |
| Name of contact person for Applicant/Proponent (if other): | Shaun Gomez | |
| Company/ Trading name/State Department/Organ of State: | Urban Country Estate (Pty) Ltd | |
| Company Registration Number: | 2022/320653/07 | |
| Postal address: | No 539 Crossberry Street,<br>Xanadu Eco Estate | |
| | Hartbeespoort | Postal code: 0216 |
| Telephone: | ( ) | Cell: 0725890500 |
| E-mail: | info@urbanfront.co.za | Fax: ( ) |
| Company of EAP: | Sharples Environmental Services cc | |
| EAP name: | Michael Bennett | |
| Postal address: | PO Box 9087 | |
| | George | Postal code: 6530 |
| Telephone: | 044 8734923 | Cell: |
| E-mail: | michael@sescc.net | Fax: ( ) |
| Qualifications: | *Michael:* BSc Environmental & Geographic Sciences and Ocean and Atmospheric Science | |
| EAPASA registration no: | Michael: 2021/3163 | |
| **Duplicate this section where there is more than one landowner**<br>Name of landowner: | Urban Country Estate (Pty) Ltd – (Erf 19374) | |
| Name of contact person for landowner (if other): | Shaun Gomez | |
| Postal address: | No 539 Crossberry Street,<br>Xanadu Eco Estate | |
| | Hartbeespoort | Postal code: 0216 |
| Telephone: | ( ) | Cell: 0725890500 |
| E-mail: | info@urbanfront.co.za | Fax: ( ) |
| Name of Person in control of the land: | Shaun Gomez | |
| Name of contact person for person in control of the land: | | |
| Postal address: | No 539 Crossberry Street,<br>Xanadu Eco Estate | |
| | Hartbeespoort | Postal code: 0216 |
| Telephone: | ( ) | Cell: 0725890500 |
| E-mail: | info@urbanfront.co.za | Fax: ( ) |
| **Duplicate this section where there is more than one landowner**<br>Name of landowner: | Cedardale Investments (pty) Ltd – (Erf 19001) | |
| Name of contact person for landowner (if other): | Amit Katz | |
| Postal address: | PO Box 892 | |

| | | |
|---|---|---|
| | Highlands North | Postal code: 2037 |
| Telephone: | 0827734567 | |
| E-mail: | amjkatz@gmail.com | |
| Name of Person in control of the land: | Cedardale Investments (pty) Ltd | |
| Name of contact person for person in control of the land: | Amit Katz | |
| Postal address: | PO Box 892, Highlands North | |
| Telephone: | 0827734567 | Postal code: 2037 |
| E-mail: | amjkatz@gmail.com | |
| **Duplicate this section where there is more than one Municipal Jurisdiction** Municipality in whose area of jurisdiction the proposed activity will fall: | George Local Municipality | |
| Contact person: | George Municipal manager | |
| Postal address: | PO Box 19 | |
| | George | Postal code: 6530 |
| Telephone | 044 801 9111 | Cell: |
| E-mail: | gmun@george.gov.za | Fax: ( ) |

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

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

Greenfield – Although the site has been previously cleared as evident from the pioneer plants on site. The site has not been developed yet apart from a partially built house from the previous EA for the property and a construction access road over the property to the adjacent development being constructed.


**Figure 2: Two track road seen from Google Earth**

**Figure 3: Two track road before construction access**

**Figure 4: construction access road**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~3.~~ | **~~For Linear activities or developments~~** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~3.1.~~ | ~~Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:~~ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~3.2.~~ | ~~Development footprint of the proposed development for all alternatives.~~ | | | | | | | | | | | | | | | | | | | | | | | | ~~m²~~ | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~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.~~ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~3.4.~~ | ~~Indicate how access to the proposed routes will be obtained for all alternatives.~~ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~3.5.~~ | ~~SG Digit codes of the Farms/Farm Portions/Erf numbers for all alternatives~~ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ~~3.6.~~ | **~~Starting point co-ordinates for all alternatives~~** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ~~Latitude (S)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| | ~~Longitude (E)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| | **~~Middle-point co-ordinates for all alternatives~~** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ~~Latitude (S)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| | ~~Longitude (E)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| | **~~End point co-ordinates for all alternatives~~** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ~~Latitude (S)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| | ~~Longitude (E)~~ | | | | | ~~°~~ | | | | ~~'~~ | | | | ~~"~~ | | | | | | | | | | | | | |
| **~~Note: For Linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.~~** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | **Other developments** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.1. | Property size(s) of all proposed site(s): | | | | | | | | | | | | | | | | | | | | | | | | | 56 342 m² | |
| 4.2. | Developed footprint of the existing facility and associated infrastructure (if applicable): | | | | | | | | | | | | | | | | | | | | | | | | | 0m² | |
| 4.3. | Development footprint of the proposed development and associated infrastructure size(s) for all alternatives: | | | | | | | | | | | | | | | | | | | | | | | | | 56 337 m² | |

| 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). |
|---|---|

Urban Country Estate (Pty) proposing to develop Erf 19374 (Remainder Erf 6182, Erf 6179, Erf 6156) into a residential development of approximately 6.88ha consisting of:

- 79 erven
  - 70 group housing erven;
  - 1 flats erf;
  - 5 private open space erven; (the open space on the west of the property as well as the corner piece of Erf 19001 north of the stormwater structure will be managed in accordance with the management plans compiled for Erf 19001 in order to maintain consistency in the management of this area)
  - 3 private road erf.

The proposal will also include:

- Construction of new roadways;
- Construction of new internal water reticulation pipework;
- Construction of new internal waterborne gravity sewer network;
- Construction of new internal stormwater network.
- Construction of two stormwater retention dams and cascading structure to transport stormwater from the development into the Malgas river.

The planned development will consist of the following residential units and in mix relationship:

**Table 1: Development unit distribution summary.**

| Item | Unit Description | AVE ERF SIZE | AVE FLOOR SIZE | No of Units | Ownership |
|---|---|---|---|---|---|
| **1.** | 2 Bedroom – 1 Bathroom Semi-detached Flat Units | | 70 m² | 40 | Rental Units |
| **2.** | Single Storey Residential Homes with 2 to 3 Bedrooms and 2 Bathrooms | 309 m² | 160 m² | 19 | Freehold Title |
| **3.** | Single Storey Residential Homes with 2 to 3 Bedrooms and 2 Bathrooms | 415 m² | 175 m² | 32 | Freehold Title |
| **4.** | Double Storey Residential Homes with 3 to 4 Bedrooms and 2.5 Bathrooms | 400 m² | 160 m² | 13 | Freehold Title |
| **5.** | Double Storey Residential Homes with 3 to 4 Bedrooms and 2.5 Bathrooms | 452 m² | 180 m² | 6 | Freehold Title |
| | | | | **110** | |

The average occupational density will be around 2.8 people per unit, lower than the national average of households. The development would cater for the medium income group and will fall within the development category 3 & 4 for services due to the lower-than-average occupational density per household. The average erf size is 381m².

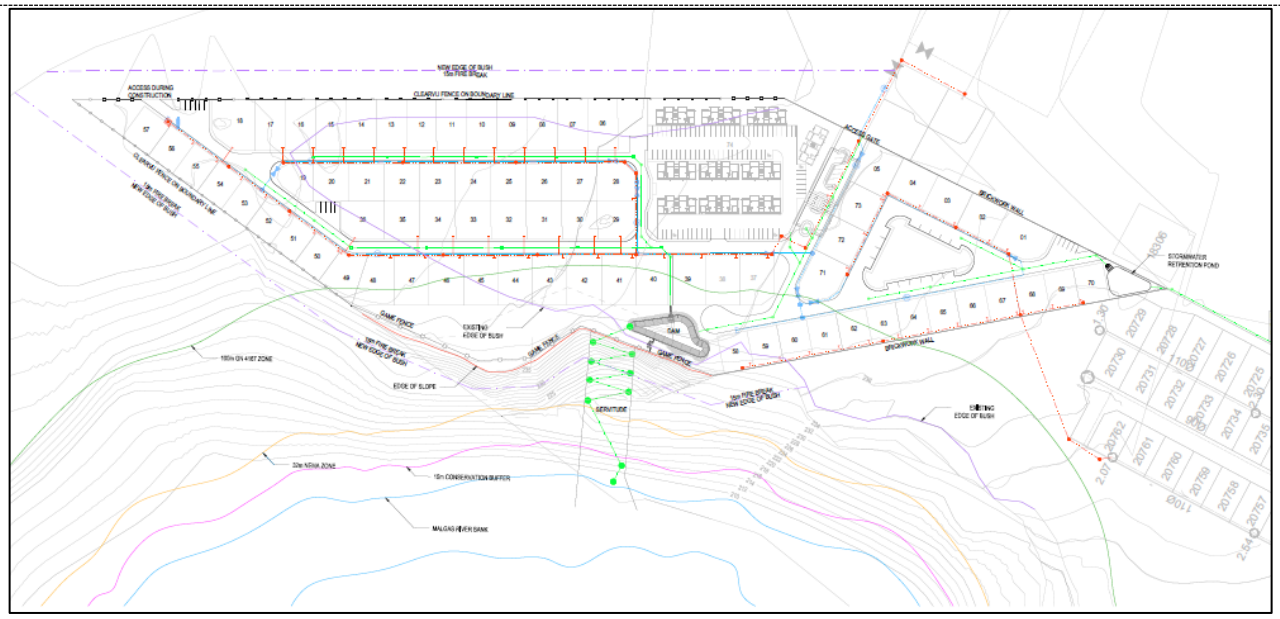

**Figure 5: Proposed Site Development Plan.**

## Engineering Services

### Water Reticulation

The reticulation main that will be used for this development will be a Ø110mm class 9 uPVC pipe. This will connect to the existing Ø100mm municipal watermain in Plantation Road.

### Sewer

Only 22 of the freestanding erven will gravitate towards the southern part of the development and connect into the Ø110mm pipe. The remainder of the development will connect to the Ø150mm pipe in Candlewood Street.

All internal sewer reticulation pipelines will be Ø160mm class 34 uPVC pipes. All house connection pipes will be Ø110mm uPVC pipes.

### Internal Roads

The majority of the roads will be 6m wide (3m per lane direction) with the exception of a 4m wide one-way road on the north-eastern side of the property

### Stormwater Runoff and attenuation

Stormwater will be collected throughout the development along the roadways. The stormwater runoff for this development will flow in a Southern direction. The majority of the runoff will be directed into the main attenuation dam located on the western side in the middle of the site. The volume retained will be the difference between the 1:5-year pre-development flood and the 1:50 year post-development flood.

The release rate out of the attenuation pond will be equal to the 1:5-year flood flow rate. This will be released into a cascading structure which will transport it down the steep slope into the Malgas river. The stormwater will be released onto Reno Mattresses at the bottom of the cascading structure to prevent any soil erosion.

The stormwater on the southern side of the development will be attenuated in a smaller pond located in the green zone in the middle of the southern side of the development (Phase 1). The outflow pipe will be directed to the south with an interim headwall located in George Erf 19001. Because of the topography of the site, it is not possible to direct the stormwater back up towards the main pond.

Due to the lack of municipal infrastructure to the south of the development, the best solution

would be to connect to the stormwater infrastructure of George Erf 19001 once it is developed.

The attenuation dams will be fitted with submersible pumps that will be connected to a designed irrigation pipe system throughout the estate.

The stormwater pipes are minimum 375mm diameter in size, laid at a minimum grade of 1:400 to ensure self-cleaning. The road and minor stormwater infrastructure are designed for a 1:5-year recurrence interval with the major system being designed for a 1:50 year recurrence interval.

**Irrigation with stormwater**
The water level control within the Attenuation Pond will be managed by an electronic float switch unit with a timer switch. The timer switch and float switch will activate a 2.2kw submersible water pump that is installed within the Attenuation Pond. This pump will be connected to an irrigation pipe network throughout the estate, along the roads and within all the green areas.

The irrigation network will be fitted with valves to allow for the manual changeover of water flow to the various desired areas for irrigation. The irrigation system will consist of small pop-up sprinklers throughout the development.

The irrigation system will be set on a timer switch to pump through the day. Levels within the Attenuation Pond will be automatically managed by means of electronic float switches to ensure the protection of the pump.

The total irrigatable area within the estate is approximately 1.68Ha, this is equivalent to 68m³/day volume of water that can be irrigated.

**Discharge of stormwater to Malgas River**
The outflow from the attenuation pond will be position at a level just below the inlet in order to retain most of the flow inside the chamber and to slow the discharge velocity to acceptable municipal standards. The outflow will be through a pipe that will daylight into a headwall unit that is fitted with energy dissipating structures.

This will discharge the water into a series of holding ponds and descending water stairs to carry the stormwater from a higher elevation to a lower elevation into a final holding pond before it overflows onto a gabion mattress and further into the Malgas river.

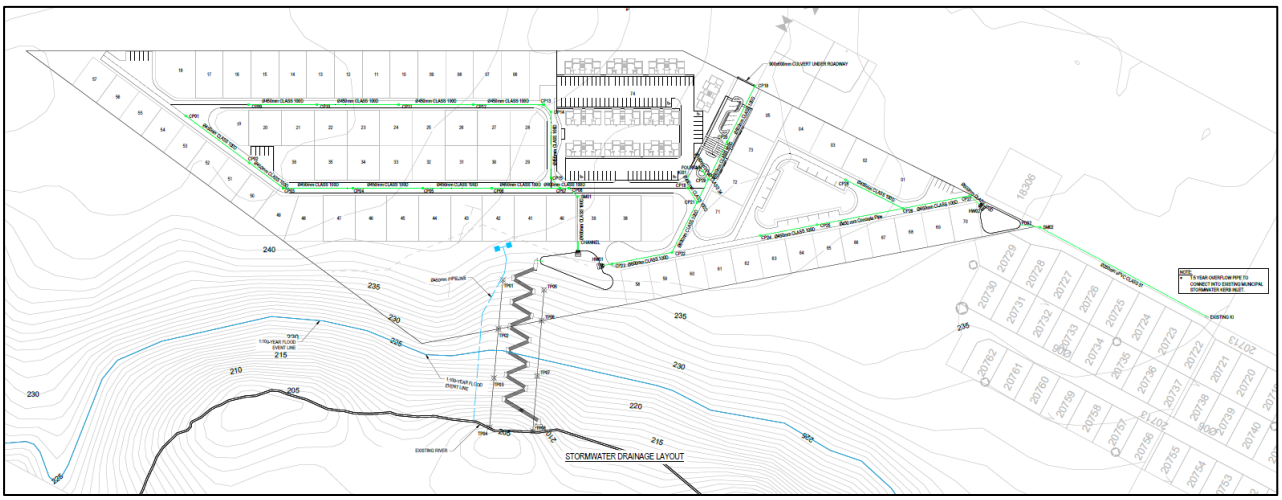


**Figure 6: Stormwater Drainage Layout**

**Fire Breaks**
Please refer to the letter from DFFE and the Southern Cape Fire Protection Agency (Appendix L) regarding the fire break agreement with the adjacent landowner (DFFE), the adjacent landowner will clear a 15m fire break and a 5m fire break will be accommodated on the proposed site and the combined firebreak will therefore be 20m.

**Electricity supply**
The electrical reticulation will comprise of underground 11kV cables, which will be located within the road reserves and connect to the one internal miniature substation to the Bulk Electrical network.

The residential units and infrastructure components will each be provided with a separate metered underground electrical service, which will be connected to the internal substation.

Appropriate roadway and area lighting will be installed to meet the requirements of the development and will be designed to comply to SABS Code 098:1990.

The Developer is investigating a Grid Tied PV Solar solution that would see the carports be covered in PV Solar panels that feeds the power to a Central Inverter and Battery Storage facility with back-up generation capabilities. From here the power would be routed back to the units where each unit will be fitted with a Smart Prepaid meter system.

**Existing Electrical Distribution Network**
There is an existing 95mm2 x 3c (Al) 11kV PILC cable in the area which feeds between SS-Hawthorndene and MS-Witfontein.

**Proposed Electrical MV Distribution Network**
The medium voltage network currently in place will be sufficient to supply the intended development and confirmation of this was obtained from George Municipality in a written email dated 2022-05-19 in response to our capacity request, reference R5094Q-L002 dated 2022-04-27. An extract from the email confirming the capacity availability:

*1. Capacity available:*
*a. The capacity will be made available on the 95/3 Ring near Hawthorndene SS to MS Witfontein*

Point of Supply
A new double 95 $mm^2$ x 3c (Al) 11kV PILC cable will be cut into the existing 95 $mm^2$ x 3c (Al) 11kV PILC cable between SS-Hawthorndene and MS-Witfontein and extended to the entrance gate of the Development where a 500 kVA min-substation will be installed along with the required low voltage switchgear required to supply a new bulk low voltage metering kiosk.

**Solid Waste Handling**
The Estate will enter into a service contract with the George Municipality for the removal and disposal of all solid waste. The estimated volume of solid waste is estimated at 0.085$m^3$/ household per week with a total estimated volume for the development at 10$m^3$ per week.

| | |
|---|---|
| 4.5. | Indicate how access to the proposed site(s) will be obtained for all alternatives. |
| Access to the site is gained via a black topped collector road, named Plantation Road that is accessed from the black topped national road N12 CJ Langenhoven Road. | |

| | | | |
|---|---|---|---|
| 4.6. | SG Digit code(s) of the proposed site(s) for all alternatives: | Erf 19374 | C02700020001937400000 |
| | | Erf 19001 | C02700020001900100000 |

| | | | | |
|---|---|---|---|---|
| 4.7. | Coordinates of the proposed site(s) for all alternatives: | | | |
| | Latitude (S) | 33° | 56‘ | 46.90“ |
| | Longitude (E) | 22° | 25' | 36.47“ |

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

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

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

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

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

## 3. Other legislation

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

- Amended Environmental Impact Assessment Regulations, GN No. R. 324 – 327 (7 April 2017)
- The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)
- Spatial Planning and Land Use Management Act, No. 16 of 2013 (SPLUMA)
- Western Cape Land Use Planning Act, (Act 3 of 2014) (LUPA)
- George Municipality: By-law on Municipal Land Use Planning (2015)

## 4. Policies

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

**Western Cape Provincial SDF (2014)**

The PSDF puts in place a coherent framework for the Province's urban and rural areas that:

- Gives spatial expression to National and provincial development agendas.
- Serves as basis for coordinated and integrated planning alignment on National and Provincial Departmental Programmes.
- Supports municipalities to fulfil their mandates in line with national and provincial Agendas.
- Communicates government's spatial development agenda.

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

- Greater productivity, competitiveness and opportunities within the spatial economy.
- Strengthening resilience and sustainable development.

**Eden Spatial Development Framework (2017)**

The Eden District Spatial Development Framework aims to establish a strong strategic direction and vision, towards increasing levels of detail in the spatial recommendations that are directive rather than prescriptive and providing guidance to local municipalities in the District regarding future spatial planning, strategic decision making and regional integration. The vision and strategic direction identify four key drivers of spatial change within the District. These four strategies lie at the heart of this SDF and the problem statement, spatial concept, spatial proposals and implementation are organised around these directives.

**George Municipality Integrated Development Plan (2017-2022)**

The property is located within the urban edge of the George Municipality and has been earmarked for residential development.

## 5. Guidelines

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

| | |
|---|---|
| Guideline on Public Participation (2013) | Guideline considered in the undertaking of the public participation for the proposed development. All relevant provisions contained in the guideline were adhered to in the basic assessment process as appropriate, except where an exemption/ deviation has been granted by the Competent Authority. |
| Guideline on Alternatives (2013) | Guideline considered when identifying and evaluating possible alternatives for the proposed development. Alternatives that were considered in the impact assessment process are reported on in this Basic Assessment Report (see section E) |
| Guideline on Need and Desirability (2013) | Guideline considered during the assessment of the Need and Desirability of the proposed development project. |
| Guideline on Environmental Management Plans (2005) | Guideline considered in the compilation of the EMP attached to this Basic Assessment Report. |
| Guideline for the Review of Specialist Input into the EIA Process (2005) | Guideline considered during the review and integration of specialist input into this Basic Assessment Report |
| External Guideline: Generic Water Use Authorization Application Process (2007) | Guideline considered during the process of applying for the required water use authorization |
| Integrated Environmental Management Information Series 5: Impact Significance (2002) | Guideline considering during the identification and evaluation of potential impacts associated with the proposed development, and the reporting thereof in this Basic Assessment Report |
| Integrated Environmental Management Information Series 7: Cumulative Effects Assessment (2004) | Guideline considering during the assessment of the cumulative effect of the identified impacts. |

- Guidelines for Human Settlement Planning and Design;
- George Municipality Guidelines and Standards for the Design of Water Supply;
- SABS 1200 DB1989 Earthworks and Pipe Trenches
- SABS Code 098:1990.

## 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

GN 1150 PROCEDURES FOR THE ASSESSMENT AND MINIMUM CRITERIA FOR REPORTING ON IDENTIFIED ENVIRONMENTAL THEMES IN TERMS OF SECTIONS 24(5)(a) AND (h) AND 44 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998, WHEN APPLYING FOR ENVIRONMENTAL AUTHORISATION

The screening tool report identified the following specialist assessments to be conducted.

| | |
|---|---|
| Landscape/Visual Impact Assessment | General Protocol |
| Archaeological and Cultural Heritage Impact Assessment | General Protocol |
| Palaeontology Impact Assessment | General Protocol |
| Terrestrial Biodiversity Impact Assessment | Terrestrial Biodiversity Assessment Protocol |
| Aquatic Biodiversity Impact Assessment | Aquatic Biodiversity Assessment Protocol |
| Hydrology Assessment | General Protocol |
| Socio-Economic Assessment | General Protocol |
| Plant Species Assessment | Plant Species Assessment Protocol |
| Animal Species Assessment | Animal Species Assessment Protocol |

A Site Verification Report was submitted in December 2022 and the Department's response letter dated 25 January 2023, agreed that only the highlighted specialist studies are necessary. The Site Verification Report as well as the response letter are attached as Appendix I.

## 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. |
|---|---|---|
| 12 | **The development of**<br>(i) Dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square meters, or<br>**(ii) Infrastructure or structures with a physical footprint of 100 square meters or more**<br>**Where such development-**<br>a) Within a water course<br>b) In front of a development setback; or<br>**c) If no development setback exists, within 32 meters of a watercourse, measured from the edge of a watercourse;**<br><br>Excluding<br>(aa) The development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour<br>(bb) Where such development activities are related to the development of a port or harbour, in which case activity 26 in listing notice 2 of 2014 applies<br>(cc) activities listed in activity 14 in listing notice 2 of 2014 or activity 14 in listing notice3 of 2014, in which case that activity applies<br>(dd) where such development occurs within an urban area<br>(ee) where such development occurs within existing roads, road reserves or railway line reserves<br>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared. | The stormwater infrastructure will be located within 32 m of the Malgas River. This activity is therefore triggered by the proposal. |
| 27 | **The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation,** except where such clearance of indigenous vegetation is required for—<br>(i) the undertaking of a linear activity; or<br>(ii) maintenance purposes undertaken in accordance with a maintenance management plan. | Although the site is dominated by alien vegetation and none of the original vegetation type is present there were some indigenous vegetation species located on the site as indicated in the Botanical Assessment.<br><br>This Activity is therefore triggered by the proposal. |
| 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. |
| 4 | **The development of a road wider than 4 metres** | Although the site is dominated by alien |

| | | |
|---|---|---|
| | **with a reserve less than 13,5 metres.**<br><br>**i. Western Cape**<br>i. Areas zoned for use as public open space or equivalent zoning;<br>ii. Areas outside urban areas;<br>(aa) Areas containing indigenous vegetation;<br>(bb) Areas on the estuary side of the development setback line or in an estuarine functional zone where no such setback line has been determined; or<br>iii. Inside urban areas:<br>(aa) Areas zoned for conservation use; or<br>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority. | vegetation and none of the original vegetation type is present there were some indigenous vegetation species located on the site as indicated in the Botanical Assessment. The internal roads will exceed 4m in width and therefore this activity is triggered by the proposal. |
| 12 | **The clearance of an area of 300 square metres or more of indigenous vegetation** except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.<br>**i. Western Cape**<br>i. **Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;**<br>ii. Within critical biodiversity areas identified in bioregional plans;<br>iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas;<br>iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or<br>v. On land designated for protection or conservation purposes in an Environmental Management Framework adopted in the prescribed manner, or a Spatial Development Framework adopted by the MEC or Minister. | Although Endangered vegetation is mapped for the site the botanical report confirms that there is no original vegetation type present on site. Although more than 300 square meters of vegetation will be cleared for the proposal, none of the Endangered vegetation type occurs on the site.<br><br>This activity is therefore not triggered by the proposal. |

**Note:**

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

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

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

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

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

## SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

| 1. | Provide a description of the preferred alternative. |
|---|---|

Urban Country Estate (Pty) proposing to develop Erf 19374 (Remainder Erf 6182, Erf 6179, Erf 6156) into a residential development of approximately 5.6ha consisting of:
79 erven
- 70 group housing erven;
- 1 flats erf;
- 5 private open space erven; (the open space on the west of the property as well as the corner piece of Erf 19001 north of the stormwater structure will be managed in accordance with the management plans compiled for Erf 19001 in order to maintain consistency in the management of this area)
- 3 private road erf.

The proposal will also include:

- Construction of new roadways;
- Construction of new internal water reticulation pipework;
- Construction of new internal waterborne gravity sewer network;
- Construction of new internal stormwater network.
- Construction of two stormwater retention dams and cascading structure to transport stormwater from the development into the Malgas river.

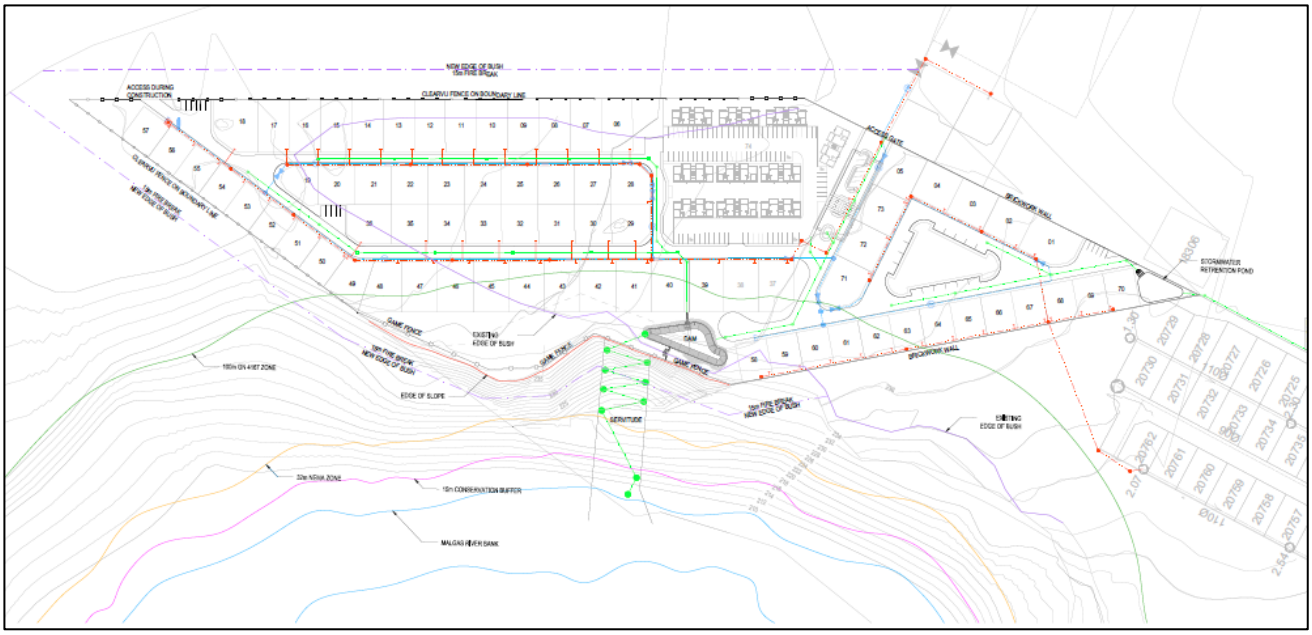

**Figure 7: Site Development Plan**

Please also refer to Section B 4.4 for a detailed description of the preferred alternative.

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

The Property is zoned Agricultural Zone I (Agriculture) in terms of the George Integrated Zoning Scheme By-law (GIZS) following a zoning rectification in 2022. The Property is vacant and has not been used for agricultural purposes for many decades. The zoning and land use is proposed to change following this land use application.

It is proposed to rezone The Property to Subdivisional Area to allow the owner to subdivide The Property to create Single Residential Zone II erven (Estate Housing) which will consist of:

- 70 group housing erven;
- 1 flats erf;
- 5 private open space erven; (the open space on the west of the property as well as the corner piece of Erf 19001 north of the stormwater structure will be managed in accordance with the management plans compiled for Erf 19001 in order to maintain consistency in the management of this area)
- 3 private road erf.

| 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. |
|---|---|

The previous approval for the property has lapsed, therefore there are no potential approval conflicts.

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

According to the PSDF, higher densities and prevention of urban sprawl can be achieved through various development opportunities i.e., subdivision of properties, development of additional dwelling units including sectional title development, demolition and redevelopment, high density suburbs, flats, and infilling. These can be used as means to achieve higher density.

Due to previous agricultural activities, most large indigenous trees on The Property have already been cleared. The proposed rezoning and subdivision does not negatively affect any coastal landscapes as it is located on the northern boundary of the George urban edge.

Thus, this application is found not to be in conflict with the PSDF.

| 4.2 | The Integrated Development Plan of the local municipality. |
|---|---|

The property is located within the urban edge of the George Municipality and has been earmarked for residential development.

| 4.3. | The Spatial Development Framework of the local municipality. |
|---|---|

The Property is not addressed specifically in the GMSDF. The Property borders two established residential neighbourhoods. Currently The Property is vacant and therefore underutilised considering its location within the urban edge. Rezoning and subdividing The Property to develop 70 group housing erven adheres to the following policies in the MSDF:

**Policy C:** Maintain a compact settlement form to achieve better efficiency in service delivery and resource use, and to facilitate inclusion and integration.

**Policy C2:** Restructure settlement patterns through infill development of vacant and underutilised land in the settlements in the George Municipal Area.

- The proposed rezoning & subdivision will promote densification and targets strategically located vacant land for infill urban development.
- The Property is located right between two residential neighbourhoods, Blanco and Heatherlands and is part of Heather Park. Blanco is characterised by smaller erven (mostly ranging between 300 $m^2$ and 600 $m^2$) and Heatherlands is characterised by larger properties (around 1000 $m^2$). The average property size in Heather Park is 800 $m^2$ with the proposed subdivision to provide residential properties between 400 $m^2$ and 600 $m^2$.

**Policy E:** Safeguard the municipality's farming and forestry areas as productive landscapes, equal in value to urban land.

- It is believed that The Property was used for log and wood harvesting. Under this assumption, it is seen that The Property is currently vacant with mostly grassed vegetation.
- The Property is inside the urban edge and is therefore also seen as an opportunity to limit urban

sprawl through infill development.

This land use application and the nature thereof is found to be consistent with the GMSDF as required in terms of Section 19 of the Land Use Planning Act, 2014 (LUPA).

| 4.4. | The Environmental Management Framework applicable to the area. |
|---|---|

N/A – No EMF has been adopted for George.

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

Please refer to Appendix F for the PPP information.

| 6. | Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development. |
|---|---|

According to the Western Cape Biodiversity Sector Plan (WCBSP), the central portion of the site is classified as Critical Biodiversity Area (CBA) 2 Terrestrial: Degraded, with the extreme western corner, which comes into proximity to the Malgas River, falling within an area classified as CBA1: Terrestrial. The Malgas River, which occurs just to the west of the site is classified as CBA1: Aquatic (Figure 8).

According to the WCBSP, CBA2: Degraded are sites in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. These should be maintained in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. CBAs are sites in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. These should be maintained in a natural or near-natural state, with no further loss of natural habitat, and only low-impact, biodiversity-sensitive land uses are appropriate.

A strip of the north-western boundary of the site falls within an area classified as Ecological Support Area (ESA) 2: Restore from plantation or high-density Invasive Alien Plants (IAP) due to the proximity to the Malgas River. ESAs are not essential for meeting biodiversity targets, but they play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services. According to the WCBSP, they should be restored and/or managed to minimise impact on ecological processes and ecological infrastructure functioning, especially soil and water-related services, and to allow for faunal movement (Pool-Stanvliet et al., 2017).

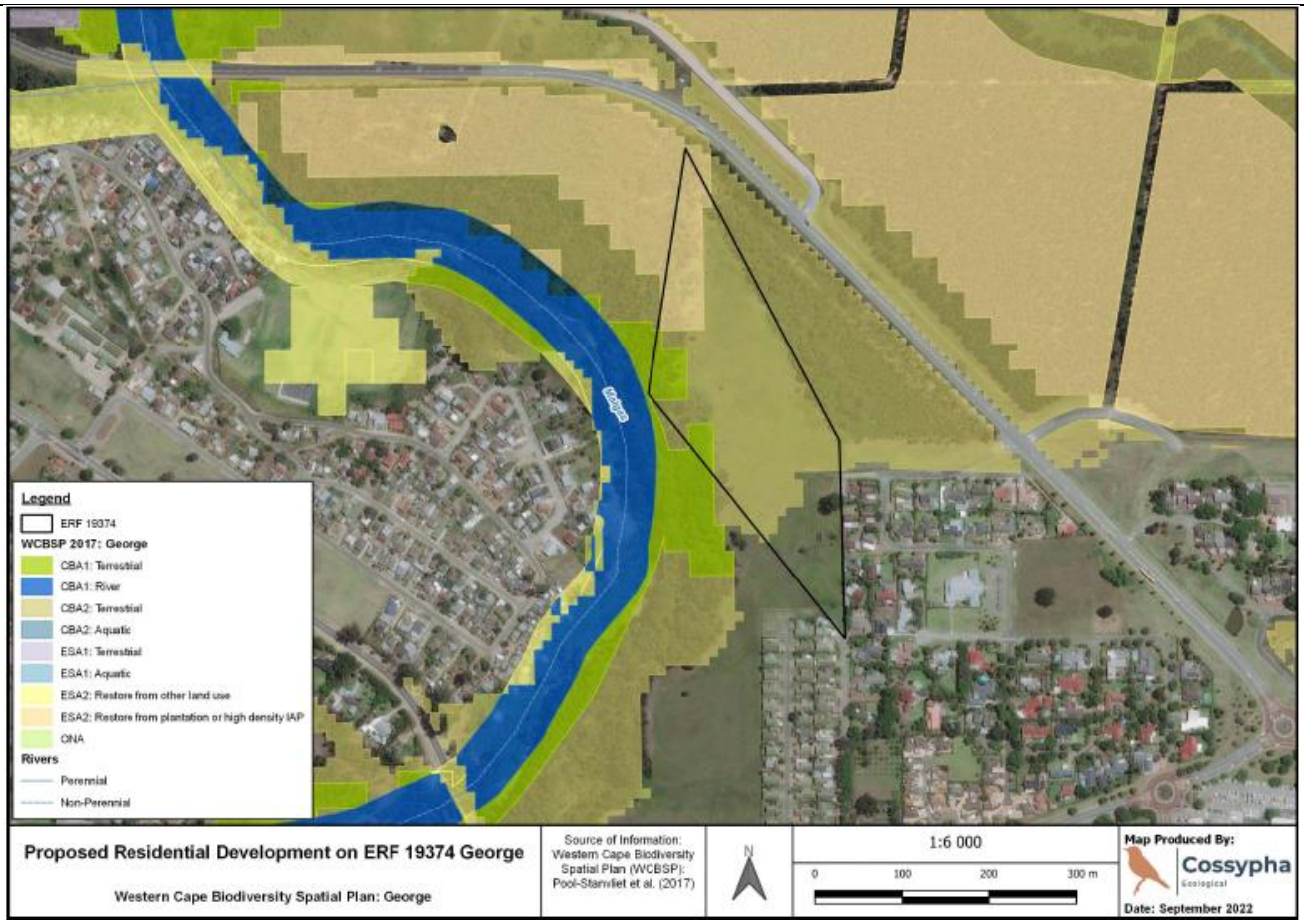


**Figure 8: The study area in relation to the WCBSP.**

The disturbance footprint falls partly in a CBA1 area and partly in a CBA2 area. Observations in the field by the botanical specialist do not support this classification at all. The site is Transformed and there is a Very Low probability of ever being able to reverse the transformation to natural Garden Route Shale Fynbos.

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

N/A

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

The screening tool reports have not changed, please refer to Appendix I for the screening tool reports.

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

The property is situated inside the urban edge of George as indicated by the blue dash line in Figure 9, obtained from the George Municipality's GIS Public Viewer. The image also shows the already developed areas adjacent to the property.

The proposed land development will be in character with the surrounding area and will provide additional residential opportunities in a popular neighbourhood. The property is thus earmarked for development and urban expansion.

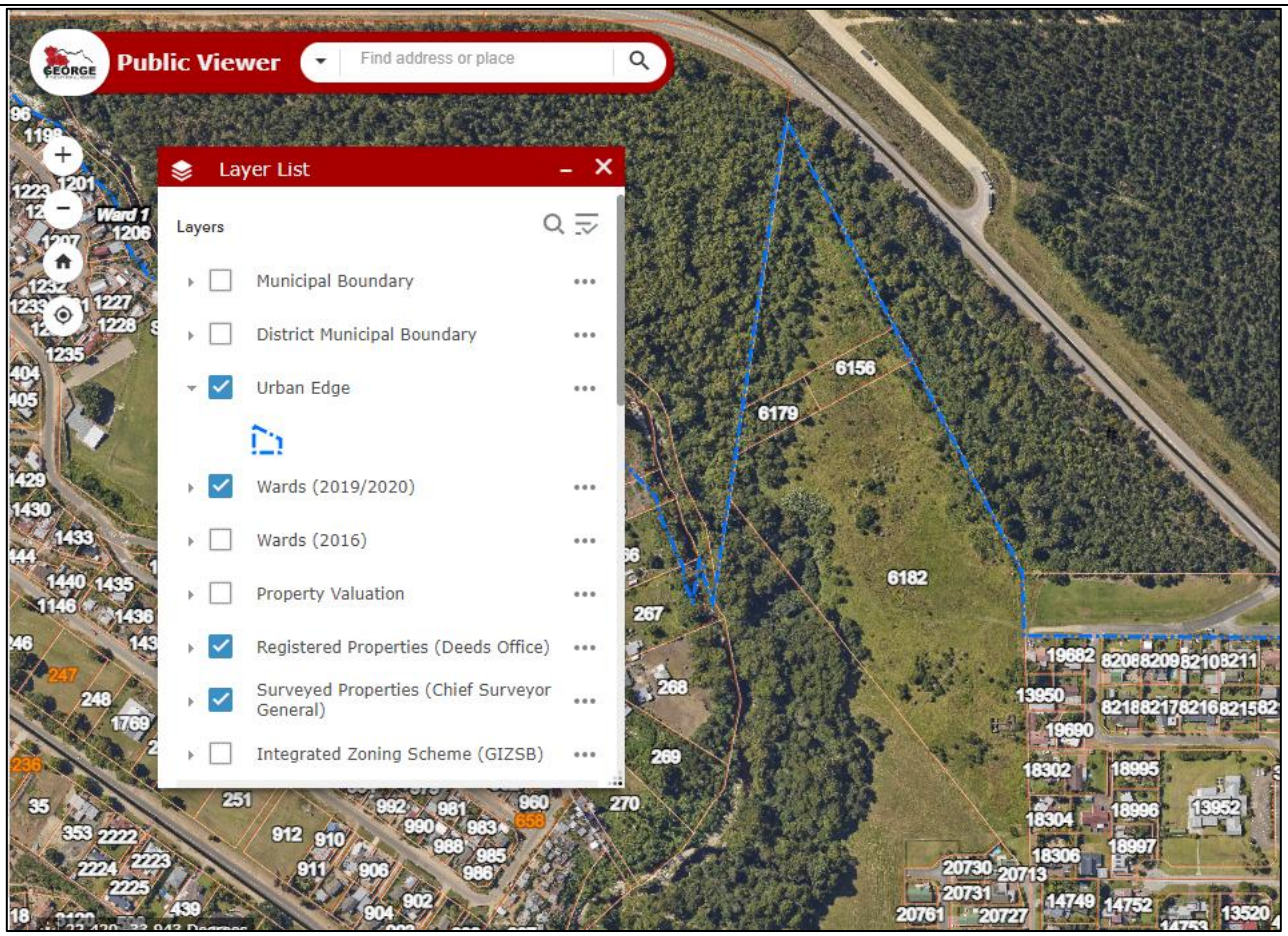


**Figure 9: A screenshot taken from George Municipality's GIS public Viewer.**

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

N/A – There are currently no existing resources and infrastructure. The necessary infrastructure will be developed.

| | |
|---|---|
| 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). |

*(Source: ENGINEERING SERVICES DEVELOPMENT REPORT, URBAN COUNTRY ESTATE: REMAINDER ERF 6182; ERF 6179; ERF 6156 of LAPSED ERF 19374, Report compiled by: CHEL Building & Civil Services, Nov. 2022).*

Existing services layouts for the George area directly opposite the site was obtained from the offices of GLS Consulting Engineers in Stellenbosch, with approval from Land Development Manager for Civil Engineering Services of the George Municipality.

Bulk Water supply Line

There is a 450 mm diameter GRP water pipeline that runs across the proposed development site that was installed within the road reserves of the LAPSED ERF 19374 site development layout. (Refer to Figure 10 below)

The site development plan has been adjusted to accommodate the pipe alignment along the main entrance road and have minimal impact on the estate and the planned sites.

It is recommended that this pipeline be accommodated within the road reserves as far as possible. As far as practically possible and as required, extra supporting filling or cover protection will be provided to clearly demarcate this pipe service.

The pipe will be opened by hand in designated areas to allow visual inspection of the pipe to enable location of the pipe for the contracting team throughout the Civil Infrastructure construction process.

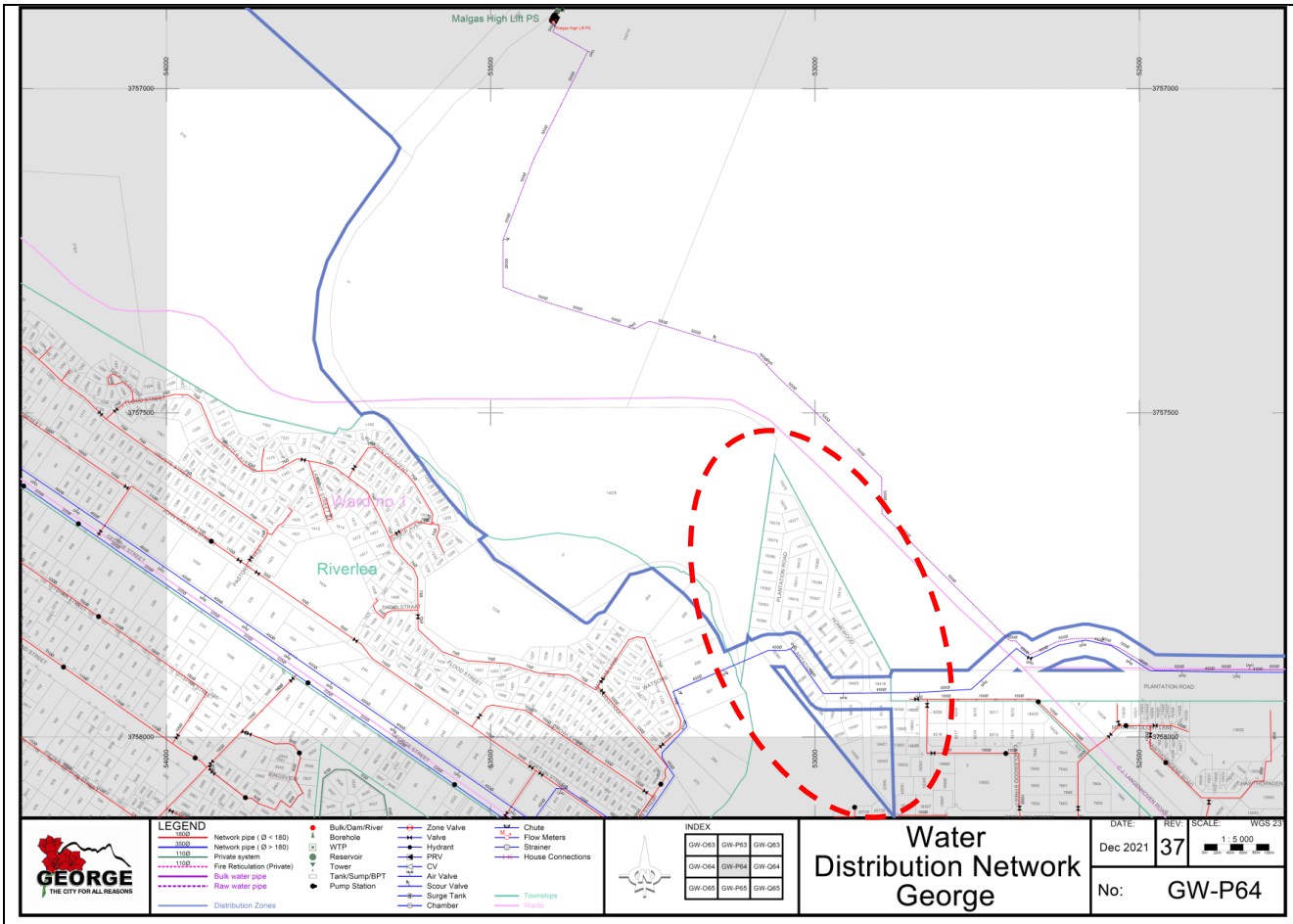


**Figure 10: 450mm diameter Municipal Bulk Supply GRP Pipe that runs through the planned development site (red dashed circle).**

Proposed Water Connections

As indicated by GLS Consulting Engineers, there are two (2) water points that can be connected into. This will allow for a ring feed within the planned development. This will ensure equal pressure within the network. The first connection point is near the planned entrance along the Plantation Road, while the second connection point is to a midblock water supply line, with a pump station in the neighbouring Heather Park, Homewood Development, Tommy Joubert Laan, that is near the South-eastern end of the planned development. These water lines are of 110 mm and 90 mm diameter uPVC respectively. (Refer to Figure 11 below).

Bulk connections to these water services would be required from Council. Details of the connection would be as per Council's requirements and specifications.

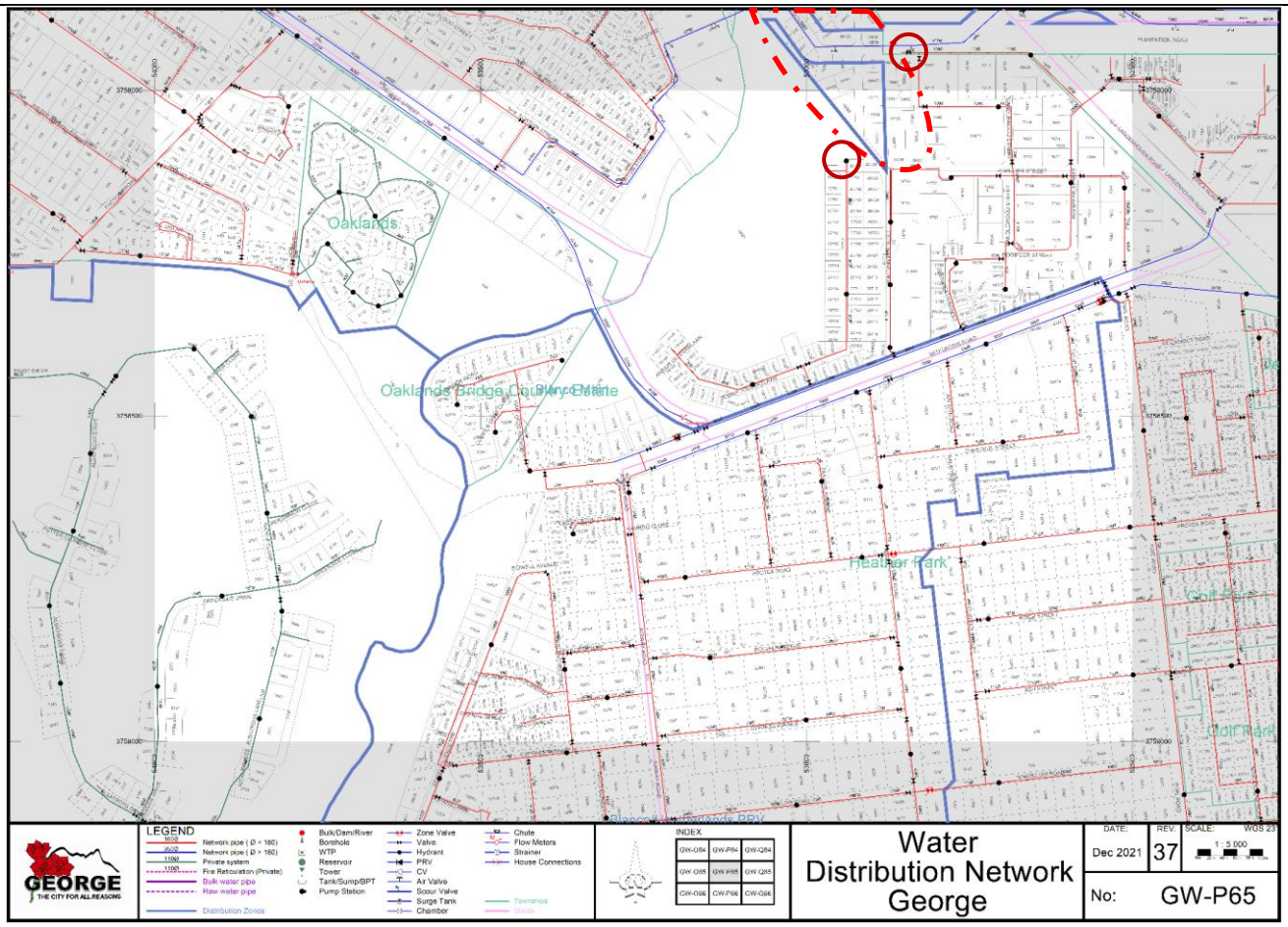


**Figure 11: Proposed Water Connection Points – as pointed out by GLS Consulting Engineers.**

Proposed Sewerage Connections

As indicated by GLS Consulting Engineers, there are two (2) Sewer points that can be connected into. This is required in order to accommodate the lower, south-eastern part of the planned estate to the connection point in the neighbouring Heather Park, Homewood Development, Tommy Joubert Laan. This connection is a 110mm diameter sewer main. As confirmed with GLS Consulting Engineers the connection of the planned phase one (1) of the development consisting of twenty-two (22) units will not exceed the hydraulic flow of this network system.

The 2nd connection that will connect the planned phase two (2), three (3) and four (4) and is located along the Candlewood Street, off from Plantation Road. This connection is a 160mm diameter pipe. Again, as confirmed the hydraulic flow of this network would not be exceeded with the connection of the estate to this part of the network. (Refer to Figure 12)

Bulk connections to these water services would be required from Council. Details of the connection would be as per Council's requirements and specifications.

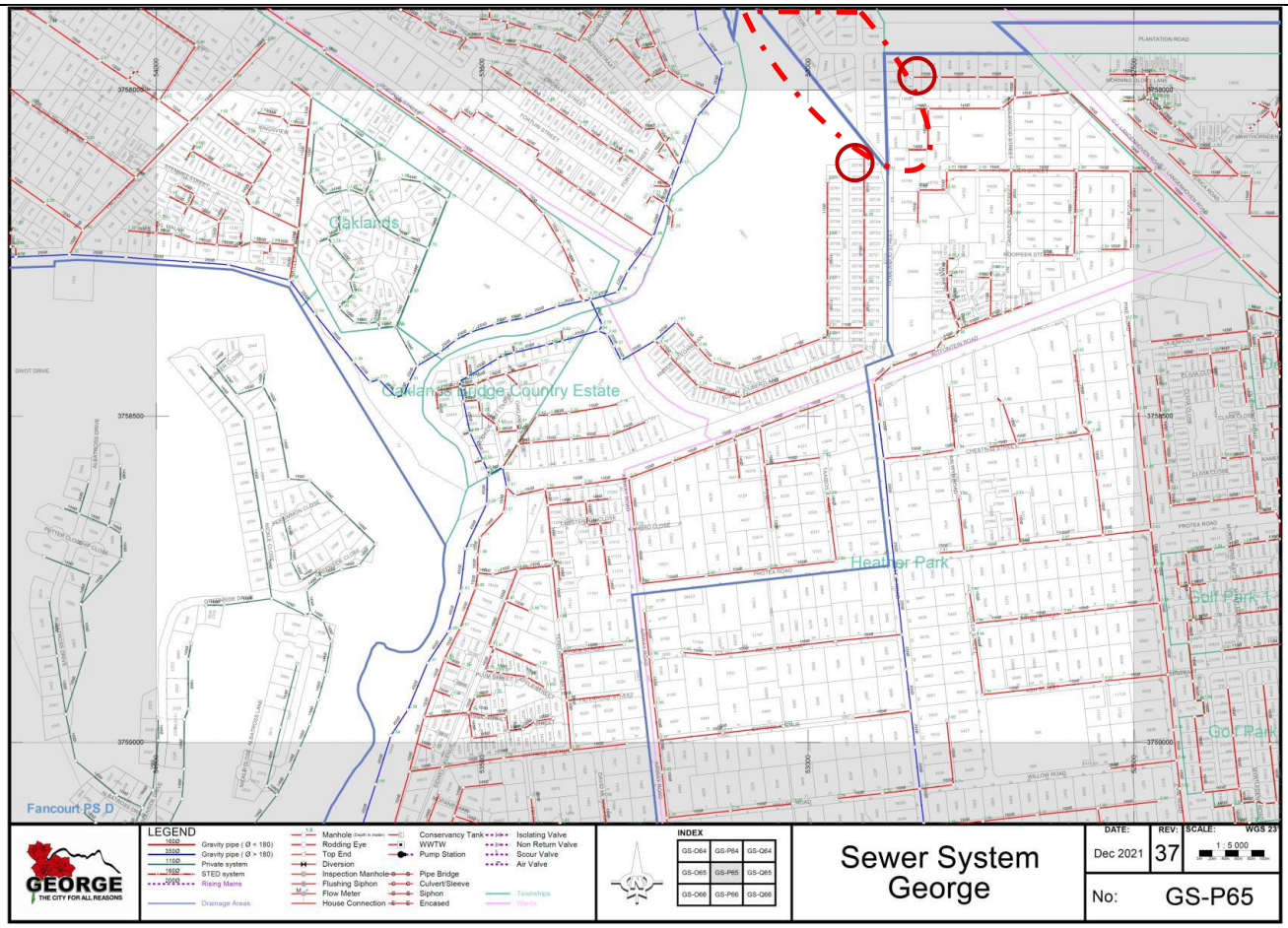


**Figure 12: Proposed Sewer Connection Points – as pointed out by GLS Consulting Engineers.**

Stormwater

There is no existing stormwater system within the perimeter of the site, nor the Plantation Road. Only a shallow earth dish drain is found along the northern side of the Plantation Road that seems to create a pool of water near the Candlewood Street intersection with Plantation Road.

Storm water would need to be attenuated within the boundaries of the development and released at low velocities into the Malgas River. The stormwater release from the attenuation ponds would be done in a controlled manner through a system of energy breaking structures down the steep slope within the identified green public open space, to a lower elevated stormwater attenuation pond system from where it will be released into the Malgas River.

Please refer to 4.4 of Section B of this report for more information on the Stormwater Management Plan.

| | |
|---|---|
| 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. |

Please also refer to Appendix K for the need and desirability of the proposal in relation to the DEA, 2017 guideline on Need and Desirability.

(Source: PROPOSED CANCELLATION OF GENERAL PLAN, CONSOLIDATION, REZONING & SUBDIVISION FOR URBAN COUNTRY ESTATE PTY LTD ERVEN 6179 & 6156 AND ERVEN 19372 & 19373 GEORGE (UNREGISTERED PORTIONS OF REMAINDER ERF 6182 GEORGE), HOMEWOOD STREET & PLANTATION ROAD, HEATHER PARK GEORGE MUNICIPALITY & DIVISION, January 2023, Prepared by Marlize de Bruyn Planning – Consulting Town & Regional Planning. Appendix G6).

Need and desirability is the balancing of various factors.

**Need** depends on the nature of a development proposal and is based on the principle of sustainability. This motivation report has shown that the rezoning and subdivision for The Property does not impact negatively on the character of The Property, the environment, surrounding properties or visual impacts.

The proposition will fulfil the need to provide additional residential opportunities within the George urban edge and will be in accordance with the medium density character of the area.

**Desirability,** from a planning perspective, is defined as the degree of acceptability of a proposed development on a property. The relevant factors include the physical characteristics of The Property, existing planning in the area, character of the area, the locality and accessibility of The Property as well as the provision of services.

**Physical characteristics of The Property**

The physical characteristics of The Property are considered in the proposed layout. What is developable with a suitable topography is reflected in the proposed layout.

**Existing planning in the area**

This land use application is not in conflict with the George Municipal Spatial Development Framework (GMSDF). Residential densification and infill development are supported through this land use application.

**Character of the area**

As mentioned, the proposed rezoning and subdivision will have no negative effect on the character of the area. It is likely to contribute to the residential character of the surrounding neighbourhoods.

**Provision of services**

Municipal engineering services will be installed as necessary, and costs will be carried by The Property owners. See services reports attached hereto as Appendices G5 &G8.

**Economic impact**

The proposed rezoning and subdivision will have no negative economic impact. It will bring additional ratepayers to the George Municipality and strengthen the secondary sector of the local economy.

**Direct impact on surrounding properties**

No neighbour will be overshadowed or overlooked by the proposed development as described earlier, mainly due to the topography and nature of the future development. It is our view that the need and desirability of the rezoning and subdivision for The Property, showed no negative impacts.

## 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.

| |
|---|
| N/A |

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

| |
|---|
| Please refer to Appendix F |

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

| |
|---|
| All of the State Departments and Organ of State indicated were consulted with. |

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

| |
|---|
| All of the State Departments and Organ of State indicated were consulted with. |

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

| |
|---|
| CapeNature<br>SANRAL |

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.

| |
|---|
| Please refer to Appendix F |

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

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

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

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

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

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

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

## SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

### 1. Groundwater

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

### 2. Surface water

| | | | |
|---|---|---|---|
| 2.1. | Was a specialist study conducted? | **YES** | NO |
| 2.2. | Provide the name and/or company who conducted the specialist study. | | |
| Ms. Christel du Preez (2022)of FEN Consulting, part of the SAS Environmental Group of Companies.<br>Ms. Amanda Mileson (amended report 2023 and addendum 2024) of FEN Consulting, part of the SAS Environmental Group of Companies.<br>Report attached as Appendix G2. | | | |
| 2.3. | Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development. | | |

**Watercourse Identification** *by FEN Consulting:*

During the site assessment undertaken by Christel du Preez in April 2022, no watercourses (wetlands or rivers) were identified within the study area. As such, the study area can be considered of low aquatic biodiversity sensitivity. The study area is a relatively flat area, with a significant westerly facing slope along the western boundary. The overall condition of the study area can be described as transformed (as verified by the historical aerial photographs) and hosts terrestrial vegetation typical of disturbed areas. The Malgas River was identified outside the western boundary of the study area, within the investigation area.

Although *Arundo donax* and *Cortaderia selloana*, both exotic and opportunistic wetland plant species, were identified in scattered patches throughout the study area, its presence can be prescribed to the historical transformation of the study area (Figure 13). Historical and ongoing disturbance has resulted in the infestation of alien species that are adapted to disturbed areas, such as the study area. Upon investigation of the soil profile of the study area, no wetland soil morphological characteristics were observed, thus confirming that no wetlands are present within the study area.

**Figure 13: Photographs providing an overview of the study area, noting patches of *Cortaderia selloana* (pink arrows) and *Arundo donax* (blue arrow).**

## Watercourse characteristics

The Malgas River originates from the Outeniqua mountains, almost 6 km north of the study area. Although the headwaters of this system are protected (within the Witfontein Nature Reserve) and thus considered to be in an unmodified ecological condition, the reach of this river within the agricultural and forestry land use setting outside of the protected area has been impacted upon over many decades, which also includes water abstraction, adjacent mining activities (Much Asphalt mining) and various linear infrastructure crossings.

Due to the significant invasion of a variety of large tree species, most notably *Eucalyptus* species but also other species such as *Solanum mauritianum*, *Acacia mearnsii* and *A. malanoxylon*, and a variety of *Lantana* species, the vegetation component and overall biodiversity of the river is considered degraded. This can also be the result of the adjacent anthropogenic activities from the close by urban Blanco community such as contaminated stormwater inputs and rubble disposal.

It is acknowledged that the large Eucalyptus trees species do stabilize the slope between the river and study area, however, some erosion of the active channel of the river was noted, specifically at the George Street bridge crossing as the understory of the marginal zone is not vegetated and is susceptible to erosion and scouring. Despite this, and considering all other impacts, no significant sediment deposition in the assessed reach of the river was noted. Additionally, the water quality of the river is also considered fair despite the presence of an urban community within very close proximity to the river. This can, however, be attributed to this section of river being located at the top of the catchment with relatively less severe impacts compared to the downstream reach which are surrounded by urban and agricultural developments.

## Watercourse classification & assessment

| Watercourse | Level 3: Landscape Unit | Level 4: Hydrogeomorphic (HGM) Type |
|---|---|---|
| **Malgas River** | Valley floor—the base of a valley, situated between two distinct valley side-slopes, where alluvial or fluvial processes typically dominate. | River—a linear landform with clearly discernible bed and banks, which permanently or periodically carries a concentrated flow of water. A river is taken to include both the active channel. |

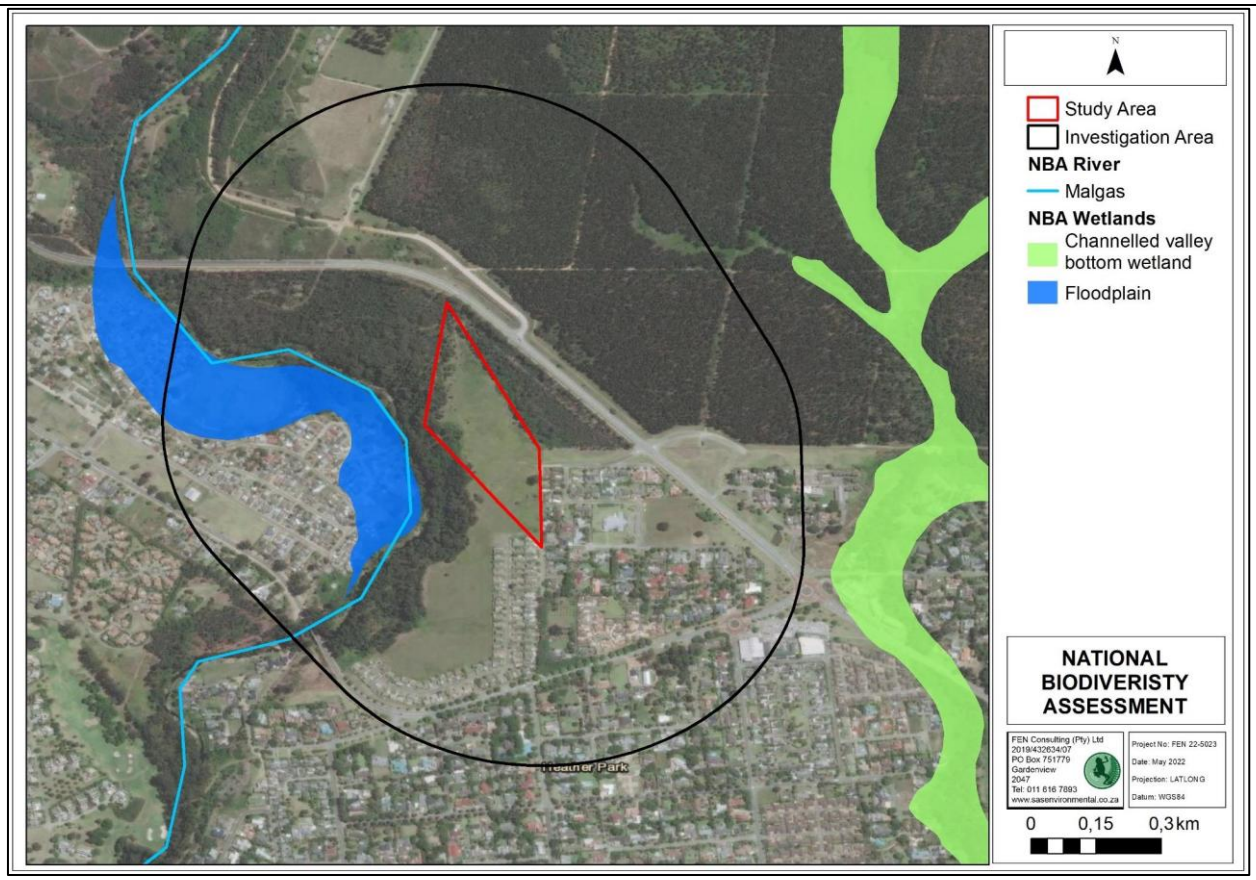


**Figure 14: Wetlands identified to be associated with the study and investigation areas, as identified by the National Biodiversity Assessment (2018).**

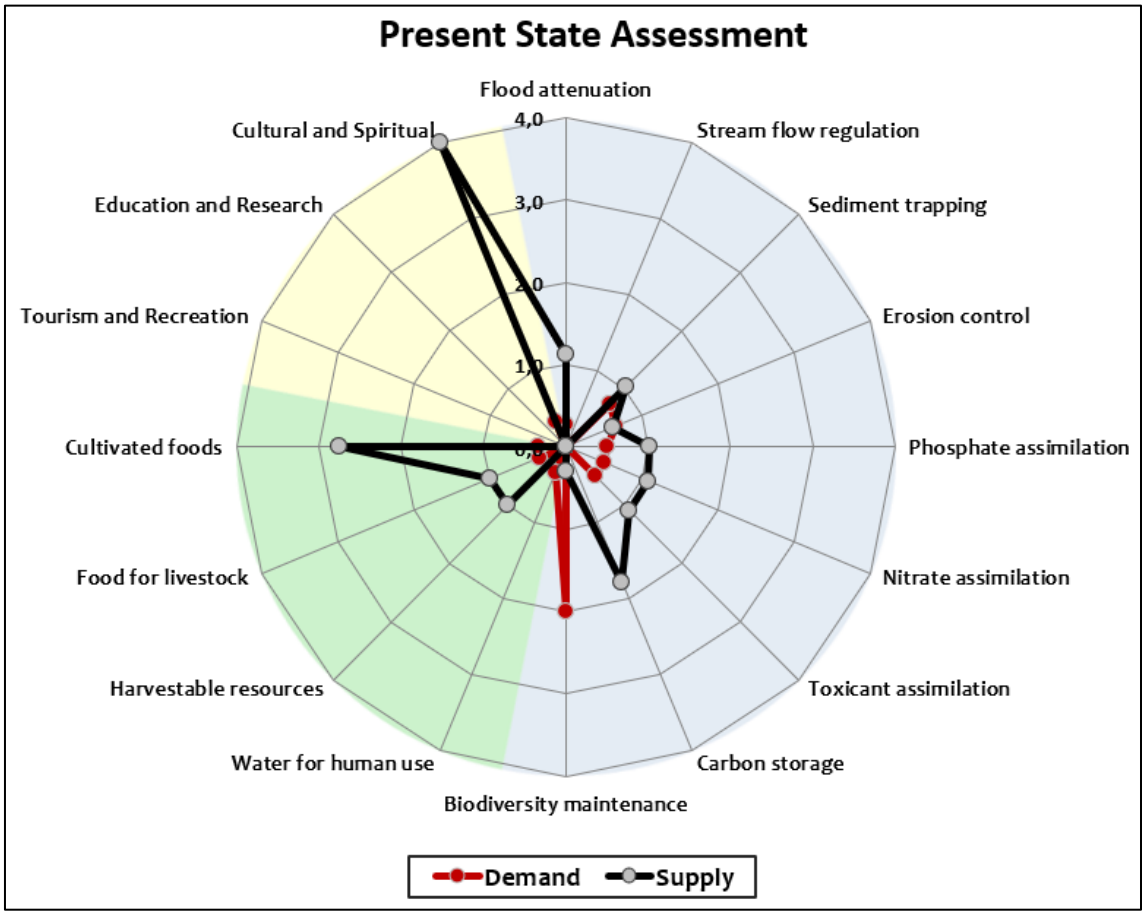


**Figure 15: Ecological & socio-cultural service provision graph.**

**Figure 16: The study area (red dashed line) is located upgradient and east of the river, as there is a steep westerly facing slope between the study area and the river (yellow arrow).**

**Figure 17: The understory of the riparian marginal zone is invaded by a variety of alien shrubs and litter was also noted in and along the active channel.**

**Index of Habitat Integrity (IHI) Category: D (Largely modified)**

Due to catchment land changes, specifically the surrounding urban developments (Blanco) and forestry developments, significant alteration to the vegetation composition and hydrological regime of the river is evident. This has resulted in the overall degradation of the system, including impacting on ecosystem service delivery, and has reduced the ecological sensitivity thereof.

**Ecoservice Provisioning: Moderately high to very low (indicator dependent)**

The river was calculated to have an overall low to very low importance of providing ecosystem services. This can mainly be attributed to the changing of the catchment land uses which have impacted on the ability of the river to deliver a variety of services. Due to the Blanco community located along the western embankment of the river, the river is considered of moderately high importance for cultural services and cultivated food. Due to the modified condition of the river very low regulating and supporting services are delivered.

**Ecosystem Importance and Sensitivity (EIS) Category: Moderate to High**

This river is considered of moderate ecological importance on a landscape scale, primarily due to the protection level of the wetland vegetation type it is associated with, as well as the river partially classified as a CBA 1 by the WCBSP (2017, Figure 18). Considering the overall ecological state of the river, it is not considered to be sensitive to changes in the landscape and water quality impacts. This can be prescribed to the already transformed landscape in which the river is located.

**Recommended Ecological Category (REC): Category D (Maintain)**
**(Best Attainable State) BAS: Category D (Largely modified)**
**(Recommended Management Objective) RMO: Maintain**

The outcome of the RMO indicates that the PES of the river must be maintained at a Category D (largely modified). Although the development will be located outside the delineated extent of the river, considering the slope along the eastern embankment of the river and the study area, indirect impacts (such as sediment laden runoff into the river from the development) are deemed likely. Should appropriate mitigation measure be applied during the construction phase, and the development improve the buffer zone surrounding the river through the removal of alien and invasive plants (AIPs), the RMO, BAS and REC can be maintained.

## 3. Coastal Environment

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

## 4. Biodiversity

| | | | |
|---|---|---|---|
| 4.1. | Were specialist studies conducted? | **YES** | NO |
| 4.2. | Provide the name and/or company who conducted the specialist studies. | | |

Robyn Phillips of Cossypha Ecological conducted the Terrestrial Biodiversity and Terrestrial Animal Species Assessment.
Report attached as Appendix G3.

Dr David J. McDonald of Bergwind Botanical Surveys & Tours conducted the Botanical Assessment.
Report attached as Appendix G1.

| 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. |
|---|---|

**Vegetation map:** A product of The Vegetation of South Africa, Lesotho and Swaziland (VEGMAP) (Mucina & Rutherford, 2006). The South African National Biodiversity Institute (SANBI) has updated the VEGMAP (2018). These shapefiles were used. In addition, the National Web-based Environmental Screening Tool was applied to determine the Relative Plant Species Theme Sensitivity as is required of botanical specialists.

The site is mapped as Garden Route Shale Fynbos which is classified as Endangered (Ecosystem Threat Status, 2016).

***The vegetation of Erf 19374,*** *as described by Dr McDonald:*

Along the north-eastern boundary is a line of Eucalyptus trees (*Eucalyptus cladocalyx* or sugar gum). The trees have spread westwards onto the erf, and it is no longer a line but a grove. Blackwood (*Acacia melanoxylon*) is found in amongst the eucalyptus trees. Apart from the gum trees and the invasive black wattle (*Acacia mearnsii*) forming dense stands in the northern sector near the Malgas River and that extend southwards to the southern extreme of the erf, the vegetation is mainly a mix of exotic and indigenous grasses. These grasses form a dense sward in the central and southeast part of the erf and are punctuated by other herbaceous and shrub species, mainly exotics. The site is thus relatively open apart from the densely wooded areas, that are mostly along the boundaries. The shade-loving grass, *Setaria megaphylla*, is prominent under the dense alien invasive trees, together with *Pennisetum clandestinum* (Kikuyu grass). Please refer to the botanical assessment attached as Appendix G1 for a list of recorded plant species on the property.

According to the botanical specialist, Dr David J. McDonald, no Red List species (i.e., species of conservation concern [SCC]) (sensu Raimondo et al. 2009) were found on the site. The erf has no original fynbos left with a very low probability of it ever being restored. Therefore, although it falls within an area classified as 'endangered' ecosystem, whether the site is conserved or developed would make no difference to the national conservation target for Garden Route Shale Fynbos.

**Ecosystem threat status:** Informed by (1) The National List of Threatened Terrestrial Ecosystems (Government Gazette, 2011), (2) The Western Cape State of Biodiversity 2017 Report (Turner, 2017), and (3) The National Biodiversity Assessment (2018)(SANBI, 2019).

The **Ecosystem Threat Status** is Endangered.

**Biodiversity planning:** The 2017 Western Cape Biodiversity Spatial Plan (CapeNature, 2017) GIS (Geographical Information System) shapefiles for the George Municipality is important for determining the conservation importance of the designated habitat. Ground-truthing is an essential component in terms of determining the habitat condition.

**Important species:** The presence or absence of threatened (i.e., species of conservation concern) and ecologically important species informs the ecological condition and sensitivity of the site. The latest conservation status of species is checked in the Red List of South African Plants (Raimondo et al. 2009) (www.redlist.sanbi.org).

**Site boundary:** these and other resource layers were used to define the site boundary and to compile several maps. This information is available on the CapeFarmMapper website (Department of Agriculture: gis.elsenberg.com).

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

The 2017 WCBSP Handbook (Pool-Stanvliet et al., 2017) distinguishes between the various conservation planning categories. Critical Biodiversity Areas are habitats with high biodiversity and ecological value. Such areas include those that are likely to be in a natural condition (CBA 1) and those that are potentially degraded or represent secondary vegetation (CBA 2). Ecological Support Areas are not essential for meeting biodiversity targets but play an important role in supporting the functioning of Protected Areas or CBAs and are often vital for delivering ecosystem services. A distinction is made between ESAs that are still likely to be functional (i.e., in a natural, near natural or moderately degraded condition; (ESA 1) and Ecological Support Areas that are severely degraded, or have no natural cover remaining, and therefore require restoration (ESA 2). Other Natural Area (ONA) sites are not currently identified as a priority but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although not prioritised, they are still an important part of the natural ecosystem.

| 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. |
|---|---|

According to the Western Cape Biodiversity Sector Plan (WCBSP), the central portion of the site is classified as Critical Biodiversity Area (CBA) 2 Terrestrial: Degraded, with the extreme western corner, which comes into proximity to the Malgas River, falling within an area classified as CBA1: Terrestrial. The Malgas River, which occurs just to the west of the site is classified as CBA1: Aquatic (Figure 18).

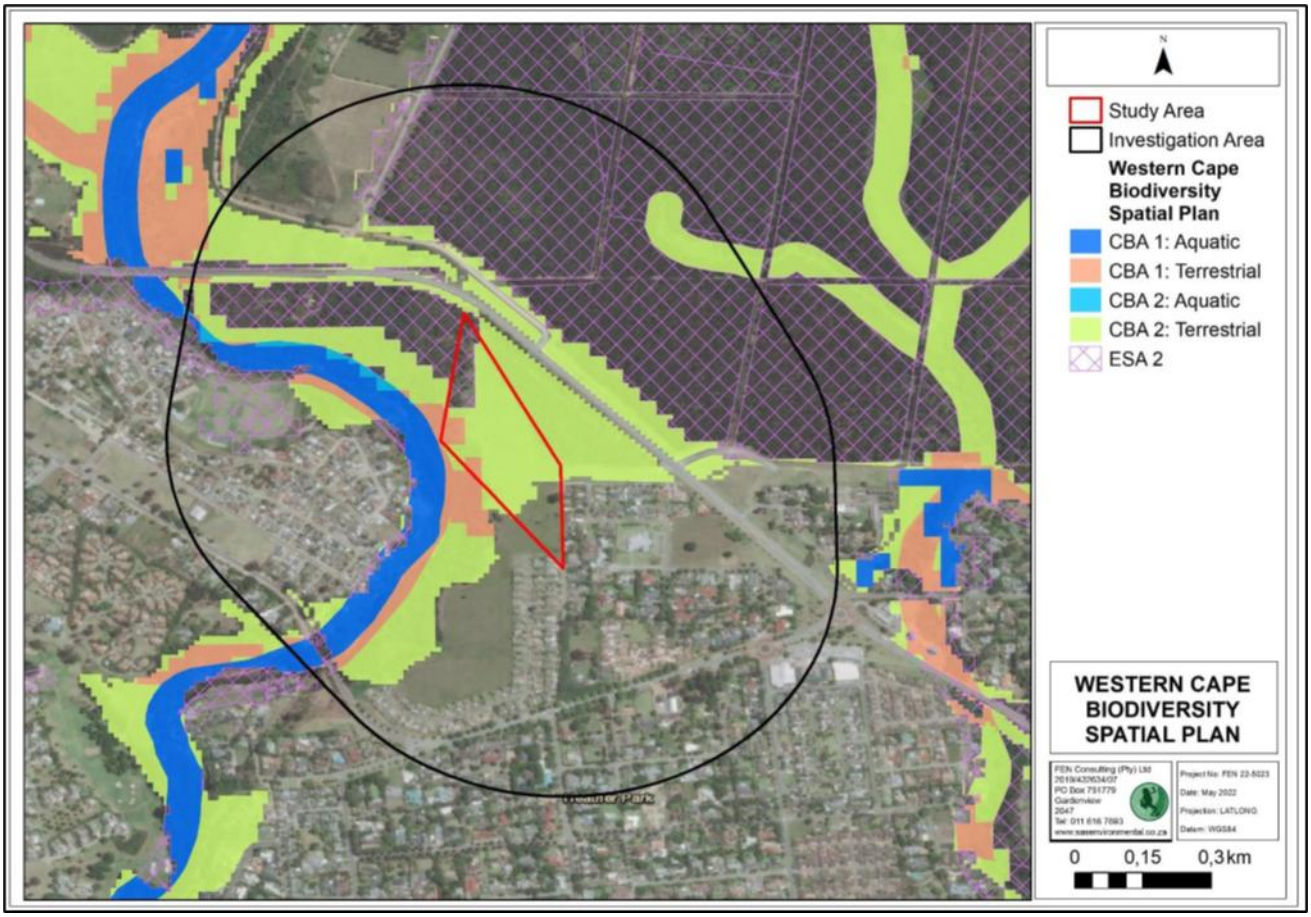


**Figure 18: Areas of importance associated with the study and investigation areas, as identified by the Western Cape Biodiversity Spatial Plan (2017).**

According to the WCBSP, CBA2: Degraded are sites in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. These should be maintained in a natural or near-natural state, with no further loss of habitat. Degraded areas should be rehabilitated. CBAs are sites in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. These should be maintained in a natural or near-natural state, with no further loss of natural habitat, and only low-impact, biodiversity-sensitive land uses are appropriate.

A strip of the north-western boundary of the site falls within an area classified as Ecological Support Area (ESA) 2: Restore from plantation or high-density Invasive Alien Plants (IAP) due to the proximity to the Malgas River. ESAs are not essential for meeting biodiversity targets, but they play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services. According to the WCBSP, they should be restored and/or managed to minimise impact on ecological processes and ecological infrastructure functioning, especially soil and water-related services, and to allow for faunal movement (Pool-Stanvliet et al., 2017).

From a National Freshwater Ecosystem Priority Areas (NFEPA) perspective, the site falls within the George and Outeniqua Strategic Water Source Area (SWSA), which supplies George, Oudtshoorn, and the Garden Route area with water. The main rivers that flow from this SWSA include the Groot Brak River and Olifants River. The site falls within the Gouritz National Water Management Area (WMA) and within the Coastal Gouritz Sub-WMA. The site falls on the east bank of the Malgas River, and other NFEPA features that occur in the vicinity includes a nonperennial drainage line associated with the Rooi River situated approximately 390 m to the northeast (Nel et al., 2011; FEN Consulting, 2022). No wetlands or drainage lines fall within the boundaries of the site (FEN Consulting, 2022).

Overall, the site (and immediate surrounds) displays a low sensitivity from a terrestrial biodiversity and faunal perspective. The site is largely in a modified state due to previous land use practices (historical clearing for cultivation) and subsequent disturbances to the site. There is little to no indigenous vegetation remaining and the site is bordered by dense stands of alien trees. The Malgas River on the western border of the site is also invaded with alien vegetation (mostly Eucalyptus trees) and is in a degraded state. The habitat for fauna is of poor quality and likely only supports generalist species. The site has limited use by fauna and no animal SCC are expected to occur on the site.

In terms of regional biodiversity, the site is relatively small, and it is evident both from the historical satellite imagery and the site visit that the site is in a modified state. The site is therefore not considered a representative portion of the vegetation type or ecosystem and is not considered important for reaching biodiversity targets due to the small size. The site is therefore considered to be of low importance from a terrestrial biodiversity perspective. The proximity of the site to the Malgas River is however a point of consideration and important ecological processes still exist even though the river is in a degraded state. The maintenance of a conservation buffer is critical for minimising impacts on the river, and maintaining ecological connectivity, especially the extreme western corner of the site.

According to the botanical specialist, however, the 'disturbance footprint' falls partly in a CBA1 area and partly in a CBA2 area. Observations in the field do not support this classification at all. The site is Transformed and as stated above, there is a Very Low probability of ever being able to reverse the transformation to natural Garden Route Shale Fynbos.

| 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. |
|---|---|

In terms of Protected Areas (PA), the site does not fall within a protected area. However, the site falls within the Garden Route Biosphere Reserve and falls within the Transition Zones associated with the George urban area. The Transition Zone is usually the largest part of the biosphere reserve and is where the greatest development activity is allowed, promoting economic and human development that is socio-culturally and ecologically sustainable. The Core Zone comprises a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species, and genetic diversity, while the Buffer Zone (usually surrounding the Core Zone) is managed to support the conservation objectives of the Core Zone (UNESCO, 2022).

Other PAs occurring in the vicinity include the Witfontein Nature Reserve ~2.4 km to the north of the site, and the Van Kervel Local Authority Nature Reserve, and the Katrivier Nature Reserve ~3 km and ~4.3 km to the east of the site respectively. The Outeniqua Mountains Important Bird Area (IBA) falls just to the north of the site and extends in a band ~140 km long and across the Outeniqua Mountains incorporating the Witfontein Nature Reserve, Garden Route National Park, and many other PAs in the region.

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

The terrestrial ecologist reported that very little faunal activity was observed during the site visit. The only activity observed included small passerine birds such as sparrows, cisticolas, and waxbills. The habitat on the site is generally of poor quality and would provide cover for generalist small mammal, bird, and reptile species. The site is disturbed on a regular basis so it's highly unlikely that the available habitat would sustain any significant faunal populations, especially SCC.

## 5. Geographical Aspects

| Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development. |
|---|

The study area is situated on flat, higher lying ground above the Malgas River that occurs just to the west of the site. The extreme western corner of the site drops down steeply to the river. Otherwise, the site is surrounded by commercial plantations and the N9 road to the north, and residential areas of George to the west and south. The site and immediate surrounds are considered modified and disturbed with very little natural habitat remaining. As was found by the aquatic assessment (FEN Consulting, 2022), the Malgas River is highly infested with alien vegetation and in a degraded state.

## 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. | | |

Ron Martin from Ron Martin Heritage Consultancy.
Report attached as Appendix G4.

| 6.3. | Explain how areas that contain sensitive heritage resources have influenced the proposed development. |
|---|---|

The site has intrinsic value in terms of its historical background particularly in terms of its social history.

The site is where the historic settlement of Preto was established, first occupied by freed slaves and Khoekhoen from 1833 onward, then formalized into a settlement c1860, Subsequent generations of people of colour occupied the site until the 1980s when they were evidently forced to sell the site and vacate as a result of the land being incorporated into Heather Park, a white group area. A land restitution process was initiated in 1995 but was ultimately unsuccessful.

This history is the strongest heritage indicator for the site.

Two public meetings were help with descendant communities of the Preto settlement and a third possible association; that of the WW2 George Aerodrome, was identified. Through ongoing engagement with the descendant community and through additional research, this report concludes that the site has a direct tangible link to the Preto settlement as well as associative significances to the settlement of Blanco, where the displaced community was moved to, and the aerodrome in terms of its proximity and perceived secondary uses (movement patterns, etc), a significance which does not apply anymore as the settlements had disappeared. The memory, however, remains and must be celebrated through symbolic representation of this memory.

The only potential other tangible heritage indicator was its limited aesthetic value relating to its sense of place provided by the treeline along the river and its associated floodplain. No design informants were proposed in this regard, as the site falls outside the 1:100 year flood-line and the proposed subdivision plan already responds to the tree line, which abuts the sensitive area.

**RECOMMENDATIONS**

Based on the content and findings of this report, it is recommended in terms of Section 38(8) of the National Heritage Resources Act, that Heritage Western Cape:

- Endorse this report as having complied with the provisions of Section 38(3) of the Act.
- Recommend to the Department of Environmental Affairs & Development Planning (DEA&DP) that the proposed rezoning of Erf 19374, George, be approved, and
- That the proposed layout plan for the new development, be approved.

The only condition should be that a tangible representation of the memory associated with Preto be incorporated, through a naming exercise, either of the streets or the development itself, to be initiated. This could be done in collaboration with the George Museum or the George Heritage Trust, in consultation with the community.

## 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. |
|---|

**Heritage Statement**

Cultural significance is defined in the NHRA as "aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological significance" [Section 2(vi)].

A heritage resource is defined as "any place or object of cultural significance" [Section 26(xvi)]. In terms of these definitions, the study area is assessed as follows:

*Aesthetic/Architectural Significance*

The study area has no architectural value. Neither period structures nor ruins occur visibly on the site. The existing ruins on the south-eastern portion of the site date from c1990s.

The study area does possess some, albeit very limited aesthetic value relating to its rural/peri-urban setting and associated cultural landscape, including its mature treeline along the Malgas River. These will have some screening value of the development from Blanco and vicinity.

*Historical Significance*

The study area has important historical value, specifically as it was the site of the Preto settlement. It also has some historical associations to the communities of Blanco and Watsondorp, as well as the WW2 George Aerodrome in terms of its general history and proximity.

*Scientific/Technological Significance*

The study area has no scientific significance.
Site inspections coupled with available documentary evidence and oral accounts have revealed no instances of historic irrigation watercourses/furrows on the site.
The Archaeological Impact Assessment by Jonathan Kaplan dated October 2022 finds an isolated, modified, MSA quartzite chunk was recorded alongside a soil test pit in the northern portion of the site.
It recommends that the housing development on Erf 19374 in George is unlikely to impact on important pre-colonial archaeological heritage resources.

*Social/Spiritual/Linguistic Significance*

The subject property was the site of the Preto settlement and has a strong association with the neighbouring Watsondorp and Blanco/Malgashoek communities.

The significance of this value applies to its location and proximity.

The Heritage Impact Assessment then concludes and recommends the following:

A housing development on Erf 19374 in George is unlikely to impact on important pre-colonial archaeological heritage resources.
Therefore, there are no objections to the development proceeding.
Excavations for building foundations and services may expose a few isolated ESA and MSA heritage resources below the cover sands.

Recommendations:
Regarding a proposed residential housing development on Erf 19374 in George, the following recommendations are made:
1. No archaeological mitigation is required.
2. No monitoring is required
3. If any unmarked human remains are uncovered or exposed during construction excavations, these must be immediately reported to the heritage consultant. Human remains must not be disturbed until inspected by a professional archaeologist.

## 8. Socio/Economic Aspects

| 8.1. | Describe the existing social and economic characteristics of the community in the vicinity of the proposed site. |
|---|---|

The site is located between the residential areas of Blanco to the west and Heather Park to the south, and about 3 km northwest of George Central, within the George Local Municipality, Garden Route District, West Cape Province.

**George Municipality's Economic Overview**
In 2019, the economy of George was valued at R18.556 billion (current prices) and employed 82 939 people. Historical trends between 2015 and 2019 indicate that the municipal area realised an average annual growth rate of 1.5 per cent, which can mostly be attributed to the tertiary sector that registered a positive annual growth rate of 2.1 per cent.

**Unemployment**
George (14.2 per cent) has the third lowest unemployment rate in the Garden Route District and is below the district (15.4 per cent) and Western Cape (18.9 per cent) unemployment rates. Unemployment has been volatile from 2010-2020. After jumping from 13.8 per cent in 2018 to 14.7 per cent per cent in 2019, it declined slightly to 14.2 per cent in 2020. This was largely due to an increase in the discouraged work seekers and not economically active population. Unfortunately, most job losses affected low and semi-skilled workers who are more vulnerable to living in poverty during times of economic decline.

| 8.2. | Explain the socio-economic value/contribution of the proposed development. |
|---|---|

According to the Socio-Economic Impact Assessment, Appendix G12:

**CAPEX (Capital expenditure)**
A capital injection (CAPEX) will be projected for each of the development activities. These include direct and indirect economic impacts. The construction of the Urban Country Estate Residential Development will have the following estimated impacts on the economy in the study area:

- Additional new business sales
- Additional employment (direct and indirect) The total capital turn-over in the construction phase of the Urban Country Estate Residential Development is estimated at R 276 000 000. excl

**Additional new business sales**
The construction of the Urban Country Estate Residential Development will lead to the expansion of business sales for existing business located within the area. For example, materials used in construction such as Pipes, cabling, bricks, concrete, Aluminium windows and doors, roof sheeting, sanitary ware etc. will all be purchased, as well as services such as Town planners, land surveyors, lawyers, real estate agents, engineers, plumbers, electricians etc. These changes will be measured in terms of new business sales, i.e. new sales that will be generated in the economy as a direct result of the capital investment in the development. Business sales will be generated because of capital investment by the developer for each of the development activities which is said to take place as mentioned above.

**Additional employment**
Constructing the proposed Urban Country Estate Residential Development will result in the creation of direct jobs for the construction of various facilities. Indirect jobs will also be created in industries that provide goods, materials, and services. For example, an increased demand for goods used in the construction sector will arise from businesses and industries related to construction. This could lead to more jobs being created in these businesses to increase their output. The number of jobs created during the development phase, due to the capital investment by the developers of the Urban Country Estate Residential Development.

**Summary of Estimated capital expenditure – Construction phase**
This section provides a summary of the impact during the construction phase (capital expenditure) of the development.

TOTAL PROJECT DEVELOPMENT COST (INCLUDING VAT) R 317 283 000

- Housing Development Turnover R 177 283 000
- Apartment Development Turnover R 82 000 000

TOTAL LOCAL MATERIAL AND LABOUR RESOURCES (INCLUDING VAT) R 158 641 500.

**Operational expenditures**
It is generally understood that after the construction of a development or facility, ongoing economic impacts (expenditure and output) will occur once economic activities on site commence. This expenditure expands markets for goods and services, increases the labour market, and acts as an impetus for new commercial development.
market demand in the affected sectors. It is estimated that the Urban Country Estate Residential Development will generate this demand over several years. The demand will be operational, as well as direct, indirect, and induced.
The ongoing impacts can be measured by new business output in the area (turnover), additional employment, and the resulting increase in GGP contribution. The calculated impact will indicate the potential.

The employment opportunities, which will be generated will be permanent jobs in the following categories:

- Management
- Professional
- Sales and Marketing
- Technical
- Administrative
- Maintenance

Municipal Rates and Taxes Municipalities are responsible for providing basic services to everyone living inside their jurisdiction. These services include:
• Water supply
• Sewerage management
• Refuse removal.
• Electrical supply
• Building and maintaining infrastructure
• Storm water drainage
• Street lighting
• Municipal parks and recreation.

In order to provide these services, the Municipality charges residents service charges, rates and levies. There are different kinds of rates, including:
• Property Rates
• Water
• Electricity
• Sewage
• Refuse removal

Water supply
Water will be supplied by the municipality and water meters will be installed. Home owners will be responsible for their water accounts. Sectional title holders will have shared water bills managed by the HOA.

Electrical supply
The electricity will be supplied by the Local Municipality. Each individual house will have a pre-paid meter installed.

Property rates
Property rates are:
• Taxes on the ownership of property (land and buildings)
• Based on the market value of the property
• Funds are used for various services provided by municipalities

Property rates are paid by owners of all types of real property, including commercial, industrial, residential, agricultural, and government properties. Property rates are based on the municipal value of a property, which is set, collected, and used locally. This means that charges vary from area to area, and the money collected is spent within that municipal area. The municipal value of a property is calculated by considering its market value, which includes both the land and improvements. The Residential Development will increase the total rates and levies paid to the local municipality, thereby increasing the direct income of the local government.

Estimated operating expenditure – Operational phase
Potential Rates and Taxes per average household:
Houses – R1200 (Average per house hold)
Apartments – R900 (Average per house hold)
70 X R1200 = R84 000
40 X R900 = R36 000
Potential municipal income per month R120 000
Potential municipal income per annum R 1 440 000
Potential service charges ( Electricity, Rates and taxes)
Houses – R3400 (Average per house hold)
Apartments – R2400 (Average per house hold)
70 X R3400 = R238 000
40 X R2380 = R95 200
Potential municipal income per month R 333 200
Potential municipal income per annum R 1 380 400
Average disposable income per house hold – R 18 000

110 New house holds X R 18000 = R 1 980 000 potential income per month injected into George economy.

**Conclusion**
Erven 6156, 6179, and Erven 19372 & 19373 George (unregistered portions of Remainder Erf 6182 George) are located within the urban edge and an intensification area, as shown in the George Municipal Spatial Development Framework (2019).

Therefore, this proposed land-use application for the subject erven is consistent with all relevant considerations as prescribed by planning legislation. It does not conflict with the overall spatial objectives for the area. It also takes neighbouring properties into account and is expected to enhance the character of the area.

The economic impact assessment demonstrates that the Urban Country Estate Residential Development will contribute to the local economy of George Municipality in the following ways:

- A new injection of funds during the construction phase, with an additional monthly injection during the commercialization phase of the proposed development.
- The unemployment rate will decrease, as an additional 410 jobs will be created during the construction phase (4-5 years), and 36 permanent job opportunities will be created during the commercialization phase.

While the job opportunities during the construction phase will be temporary, the jobs created during the commercialization phase will be permanent.
In addition, the assessment shows that the proposed residential development:

- Will positively impact the property market in the targeted segments.
- Complies with the planning principles of SPLUMA. (Refer to Annexure A of the Socio-Economic Impact Assessment)
- Will attract new residents to George with economic skills that will contribute to the local economy and job creation.

| 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 will bring added value to the area by erecting new houses of value and an estate that will uplift the value of surrounding houses.

| 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 will not impact on people's well-being. Noise and dust may be generated during the construction phase, but it will be very temporary and can be mitigated by implementing the EMPr. Please refer to Appendix G11 for the Visual Impact Assessment.

## 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.

The preferred and only property and site alternative is Erf 19374 in Heather Park, George. It is located on the east bank of the Malgas River and is surrounded by residential areas to the east, south, and west. The national road N9 borders the site to the north, beyond which, lies commercial forestry plantations. The broader landscape to the east, south, and west comprises settlement, golf courses, and industry associated with George, while farmlands comprised of cultivated fields and pastures occur further to the west. The Outeniqua Mountains occur further to the north, with the Witfontein Nature Reserve situated approximately 2.4 km to the north of the site. The site is a vacant portion of land with no current anthropogenic land use, which has been cleared of vegetation at various intervals in the past and now comprises mostly of weedy and alien vegetation and is bordered by

alien trees.

The geographical position is approximately 33˚ 56' latitude and 22˚ 25' longitude.

The Site is characterised by a gentle sloping landscape across the site that is surrounded by tree forest on the northern eastern, western, and southwestern sides of the site. The site consists of mostly grass land and small brush, with isolated small trees scattered across the site. A steep drop-off slope is found along the Southwestern side of the site that slopes towards the Malgas River that is approximately 40 m West of the Site boundary line. This slope provides access to a lower elevation area.

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

N/A – No property or site alternatives were investigated. Urban Country Estate (Pty) Ltd has acquired Erf 19374 (ERF 6182; ERF 6179; ERF 6156) and wishes to develop on this property.

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

N/A – A site selection matrix was not used since only one site exists.

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

N/A – The full extent of the property is the preferred site. No other properties or sites were investigated.

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

The proponent owns this property and wishes to develop there.

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

**Positive impacts:**

- The site is overgrown with alien invasive vegetation. Everything will be cleared to allow for the construction of the residential estate. Some open spaces will be maintained with indigenous vegetation and alien species will be controlled and removed in these areas.
- Transformation of an already disturbed and transformed area.
- Utilising vacant land within the George Urban Edge.
- Capital contributions to the municipality which contributes to the upkeep of George.
- Capital influx for service and municipal providers of the Construction and Operational Phases.
- Increased tax and levies income for municipality.
- Housing in an expanding city
- Local Labour

**Negative impacts:**

- Transformation of an undeveloped area to a developed area.
- Temporary negative construction phase impacts (noise, visual, potential dust).
- Additional minor pressure on bulk municipal services.

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

Provide a description of the preferred activity alternative.

Housing is Proposed (residential development).

The property is 56 345.8 $m^2$ in extent and approx. 56 337 $m^2$ (5.6 ha) will be cleared for the proposed development.

Provide a description of any other activity alternatives investigated.

N/A – No activity alternative was investigated as no alternative activity will deliver the preferred outcome which is to develop housing units and roads on the property.

No other activity alternative was considered as housing is considered suitable land use for this site.

Provide a motivation for the preferred activity alternative.

- The site is included in the George Urban Edge and is therefore earmarked for residential development.

- The site has nearby connection point for bulk services (north-eastern corner of the property)
- The site and proposal is in line with municipal planning and the surround character of the site.

Provide a detailed motivation if no activity alternatives exist.

N/A

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

**Positive impacts:**

- The proposed development will optimise vacant land available within an urban area.
- The proposed land development will be in character with the surrounding area and will provide additional residential opportunities in a popular neighbourhood.
- Prevention of urban sprawl.

**Negative impacts:**

- Potential construction related nuisances (i.e., noise, visual disturbance, dust, heavy vehicles on the road). This will only be an issue during the construction phase.
- Although alien invasive vegetation will be removed, the whole site will not be rehabilitated only the proposed open (green) spaces.
- Stormwater runoff if not managed properly.

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

Provide a description of the **preferred design or layout alternative.**

## Housing Alternative Layout 2 (preferred)

The preferred layout is illustrated in the site development plan below in figure 19. The layout makes prevision for **110 units** in total which will be divided in group housing and flats. The layout also include private open spaces and roads.

The development is described in Section B 4.4.

This layout includes a section of double storey apartments (flats) which provide more housing units than the original layout (Layout 1). The total development area will be 56 336 m$^2$.

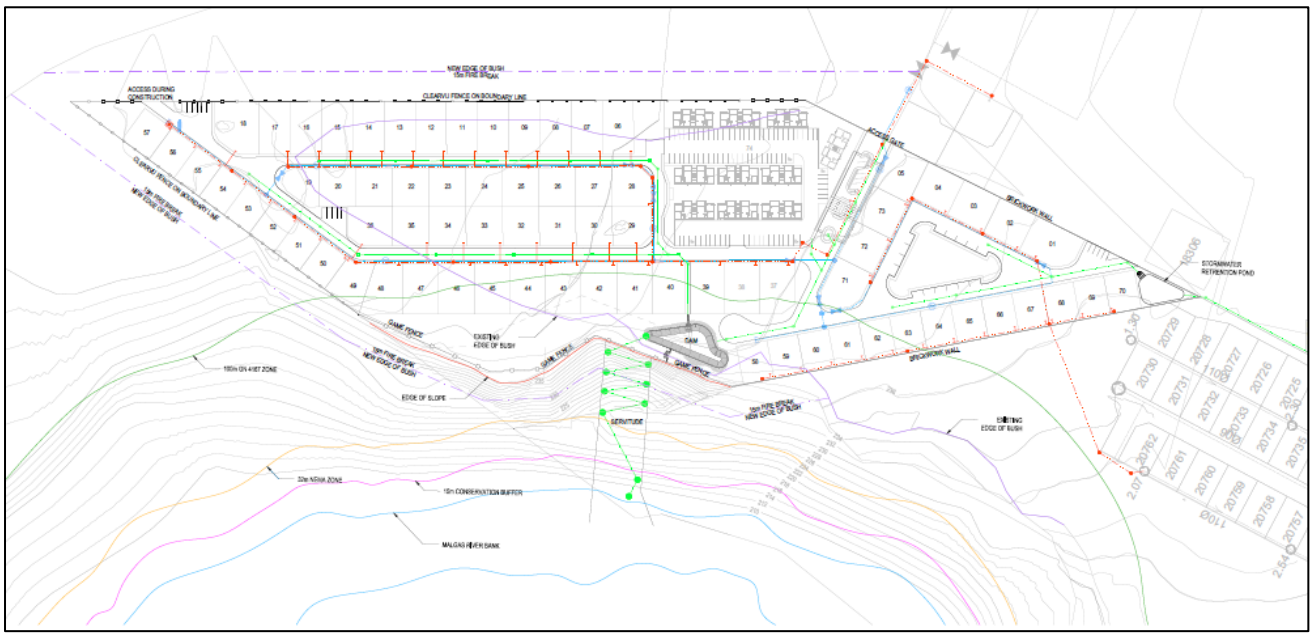

**Figure 19: Site Development Plan – Layout 2 (preferred)**

**Stormwater structures alternative layout 2**

The proposed stormwater system and associated structures are described in Section B 4.4.

Discharge of stormwater to Malgas River

The outflow from the chamber will be position at a level just below the inlet in order to retain most of the flow inside the chamber and to slow the discharge velocity to acceptable municipal standards. The outflow will be through a pipe that will daylight into a headwall unit that is fitted with energy dissipating structures.

This will discharge the water into a series of holding ponds and descending water stairs to carry the stormwater from a higher elevation to a lower elevation into a final holding pond before it overflows onto a gabion mattress and further into the Malgas river.

These stormwater stilling ponds and water staircases will be constructed using ready-mix concrete, gabion stones and retaining blocks filled with concrete. The intention is to follow the natural slopes as far as possible and to cut and fill as little as possible. The final discharge from the lowest stilling pond will be over installed rock filled gabion mattresses to dissipate the water flow.

The embankments will be sloped to a maximum of 40 degrees and will be covered and vegetated using soil saver and retaining logs and indigenous vegetation to establish and stabilize the slopes.

In steeper areas natural timber products will be used to create terraces down the height of the slopes, as shown in Figure 20. The timber that will be used will be that of non-native, alien trees that will be removed from the development site.

The Natural slopes will be vegetated to provide scenic garden settings for residents among the big trees canopy on these created terraces, as depicted in Figure 20.

All this will be done within the confines of the Development perimeter.

The following images are artistic renderings of the proposed holding ponds and descending water stairs.

**Figure 20: Outflow Headwall structure into 1st stilling pond, followed by 1st water stair section to the**

2nd stilling pond.

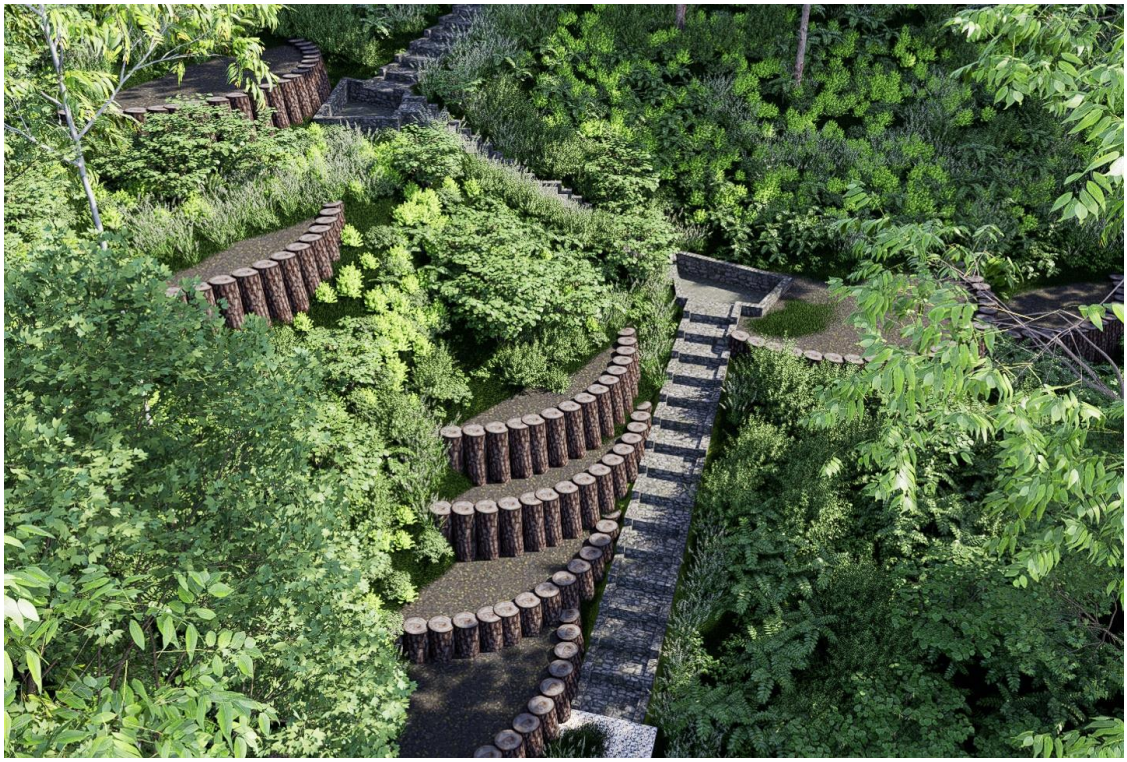

**Figure 21: 2nd stilling pond, followed by 2nd water stair section to the 3rd stilling pond and 3rd water stair section.**

**Figure 22: Elevated top view of the proposed stilling pond and water stair system.**

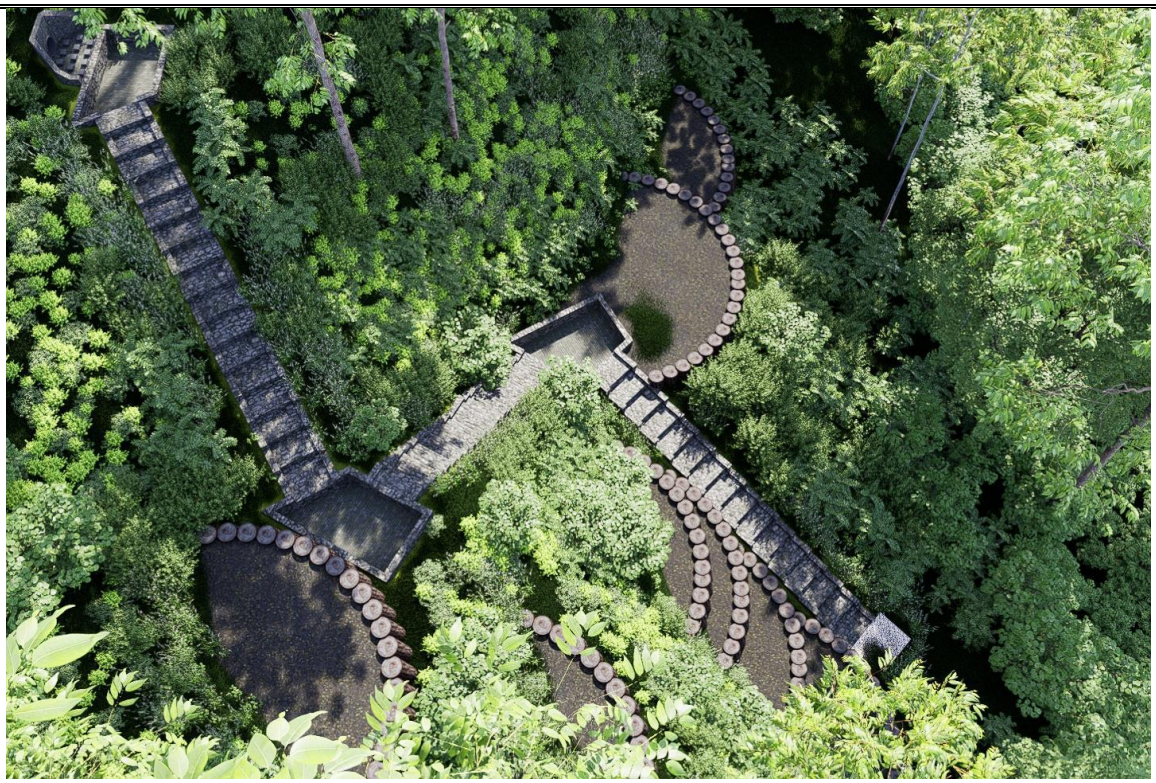

**Figure 23: Elevated top view of the proposed stilling pond and water stair system with discharge over gabion mattress structure at the bottom of the system.**

**Figure 24: Side view of the proposed stilling pond and water stair system with discharge following the natural embankment slopes that will be terraced.**

The freshwater specialist was provided with the stormwater report, and she assessed the potential impacts on the Malgas River.

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

## Housing Alternative Layout 1:

The original layout is illustrated in figure 25. This layout does not include a section for flats/double storey apartments. This layout makes provision for only 93 units in total.

| Item | AVE ERF SIZE | AVE FLOOR SIZE | No of Units |
|---|---|---|---|
| **1.** | 300 m² | 150 m² | 15 |
| **2.** | 280 m² | 125 m² | 8 |
| **3.** | 400 m² | 175 m² | 67 |
| **4.** | 556 m² | 200 m² | 3 |
| | | | **93** |

The original layout (layout 1) was changed to improve the position of the entrance gate as well as to include a section with 44 flats. The inclusion of these units will attract a wider variety of potential buyers. The flats may be more affordable to younger people and big enough for retired people.

Layout 2 is thus more socio-economically beneficial.

**Figure 25: Site Development Plan – Layout 1**

## Stormwater structures alternative layout 1

The first alternative layout considered is illustrated in figure 26 below. This layout includes attenuation ponds from where the water will be released at low velocities into the Malgas River. At the time of this conceptual design, no details were provided as to the manner in which the water would travel from the ponds down the slope into the river. From the illustration in figure 26, the developer planned to have two separate ponds on either side of the green open area.

The EAP recommended a more detailed stormwater plan be compiled. From there alternative layout 2 was developed by the engineer. Although it is also a conceptual plan at this stage, it is preferred over this layout 1 as it will be confined to one area in the western corner of the property and a more detailed plan has been developed for the concept of alternative layout 2.

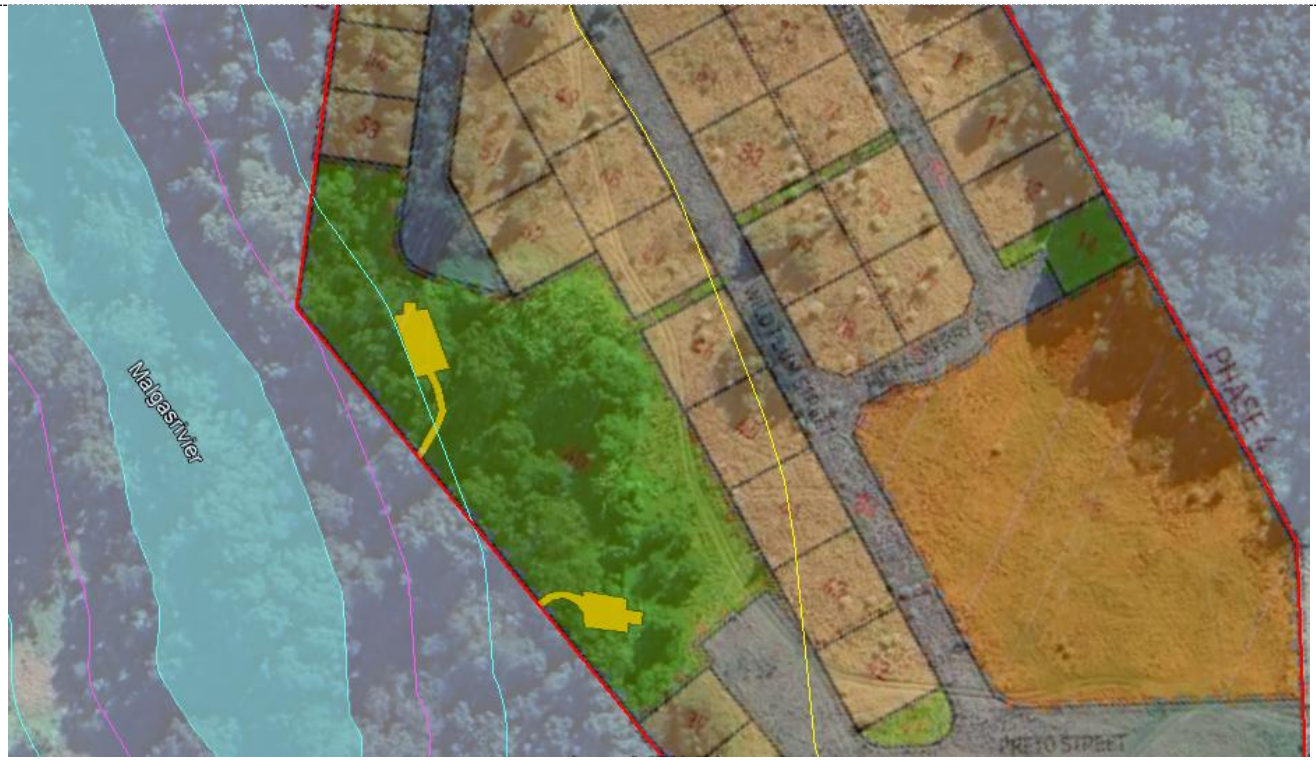


**Figure 26: A conceptual layout plan of the original (alternative 1) stormwater structures in the western corner of the property.**

Provide a motivation for the preferred design or layout alternative.

The **preferred layout (Layout 2)** includes more housing units than the original layout and this increases the housing opportunity of the property.

**Stormwater structure alternative layout 2** is the preferred layout as it has been designed in more detail than layout 1 which had only been a conceptual plan.

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

N/A

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

Both layouts make provision for open spaces which will be cleared of alien invasive vegetation. The green/ parks will contain indigenous botanic gardens with seating/picnic arrangements in tranquil garden settings. The western corner of the site, which slopes down to the Malgas River, is included in these open space areas for both of the layouts.

**Positive impacts:**

- Clearance of alien invasive vegetation and management of open spaces in Operational Phase.
- Open (green spaces) between the river and the construction area.

**Negative impacts:**

- Increased stormwater runoff from hardened surfaces.

**Stormwater structures alternative layouts**

| | Positive | Negative |
|---|---|---|
| **Layout 1** | • Clearance of alien invasive vegetation<br>• Management of stormwater<br>• | • Disturbance of the slope down to the river.<br>• Greater possibility for erosion |
| **Layout 2 (preferred)** | • Clearance of alien invasive vegetation | • Disturbance of the slope down to the river. |

| | | |
|---|---|---|
| | • Management of stormwater<br>• Lesser possibility for erosion | |

| 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:

Water Supply (Appendix G5)

Rainwater harvesting will be standard at each home and throughout the estate. Owners will be encouraged to install water filters and pressurization pumps to connect the tanks within the homes, water reticulation system. An investigation is presently underway by the proponent to determine the feasibility of a central water storage facility at the Flat units. The investigation further is to determine the feasibility of a treatment plant to treat the rainwater to potable standards for self-consumption within the Flat units. A further study is underway to determine the feasibility of recycling the stormwater collected within the estate and the treatment thereof to potables standards for self-consumption within the development. This will reduce the normal residential water demand.

Energy Saving Measures (Appendix G8)

The use of the following equipment will be made mandatory:

- Water and sewage pumps to be supplied with energy efficient motors and motor control.
- Water heating to be done using heat pumps, solar units and/or gas.
- Lighting to make use of LED lamps only.
- Use of motion sensor lighting control.

The use of the following may be considered in due course:

- Photovoltaic systems to allow for completely self-sufficient energy supply.

Provide a description of any other technology alternatives investigated.

Provide a motivation for the preferred technology alternative.

The energy efficient technology used will reduce demand on bulk services.
The development will not be vulnerable to loadshedding.

Provide a detailed motivation if no alternatives exist.

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

Services will be located within the road reserves to prevent additional disturbances of vegetation.

The internal electrical infrastructure design will take into account energy saving technologies which may include load control, the use of energy efficient lighting, the use of alternative means of water heating and inverter type HVAC equipment.

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

Provide a description of the preferred operational alternative.

Residential houses as per the proposed layout 1 is the preferred operational alternative layout however both layout alternatives presented in this report have the same operational outcomes with the numbers of the housing units varying.

The preferred alternative will provide more housing opportunities with greater variety. Additionally, the preferred alternative's greater costs to develop will benefit those involved in providing services, materials and labour.

~~Provide a description of any other operational alternatives investigated.~~

~~Provide a motivation for the preferred operational alternative.~~

~~Provide a detailed motivation if no alternatives exist.~~

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

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

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

The option of not implementing the activity means that the development will not be established and none of the impacts, positive or negative, associated with the construction and operation of the development will be experienced.

Should the proposed development not take place and the site remain as is, the following disadvantages and advantages could be expected:

Potential disadvantages:

- No construction phase employment opportunities would result.
- No project related expenditure would take place; therefore, the anticipated capital investment would not result.
- The property will not contribute to the increase in available housing units.
- The site has already been completely transformed from its natural state. Also, it is unlikely that the ecological functioning of the property would improve substantially as a result of this alternative.

Potential advantages:

- No construction phase: therefore, no potential for any construction related nuisances (i.e. noise, visual disturbance, dust, heavy vehicles on the road, etc.).
- The ecological functioning of the property could be improved, only if the site is rehabilitated (i.e., encouraged to re-vegetate with natural vegetation), all alien vegetation is removed on an ongoing basis and the natural areas are managed in the long term so that the indigenous plant species can return.

In light of the above, the No-Go Alternative is not considered favourable from a socio-economic point of view as no benefit would be gained for the local and district communities. It is unlikely that the developer or current landowner would rehabilitate and manage the site on an ongoing basis, without being able to generate any funds out of the property.

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

No other alternatives were investigated following the assessments of the specialists. The site is heavily disturbed and transformed and according to the specialists, the development will have a low to very low impact on the natural environment of the site.

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

The property is situated within the urban edge of George in a popular neighbourhood. The property has no natural conservation value except for the Malgas River which is situated between two distinct valley side-slopes on the outside and downgradient of the western corner of the property.

## 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).

Areas outside of the development footprint and a reasonable working area should be regarded as No-Go areas.

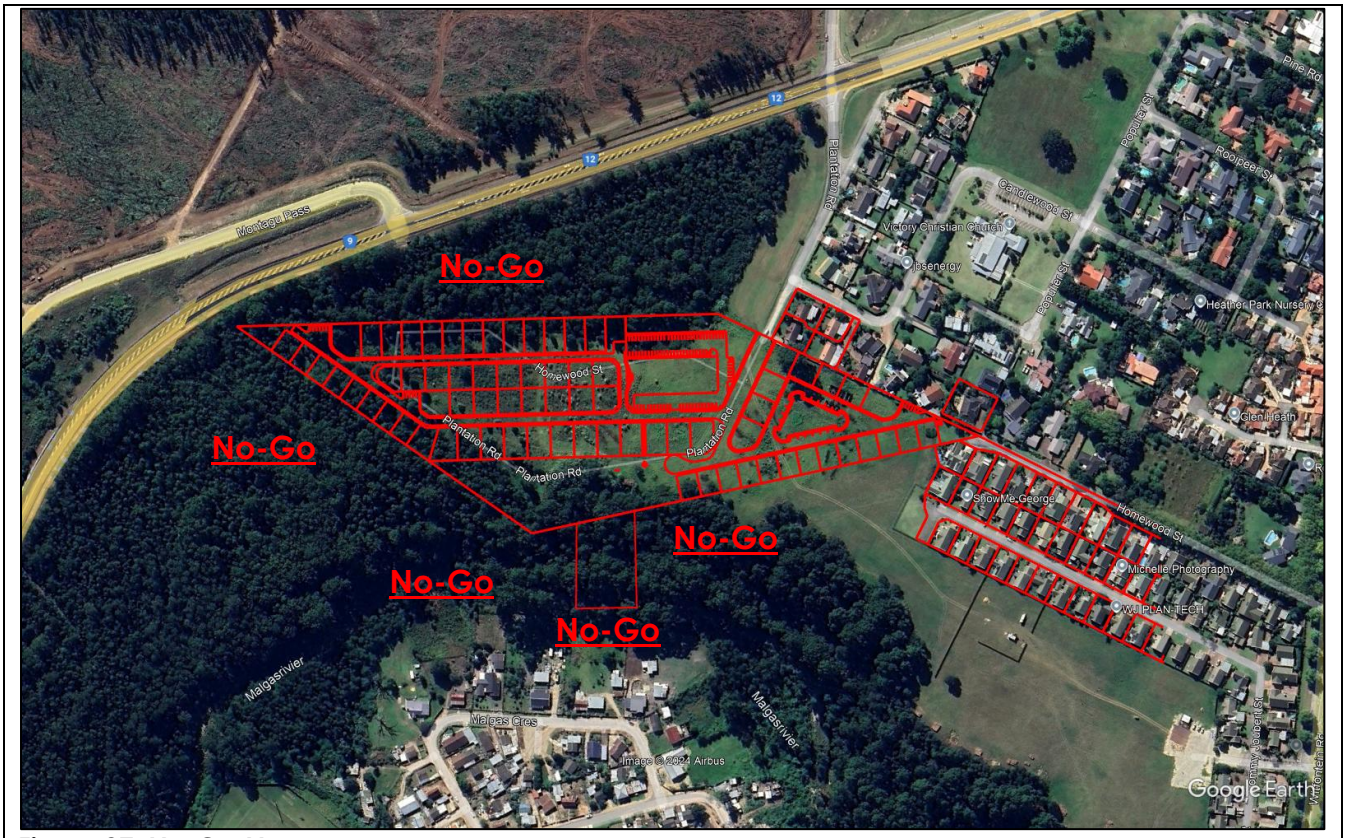


**Figure 27: No-Go Map**

## 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 criteria utilised in this environmental impact assessment is based on, and adapted from, the *Guideline on Impact Significance, Integrated Environmental Management Information Series 5* (Department of Environmental Affairs and Tourism (DEAT), 2002) and the *Guideline 5: Assessment of Alternatives and Impacts in Support of the Environmental Impact Assessment Regulations* (DEAT, 2006).

**Determination of Extent (Scale):**

| | |
|---|---|
| ***Site specific*** | On site or within 100 m of the site boundary, but not beyond the property boundaries. |
| ***Local*** | The impacted area includes the whole or a measurable portion of the site and property, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area. |
| ***Regional*** | The impact would affect the broader region (e.g., neighbouring towns) beyond the boundaries of the adjacent properties. |
| ***National*** | The impact would affect the whole country (if applicable). |

**Determination of Duration:**

| | |
|---|---|
| ***Temporary*** | The impact will be limited to the construction phase. |

| | |
|---|---|
| ***Short term*** | The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 8 months after the completion of the construction phase. |
| ***Medium term*** | The impact will last up to the end of the construction phase, where after it will be entirely negated in a period shorter than 3 years after the completion of construction activities. |
| ***Long term*** | The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter. |
| ***Permanent*** | This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied. |

**Determination of Probability:**

| | |
|---|---|
| ***Improbable*** | The possibility of the impact occurring is very low, due either to the circumstances, design or experience. |
| ***Probable*** | There is a possibility that the impact will occur to the extent that provisions must therefore be made. |
| ***Highly probable*** | It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences. |
| ***Definite*** | The impact will take place regardless of any prevention plans. |

**Determination of Significance (without mitigation):**

| | |
|---|---|
| ***No significance*** | The impact is not substantial and does not require any mitigation action. |
| ***Low*** | The impact is of little importance but may require limited mitigation. |
| ***Medium*** | The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels. |
| ***Medium-High*** | The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels. |
| ***High*** | The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential. |
| ***Very High*** | The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable. |

**Determination of Significance (with mitigation):**

| | |
|---|---|
| ***No significance*** | The impact will be mitigated to the point where it is regarded to be insubstantial. |
| ***Low*** | The impact will be mitigated to the point where it is of limited importance. |
| ***Medium*** | Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the project, such a persistent impact does not constitute a fatal flaw. |
| ***High*** | Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and taken within the overall context of the project, is considered to be a fatal flaw in the project proposal. |

**Determination of Reversibility:**

| | |
|---|---|
| ***Completely Reversible*** | The impact is reversible with implementation of minor mitigation measures |
| ***Partly Reversible*** | The impact is partly reversible but more intense mitigation measures |
| ***Barely Reversible*** | The impact is unlikely to be reversed even with intense mitigation measures |
| ***Irreversible*** | The impact is irreversible, and no mitigation measures exist |

**Determination of Degree to which an Impact can be Mitigated:**

| | |
|---|---|
| ***Can be mitigated*** | The impact is reversible with implementation of minor mitigation measures |
| ***Can be partly mitigated*** | The impact is partly reversible but more intense mitigation measures |
| ***Can be barely mitigated*** | The impact is unlikely to be reversed even with intense mitigation measures |
| ***Not able to mitigate*** | The impact is irreversible, and no mitigation measures exist |

**Determination of Loss of Resources:**

| | |
|---|---|
| ***No loss of resource*** | The impact will not result in the loss of any resources |
| ***Marginal loss of resource*** | The impact will result in marginal loss of resources |
| ***Significant loss of resources*** | The impact will result in significant loss of resources |
| ***Complete loss of resources*** | The impact will result in a complete loss of all resources |

**Determination of Cumulative Impact:**

| | |
|---|---|
| ***Negligible*** | The impact would result in negligible to no cumulative effects |
| ***Low*** | The impact would result in insignificant cumulative effects |
| ***Medium*** | The impact would result in minor cumulative effects |
| ***High*** | The impact would result in significant cumulative effects |

**Determination of Consequence significance:**

| | |
|---|---|
| ***Negligible*** | The impact would result in negligible to no consequences |
| ***Low*** | The impact would result in insignificant consequences |
| ***Medium*** | The impact would result in minor consequences |
| ***High*** | The impact would result in significant consequences |

**Impact Assessment Methodology used by the Aquatic Specialist**

Individual impacts for the construction and operational phase were identified and rated according to criteria which include their intensity, duration, and extent. The ratings were then used to calculate the consequence of the impact which can be either negative or positive as follows:

**Consequence** = type x (intensity + duration + extent)

Where type is either negative (i.e., -1) or positive (i.e., 1). The significance of the impact was then calculated by applying the probability of occurrence to the consequence as follows:

**Significance** = consequence x probability

The criteria and their associated ratings are shown in Table 4.

Table 4: Categorical descriptions for impacts and their associated ratings

| Rating | Intensity | Duration | Extent | Probability |
|---|---|---|---|---|
| 1 | Negligible | Immediate | Very limited | Highly unlikely |
| 2 | Very low | Brief | Limited | Rare |
| 3 | Low | Short term | Local | Unlikely |
| 4 | Moderate | Medium term | Municipal area | Probably |
| 5 | High | Long term | Regional | Likely |
| 6 | Very high | Ongoing | National | Almost certain |
| 7 | Extremely high | Permanent | International | Certain |

Categories assigned to the calculated significance ratings are presented in Table 5.

Table 5: Value ranges for significance ratings, where (-) indicates a negative impact and (+) indicates a positive impact.

| Significance Rating | Range | |
|---|---|---|
| Major (-) | -147 | -109 |
| Moderate (-) | -108 | -73 |
| Minor (-) | -72 | -36 |
| Negligible (-) | -35 | -1 |
| Neutral | 0 | 0 |
| Negligible (+) | 1 | 35 |
| Minor (+) | 36 | 72 |
| Moderate (+) | 73 | 108 |
| Major (+) | 109 | 147 |

Each impact was considered from the perspective of whether losses or gains would be irreversible or result in the irreplaceable loss of biodiversity of ecosystem services. The level of confidence was also determined and rated as low, medium or high (Table 6).

Table 6: Definition of reversibility, irreplaceability and confidence ratings.

| Rating | Reversibility | Irreplaceability | Confidence |
|---|---|---|---|
| Low | Permanent modification, no recovery possible. | No irreparable damage and the resource isn't scarce. | Judgement based on intuition. |
| Medium | Recovery possible with significant intervention. | Irreparable damage but is represented elsewhere. | Based on common sense and general knowledge |
| High | Recovery likely. | Irreparable damage and is not represented elsewhere. | Substantial data supports the assessment |

**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.

## DEVELOPMENT PHASE

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE – CLEARANCE OF VEGETATION**<br>***Please also refer to the impact tables in the Botanical Assessment Report, pg 21 (Appendix G1)** | | | |
| **Potential impact and risk:** | **Loss of Garden Route Shale Fynbos**<br>According to the botanical specialist, the erf has no original fynbos left with a very low probability of it ever being restored. Therefore, although it falls within an area classified as 'endangered' ecosystem, whether the site is conserved or developed would make no difference to the national conservation target for Garden Route Shale Fynbos. | | |
| Nature of impact: | Negative | | Negative |
| Extent and duration of impact: | Local and Long Term | | Local and Long term |
| Consequence of impact or risk: | Loss of vegetation | | *legally incumbent on the landowner to implement an alien invasive plant eradication programme |
| Probability of occurrence: | High | | Definite |
| Degree to which the impact may cause irreplaceable loss of resources: | Very Low | | Low |
| Degree to which the impact can be reversed: | Very Low | | Low |
| Indirect impacts: | None | | The continuation of the growth and spread of alien invasive species. |
| Cumulative impact prior to mitigation: | Very Low Negative | | None |
| Significance rating of impact prior to mitigation (e.g., Low, Medium, Medium-High, High, or Very-High) | **Very Low Negative** | | Low |
| Degree to which the impact can be avoided: | Cannot be avoided | | Low |
| Degree to which the impact can be managed: | Cannot be managed | | Low |
| Degree to which the impact can be mitigated: | Would not be required | | Cannot be mitigated |
| Proposed mitigation: | The receiving environment at Erf 19374, George, is transformed and does not have any of the original vegetation type present. In view of this, the proposed development of the erf could go ahead without any mitigation required. | | |
| Residual impacts: | The most negative state possible, i.e., transformed, is the status of the habitat on Erf 19374, George, and so there would be no residual impacts or those impacts that remain after implementation of any mitigation measures. The residual impacts for the proposed project would be Very Low Negative | | |
| Cumulative impact post mitigation: | Very Low Negative | | |
| Significance rating of impact after mitigation (e.g., Low, Medium, Medium-High, High, or Very-High) | **Very Low Negative** | | **No Impact** |

*Should the erf, for some reason, not be developed, it would be legally incumbent on the landowner to implement an alien invasive plant eradication programme, to prevent further spread of the non-indigenous invasive species.

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE - SITE ACCESS, CLEARING AND PREPARATION FOR CIVIL WORKS**<br>***Please also refer to the impact tables in the Freshwater Assessment Report and the addendum to the report, (Appendix G2)** | | | |
| **Potential impact and risk:** | - **Removal of vegetation within the study area, specifically along the western boundary of the study area**<br>- **Possible indiscriminate driving within the 15 m conservation buffer along the western boundary of the study area.** | | |
| Nature of impact: | • Potential increased dust generation, leading to potential smothering of riparian vegetation and potentially altering surface water quality within the river;<br>• Decreased ecoservice provision; and<br>• Further decreased ability to support biodiversity. | | No Impact |
| Extent and duration of impact: | Local and Short Term | | |
| Consequence of impact or risk: | Low | | |
| Probability of occurrence: | Likely | | |
| Degree to which the impact may cause irreplaceable loss of resources: | Low | | |
| Degree to which the impact can be reversed: | Fully Reversible | | |
| Indirect impacts: | Exposed/compacted soil, in turn leading to increased runoff and erosion; | | |
| Cumulative impact prior to mitigation: | Low | | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Low Negative** | | |
| Degree to which the impact can be avoided: | Cannot be avoided | | |
| Degree to which the impact can be managed: | Can be managed | | |
| Degree to which the impact can be mitigated: | High | | |
| Proposed mitigation: | • Construction of the stormwater attenuation system must be undertaken during the dry summer period to minimise the volumes of sediment entering the Malgas River and to minimise water quality impacts;<br>• Areas outside the construction footprint of the stormwater attenuation system must be marked as a no-go area;<br>• Vegetation clearance must be kept to a minimum;<br>• Vehicle movement within the 15 m conservation buffer must be kept to a minimum, and preference should be given to undertaking construction activities by hand, where feasible. Drip trays are to be used for all vehicles not in use. All vehicles used as part of the construction of the stormwater attenuation system must be parked outside the 15 m conservation buffer when not in use;<br>• Sediment traps must be installed downgradient of the construction works prior to the commencement of construction. Sediment traps are to be inspected daily and accumulated sediment to be removed by | | |

| | | |
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| | hand on a weekly basis;<br>• Soil removed from the construction area must be stockpiled outside the 15 m conservation buffer and exposed soil must be protected for the duration of the construction phase with a suitable geotextile (e.g. Geojute or hessian sheeting) to prevent erosion and sedimentation of the river. Mixture of the lower and upper layers of the excavated soil should be kept to a minimum, so as for later usage as backfill material or as part of rehabilitation activities and the stockpiles may not exceed 2 m in height;<br>• Where possible, natural timber products and vegetation must be used for slope stabilisation considering the steep slope between the study area and the river;<br>• The gabion mattresses to be installed below the lowest stilling pond must be installed to be in line with the beds of the river and not below the ground level;<br>• Mitigation measures applicable to cement/ concrete use as outlined in FEN (2022) must also be implemented where the stormwater attenuation system will be constructed. A designated area within the construction footprint of the stormwater attenuation system may be assigned for the mixing and management of cement / concrete and the location thereof is to be agreed upon by<br>• Spilled or excess concrete must be cleaned up immediately and disposed of at a suitable landfill site;<br>• It is highly recommended that the stormwater attenuation system be vegetated with suitable indigenous wetland and/or riparian vegetation to assist in water quality management and velocity reduction. This will also improve the aesthetics of the stormwater attenuation system;<br>• Rehabilitation of the disturbed area must be undertaken, including re-vegetation with indigenous vegetation, inclusive of the 15 m conservation buffer that might have been impacted by the construction of the stormwater attenuation system. Only indigenous vegetation species may be used as part of the landscaping of the slopes adjacent to the Malgas River, and alien and invasive plants are to be eradicated;<br>• The operation of the stormwater attenuation system must ensure that stormwater is released into the Malgas River in a dissipated manner to mimic natural flow velocities;<br>• Silt removed from the siltation ponds may under no circumstances be stockpiled within the 15 m conservation buffer or discarded into the Malgas River and must be disposed of at a registered waste management facility; | |

| | | |
|---|---|---|
| | and<br>• Regular inspection of the stormwater attenuation system and associated landscaped areas must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion, particularly of the landscaped areas surrounding the stormwater attenuation system. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation. | |
| Residual impacts: | an increase in AIP species entering the system due to regular disturbance of soil and removal of indigenous vegetation | |
| Cumulative impact post mitigation: | unlikely to contribute to the cumulative effect on the loss of riparian habitat within the region provided that cognisant, well-planned design is implemented | |
| Significance rating of impact after mitigation<br>(e.g., Low, Medium, Medium-High, High, or Very-High) | **Very Low Negative** | **No Impact** |

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE - CONSTRUCTION ACTIVITIES RELATED TO BUILDING ACTIVITIES OUTSIDE THE DELINEATED EXTENT OF THE RIVER AND OUTSIDE THE 15 M CONSTRUCTION BUFFER BUT WITHIN THE 100 M GN509 ZONE OF REGULATION ASSIGNED TO THE RIVER.**<br>***Please also refer to the impact tables in the Freshwater Assessment Report, pg 33 (Appendix G2)** | | | |
| **Potential impact and risk:** | **• Disturbances of soil potentially leading to increased alien vegetation proliferation, and in turn to altered riparian habitat; an<br>• Altered runoff patterns, leading to increased erosion and sedimentation of the river.<br>• Proliferation of alien and invasive plants (AIP), which could lead to dispersal of AIP seeds into the river.** | | |
| Nature of impact: | Negative | | No Impact |
| Extent and duration of impact: | Local and Medium Term | | |
| Consequence of impact or risk: | Low | | |
| Probability of occurrence: | Likely | | |
| Degree to which the impact may cause irreplaceable loss of resources: | Marginal loss of resources | | |
| Degree to which the impact can be reversed: | Fully Reversible | | |
| Indirect impacts: | an increase in AIP species entering the system due to regular disturbance of soil and removal of indigenous vegetation | | |
| Cumulative impact prior to mitigation: | the loss of riparian habitat within the region | | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Low (-)** | | No Impact |
| Degree to which the impact can be avoided: | Cannot be avoided | | |
| Degree to which the impact can be managed: | Can be managed | | |
| Degree to which the impact can be mitigated: | Can be mitigated | | |
| Proposed mitigation: | • Construction of the stormwater attenuation system must be undertaken during the dry summer period to minimise the volumes of sediment entering the Malgas River and to minimise water quality impacts; | | |

| | | |
|---|---|---|
| | • Areas outside the construction footprint of the stormwater attenuation system must be marked as a no-go area;<br>• Vegetation clearance must be kept to a minimum;<br>• Vehicle movement within the 15 m conservation buffer must be kept to a minimum, and preference should be given to undertaking construction activities by hand, where feasible. Drip trays are to be used for all vehicles not in use. All vehicles used as part of the construction of the stormwater attenuation system must be parked outside the 15 m conservation buffer when not in use;<br>• Sediment traps must be installed downgradient of the construction works prior to the commencement of construction. Sediment traps are to be inspected daily and accumulated sediment to be removed by hand on a weekly basis;<br>• Soil removed from the construction area must be stockpiled outside the 15 m conservation buffer and exposed soil must be protected for the duration of the construction phase with a suitable geotextile (e.g. Geojute or hessian sheeting) to prevent erosion and sedimentation of the river. Mixture of the lower and upper layers of the excavated soil should be kept to a minimum, so as for later usage as backfill material or as part of rehabilitation activities and the stockpiles may not exceed 2 m in height;<br>• Where possible, natural timber products and vegetation must be used for slope stabilisation considering the steep slope between the study area and the river;<br>• The gabion mattresses to be installed below the lowest stilling pond must be installed to be in line with the beds of the river and not below the ground level;<br>• Mitigation measures applicable to cement/ concrete use as outlined in FEN (2022) must also be implemented where the stormwater attenuation system will be constructed. A designated area within the construction footprint of the stormwater attenuation system may be assigned for the mixing and management of cement / concrete and the location thereof is to be agreed upon by<br>• Spilled or excess concrete must be cleaned up immediately and disposed of at a suitable landfill site;<br>• It is highly recommended that the stormwater attenuation system be vegetated with suitable indigenous wetland and/or riparian vegetation to assist in water quality management and velocity reduction. This will also improve the aesthetics of the stormwater attenuation system; | |

| | | |
|---|---|---|
| | • Rehabilitation of the disturbed area must be undertaken, including re-vegetation with indigenous vegetation, inclusive of the 15 m conservation buffer that might have been impacted by the construction of the stormwater attenuation system. Only indigenous vegetation species may be used as part of the landscaping of the slopes adjacent to the Malgas River, and alien and invasive plants are to be eradicated;<br>• The operation of the stormwater attenuation system must ensure that stormwater is released into the Malgas River in a dissipated manner to mimic natural flow velocities;<br>• Silt removed from the siltation ponds may under no circumstances be stockpiled within the 15 m conservation buffer or discarded into the Malgas River and must be disposed of at a registered waste management facility; and<br>• Regular inspection of the stormwater attenuation system and associated landscaped areas must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion, particularly of the landscaped areas surrounding the stormwater attenuation system. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation.<br><br>**Cement usage**<br>• Concrete and cement-related mortars can be toxic to aquatic life. Proper handling and disposal should minimize or eliminate discharges into wetland. High alkalinity associated with cement, which can dramatically affect and contaminate both soil and ground water. The following recommendations must be adhered to:<br>➢ Proper handling and disposal should minimize or eliminate discharges into wetland. High alkalinity associated with cement, which can dramatically affect and contaminate both soil and ground water. The following recommendations must be adhered to:<br>o Fresh concrete and cement mortar may only be mixed within the authorized construction footprint (limited to the study area). Mixing of cement may be done within the construction camp, may not be mixed on bare soil, and must be within a lined, bound or bunded portable mixer. Consideration must be taken to use ready mix concrete;<br>o No mixed concrete shall be deposited directly onto the ground. A batter board or other suitable platform/mixing tray is to be provided onto which any mixed concrete can be deposited whilst it awaits placing;<br>o Cement bags must be disposed of in the | |

| | | |
|---|---|---|
| | demarcated hazardous waste receptacles and the used bags must be suitably disposed of;<br>o Spilled or excess concrete must be disposed of at a suitable landfill site.<br>o Rehabilitation of the disturbed area must be undertaken, including re-vegetation with indigenous vegetation, inclusive of the 15 m conservation buffer that might have been impacted by the construction of the boundary fence; and<br>o Only indigenous vegetation species may be used as part of the landscaping of the development, and AIPs should be eradicated | |
| Residual impacts: | None, provided that cognisant, well-planned design is implemented. | |
| Cumulative impact post mitigation: | None, provided that cognisant, well-planned design is implemented. | |
| Significance rating of impact after mitigation<br>(e.g., Low, Medium, Medium-High, High, or Very-High) | **Very Low (-)** | **No Impact** |

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE - CONSTRUCTION RELATED NUISANCES SUCH AS TRAFFIC, NOISE AND DUST:** | | | |
| **Potential impact and risk:** | **Typical construction phase impacts associated with the development are likely to be present, including increased traffic, elevated noise levels, dust and typical disturbances to the peace and quiet resulting from the site establishment activities and the presence of construction labourers. These nuisances would be of a temporary duration (i.e., for duration of the construction phase).** | | |
| Nature of impact: | Negative | | No Impact |
| Extent and duration of impact: | Local and Temporary | | |
| Consequence of impact or risk: | Disturbance to surrounding landowners and general public | | |
| Probability of occurrence: | Definite | | |
| Degree to which the impact may cause irreplaceable loss of resources: | No loss of resources | | |
| Degree to which the impact can be reversed: | Barely reversible | | |
| Indirect impacts: | None | | |
| Cumulative impact prior to mitigation: | Negligible- Impact only occurs during construction. | | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Medium** | | |
| Degree to which the impact can be avoided: | Unavoidable | | |
| Degree to which the impact can be managed: | Medium | | |
| Degree to which the impact can be mitigated: | Can be barely mitigated | | |
| Proposed mitigation: | **Dust**<br>• Dust suppression measures must be implemented when required.<br>• Exposed surfaces must be provided with suitable cover as soon as possible.<br>• Stockpiles must be protected from wind erosion<br>• Vehicles travelling to/from the site must adhere to acceptable speed limits to prevent excessive generation of dust.<br>• Dust levels specified in the National Dust Control Regulations (GN 827 of November | | |

| | | |
|---|---|---|
| | 2013) may not be exceeded (i.e., dust fall may not exceed 1200mg/m²/day).<br>**Noise**<br>• Construction should only be allowed during normal construction working hours.<br>• Workers moving to/from the site must be sensitised to keep noise to a minimum.<br>• Vehicles, machinery and other equipment must be kept in good working order.<br>• Loud music is not allowed on site.<br>• Construction workers must be educated on how to control noise generating activities that have the potential to become disturbances, particularly over an extended period of time.<br>• Construction work must proceed efficiently, in a planned and well managed manner so as to limit the duration of the disturbance.<br>• Manual labour is preferred over the use of machinery.<br>**Traffic**<br>• All construction vehicles need to adhere to traffic laws<br>• The speed of construction vehicles and other heavy vehicles must be strictly controlled to avoid dangerous conditions for other road users.<br>• As far as possible care must be taken to ensure that the local traffic flow pattern is not be too significantly disrupted and all vehicle operators therefore need to be educated in terms of "best-practice" operation to minimise unnecessary traffic congestion or dangers.<br><br>Adequate signage that is both informative and cautionary to passing traffic (motorists and pedestrians) warning them of the construction activities. | |
| Residual impacts: | None | |
| Cumulative impact post mitigation: | Negligible | |
| Significance rating of impact after mitigation<br>(e.g., Low, Medium, Medium-High, High, or Very-High) | **Low (-)** | |

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE - CREATE TEMPORARY JOB OPPORTUNITIES** | | | |
| **Potential impact and risk:** | **A number of temporary job opportunities will be created during the construction phase of the development.** | | |
| Nature of impact: | Positive | | No Impact-Unchanged economic situation of potential labourers |
| Extent and duration of impact: | Regional and Temporary | | |
| Consequence of impact or risk: | Labourers which earn valuable income enabling them to provide food and other household necessities to their families. | | |
| Probability of occurrence: | Definite | | |
| Degree to which the impact may cause irreplaceable loss of resources: | No loss of resources | | |
| Degree to which the impact can be reversed: | Irreversible | | |
| Indirect impacts: | More spending by labourers within their community (e.g., spaza shops, etc.) will lead to | | |

| | | |
|---|---|---|
| | economic growth in the local community. | |
| Cumulative impact prior to mitigation: | Medium | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Medium-High (+)** | |
| Degree to which the impact can be avoided: | N/A | |
| Degree to which the impact can be managed: | | |
| Degree to which the impact can be mitigated: | | |
| Proposed mitigation: | | |
| Residual impacts: | | |
| Cumulative impact post mitigation: | | |
| Significance rating of impact after mitigation<br>(e.g., Low, Medium, Medium-High, High, or Very-High) | | |

| **Alternative:** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **PLANNING, DESIGN AND DEVELOPMENT PHASE - CAPITAL EXPENDITURE** | | | |
| **Potential impact and risk:** | **Sourcing of building materials, supplies, contractors, and labourers will mainly be from the local and surrounding municipal areas. This will be to the benefit of the local businesses in the area.** | | |
| Nature of impact: | Positive | | No Impact |
| Extent and duration of impact: | Regional and Temporary | | |
| Consequence of impact or risk: | Spending within the municipal area will lead to economic growth | | |
| Probability of occurrence: | Definite | | |
| Degree to which the impact may cause irreplaceable loss of resources: | No loss of resources | | |
| Degree to which the impact can be reversed: | N/A | | |
| Indirect impacts: | N/A | | |
| Cumulative impact prior to mitigation: | N/A | | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Medium-High (+)** | | |
| Degree to which the impact can be avoided: | N/A | | |
| Degree to which the impact can be managed: | | | |
| Degree to which the impact can be mitigated: | | | |
| Proposed mitigation: | | | |
| Residual impacts: | | | |
| Cumulative impact post mitigation: | | | |
| Significance rating of impact after mitigation<br>(e.g., Low, Medium, Medium-High, High, or Very-High) | | | |

# OPERATIONAL PHASE

| Alternative | Layout 1 | Layout 2 (Preferred) | No-Go |
|---|---|---|---|
| **OPERATIONAL PHASE - OPERATION OF THE RESIDENTIAL DEVELOPMENT**<br>***Please also refer to the impact tables in the Freshwater Assessment Report, pg 33 (Appendix G2)** | | | |
| **Potential impact and risk:** | **Potential fertilizers entering the river through stormwater run-off. Potential indiscriminate movement of vehicles within the river marginal zone for perimeter inspections/ maintenance of the study area fence.** | | |
| Nature of impact: | Negative | | No Impact |
| Extent and duration of impact: | Local and Permanent | | |
| Consequence of impact or risk: | • Potential eutrophication of water as a result of increased nitrates and phosphate loads into the river; and<br>• Proliferation of alien and invasive plant species within the river. | | |
| Probability of occurrence: | Possible | | |
| Degree to which the impact may cause irreplaceable loss of resources: | Low | | |
| Degree to which the impact can be reversed: | Marginally reversible | | |
| Indirect impacts: | an increase in AIP species entering the system due to regular disturbance of soil and removal of indigenous vegetation | | |
| Cumulative impact prior to mitigation: | the loss of riparian habitat within the region | | |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Low (-)** | | **No Impact** |
| Degree to which the impact can be avoided: | Cannot be avoided | | |
| Degree to which the impact can be managed: | Can be managed | | |
| Degree to which the impact can be mitigated: | Can be mitigated | | |
| Proposed mitigation: | • No vehicles are permitted to enter into the river or its marginal riparian vegetation zone. Any maintenance works must be undertaken by foot, or the relevant authorisations obtained beforehand.<br>• As much indigenous terrestrial, wetland and riparian vegetation should be included into the landscaping of the erven located along the western boundary of the study area. Indigenous vegetation will reduce the irrigation requirements as well as fertilizers and prevent garden ornamentals dispersing into the adjacent river marginal zone.<br>• Care must be taken when using herbicides and pesticides within gardens, especially during the rainy season when stormwater runoff is high. These chemicals must be used in accordance with the prescribed quantities to prevent contamination of surface water in the nearby and downgradient river.<br>• The study area and the eastern embankment of the river must be annually inspected for any erosion or gully formation that may transport contaminated run-off water to the river. Any erosion/gullies must be actively repaired.<br>• Attenuation ponds must be vegetated with | | |

| | | |
|---|---|---|
| | indigenous obligate and facultative species suitable for seasonal saturation. This will assist with energy dissipation and prevent sedimentation and erosion as well as improve habitat provision. Wooden boardwalks could be developed over these ponds for pedestrian walkways should the developer so desire;<br>• Cobbles must be placed on the concrete aprons to further assist with energy dissipation;<br>• All materials used to construct the attenuation ponds should not generate toxic leachates or lead to significant changes in pH or dissolved salt concentrations; especially considering that outflow of the pond drains into the Malgas River;<br>• No plastic lining may be used as part of the attenuation pond construction as this has various ecological impacts, with special mention of impacts to faunal assemblages; and<br>• Rocks must be placed at any outlet pipes (downgradient of the attenuation pond), as required and indigenous vegetation established to bind the soil of the bed and to prevent erosion. This will also promote diffuse flow and decrease the velocity of water released downgradient towards the Malgas River. | |
| Residual impacts: | None, provided that cognisant, well-planned design is implemented. | |
| Cumulative impact post mitigation: | None, provided that cognisant, well-planned design is implemented. | |
| Significance rating of impact after mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Very Low (-)** | **No Impact** |

| **Alternative** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **OPERATIONAL PHASE -DISCHARGE OF STORMWATER FROM THE PROPOSED DEVELOPMENT INTO THE MALGAS RIVER.**<br>***Please also refer to the impact tables in the Freshwater Assessment Report, pg 34 (Appendix G2)** | | | |
| **Potential impact and risk:** | **• Increased impermeable surfaces due to the presence of hardened surfaces resulting in an increase in stormwater runoff as well as potential contaminants into the river.** | | |
| Nature of impact: | Negative | | No Impact |
| Extent and duration of impact: | Local and Permanent | | |
| Consequence of impact or risk: | • Altered runoff patterns and increased water inputs to the river, altering the flow regime, and potentially leading to erosion and incision;<br>• Increased catchment yield (due to increased runoff) and altered flow regime may lead to changed riparian zonation;<br>• Increased water contamination due to hydrocarbons in stormwater from the internal road network | | |
| Probability of occurrence: | Definite | | |
| Degree to which the impact may cause irreplaceable loss of resources: | Low | | |
| Degree to which the impact can be reversed: | Irreversible | | |
| Indirect impacts: | | | |
| Cumulative impact prior to mitigation: | the loss of riparian habitat within the region | | |
| Significance rating of impact prior to | **Medium – High (-)** | | |

| | | |
|---|---|---|
| mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | | |
| Degree to which the impact can be avoided: | Cannot be avoided | |
| Degree to which the impact can be managed: | Can be managed | |
| Degree to which the impact can be mitigated: | High | |
| Proposed mitigation: | • Regular inspection of the stormwater outlet structures must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation;<br>• All pipelines and open swales must be regularly cleaned, and all outlet structures checked to ensure there is no debris/blockages.<br>• Only indigenous vegetation species may be used as part of the landscaping of the development and open space area, and invasive plant species must be eradicated. | |
| Residual impacts: | None, provided that cognisant, well-planned design is implemented. | |
| Cumulative impact post mitigation: | None, provided that cognisant, well-planned design is implemented. | |
| Significance rating of impact after mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Low (-)** | **No Impact** |

| **Alternative** | **Layout 1** | **Layout 2 (Preferred)** | **No-Go** |
|---|---|---|---|
| **OPERATIONAL PHASE - AVAILABILITY OF HOUSING WITHIN THE URBAN EDGE OF THE GEORGE MUNICIPALITY** | | | |
| **Potential impact and risk:** | **: The proposed development will increase the amount of housing within the urban edge of the George Municipality. The property has been earmarked for residential development in the municipal SDF.** | | |
| Nature of impact: | Positive | | Negative |
| Extent and duration of impact: | Site Specific and Long Term | | Regional and Long Term |
| Consequence of impact or risk: | The available space within the urban edge is utilised. | | |
| Probability of occurrence: | Definite | | |
| Degree to which the impact may cause irreplaceable loss of resources: | No loss of resources | | Marginal loss of resources |
| Degree to which the impact can be reversed: | Irreversible | | Irreversible |
| Indirect impacts: | | | |
| Cumulative impact prior to mitigation: | High- The market offering of housing is expanded, which would in turn motivate spending within the municipality, due to increased resident's number. | | High- Unplanned development outside of the urban edge, or within the adapted urban edge can cause various problems such as urban fragmentation and service delivery issues. |
| Significance rating of impact prior to mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | **Medium (+)** | | **Medium-High (-)** |

| | | |
|---|---|---|
| Degree to which the impact can be avoided: | Unavoidable | |
| Degree to which the impact can be managed: | High | |
| Degree to which the impact can be mitigated: | Not able to mitigate | |
| Proposed mitigation: | Not applicable | Development should only be allowed and managed within the current urban edge. |
| Residual impacts: | | |
| Cumulative impact post mitigation: | | |
| Significance rating of impact after mitigation<br>(e.g. Low, Medium, Medium-High, High, or Very-High) | | |

## 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. |
|---|---|

Table __ summaries the potential Impacts associated with the proposed development post mitigation. Please refer to the Section I (2) for the proposed mitigation measures to ensure the corresponding rating post mitigation.

**Table 1: Summary of the Impacts Post Mitigation**

| Impact | Layout 1 | Layout 2 (Preferred Alternative) | No-Go |
|---|---|---|---|
| **Construction Phase** | | | |
| Loss of Garden Route Shale Fynbos | **Very Low (-)** | **Very Low (-)** | **No Impact** |
| Disturbance and removal of riparian vegetation | **Very Low (-)** | **Very Low (-)** | **No Impact** |
| Increased erosion and sedimentation of the river | **Very Low (-)** | **Very Low (-)** | **No Impact** |
| Alien vegetation proliferation in riparian zone | **Very Low (-)** | **Very Low (-)** | **No Impact** |
| Construction related nuisances such as traffic, noise and dust | **Low (-)** | **Low (-)** | **No Impact** |
| Temporary Job creation | **Medium-High (+)** | **Medium-High (+)** | **No Impact** |
| Capital expenditure | **Medium-High (+)** | **Medium-High (+)** | **No Impact** |
| **Operational Phase** | | | |
| Potential contaminants from site entering river | **Very Low (-)** | **Very Low (-)** | **No Impact** |
| Increase runoff into river from hardened surfaces | **Low (-)** | **Low (-)** | **No Impact** |
| Increased housing within urban edge | **Medium (+)** | **Medium (+)** | **Medium-High (-)** |

From the **botanical assessment**, the specialist found that: "The receiving environment at Erf 19374, George, is transformed and does not have any of the original vegetation type present. In view of this, the proposed development of the erf could go ahead without any mitigation required".

Should the erf, for some reason, not be developed, it would be legally incumbent on the landowner to implement an alien invasive plant eradication programme, to prevent further spread of the non-indigenous invasive species.

There is no indication that any constraint with respect to flora and vegetation would prohibit development of the subject property and development is thus unconditionally supported by the botanical specialist.

Overall, the site (and immediate surrounds) displays a low sensitivity from a **terrestrial biodiversity and faunal** perspective. The site is largely in a modified state due to previous land use practices (historical clearing for cultivation) and subsequent disturbances to the site. There is little to no

indigenous vegetation remaining and the site is bordered by dense stands of alien trees. The Malgas River on the western border of the site is also invaded with alien vegetation (mostly Eucalyptus trees) and is in a degraded state. The habitat for fauna is of poor quality and likely only supports generalist species. The site has limited use by fauna and no animal SCC are expected to occur on the site.

In terms of regional biodiversity, the site is relatively small, and it is evident both from the historical satellite imagery and the site visit that the site is in a modified state. The site is therefore not considered a representative portion of the vegetation type or ecosystem and is not considered important for reaching biodiversity targets due to the small size. The site is therefore considered to be of low importance from a terrestrial biodiversity perspective. The proximity of the site to the Malgas River is however a point of consideration and important ecological processes still exist even though the river is in a degraded state. The maintenance of a conservation buffer is critical for minimising impacts on the river, and maintaining ecological connectivity, especially the extreme western corner of the site.

The outcome of the botanical assessment has not influenced the larger internal layout of the site, however, the proximity to the Malgas River in the west and the recommended conservation buffer will influence the rehabilitation plan. As the whole site slopes to the western corner, the stormwater is proposed to be directed down this point to the Malgas River, in accordance with the Stormwater management plan (Appendix G9). Once constructed and rehabilitated with suitable vegetation, the maintenance of this area will ensure the ecological connectivity with the Malgas River be maintained and possibly increase the integrity thereof by removing alien invasive vegetation.

Following the ecological **freshwater assessment** of the Malgas River, the DWS Risk Assessment and an impact assessment was applied in order to ascertain the significance of possible impacts which may occur as a result of the proposed residential development. The results of this assessment are presented in Section 7 of the freshwater specialist's report (Appendix G2) and show that assuming mitigation measures are strictly enforced, a 'Low' risk/impact to the overall integrity of the Malgas River is expected, with the implementation of the set-out mitigation measures and in particular, ecologically sensitive design of the proposed stormwater management system. This can be attributed to the proposed development located at least 15 m from the delineated extent of the river, and the assignment of a conservation buffer between the proposed development and the river. The 15 m conservation area will limit any direct and indirect impacts to the river and must be rehabilitated post-construction (with specific mention of AIP control).

The proposed development intersects both the 32 m ZoR (NEMA) and the 100 m ZoR (NWA) which would necessitate the application for Environmental Authorisation from the Department of Forestry, Fisheries and Environment (DFFE), and Water Use Authorisation from the Department of Water and Sanitation (DWS). It must, however, be noted that any sewer pipelines that may be required as part of the development will trigger the need for a Water Use Licence Application (WULA) as portions of the development is located within the 100 m ZoR. In accordance with GN 509 the construction, installation or maintenance of any sewer pipelines is excluded from authorisation by means of a General Authorisation (GA), regardless of the risk significance.

The freshwater report now only recommends the 15 m conservation buffer outside of the stormwater structure footprint be demarcated as a no-go area instead of the 32 m conservation buffer. This is to accommodate the stormwater structures and to allow for stormwater to be discharged into the Malgas River.

A GA water use registration has been undertaken by Confluent, the registered water use registration number is 29024760

From a **Heritage** perspective, an isolated, modified, MSA quartzite chunk (Point 512) was recorded alongside a soil test pit in the northern portion of the site. An old fence pole (Point 412) was recorded in the north eastern portion of the site.

Apart from the modern, incomplete face brick house, no other cultural historic remains were identified, or evidence of any earlier structures or foundations relating to the historic occupation of

the site.

The only potential other tangible heritage indicator was its limited aesthetic value relating to its sense of place provided by the tree-line along the river and its associated floodplain. No design informants were proposed in this regard, as the site falls outside the 1:100 year flood-line and the proposed subdivision plan already responds to the tree line, which abuts the sensitive area.

Based on the content and findings of the **Heritage Impact Assessment** (Appendix G4), it is **recommended** in terms of Section 38(8) of the National Heritage Resources Act, that Heritage Western Cape:

- Endorse this report as having complied with the provisions of Section 38(3) of the Act.
- Recommend to the Department of Environmental Affairs & Development Planning (DEA&DP) that the proposed rezoning of Erf 19374, George, be approved, and
- That the proposed layout plan for the new development, be approved.
- The only condition should be that a tangible representation of the memory associated with Preto be incorporated, through a naming exercise, either of the streets or the development itself, to be initiated. This could be done in collaboration with the George Museum or the George Heritage Trust, in consultation with the community.

A road will be named in accordance with the recommendations to ensure the history and meaning of Preto is maintained.

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

Impact management measures applied to the Malgas River as identified by the **Freshwater Specialist:**

**Construction Phase:**

- The 15 m conservation buffer outside of the stormwater structure footprint must be demarcated as a no-go area and no unauthorised activities are allowed within the delineated extent of the river. If a more permanent fencing is desired, a pole and electric wire fence is considered suitable as this will still allow movement of faunal species. It is acknowledged that a permanent fence will be constructed along the western boundary of the study area which will encroach on the 15 m conservation buffer or be directly on the boundary of the 15 m conservation buffer; however, this fence line can then be the distinction between the construction footprint in the study area and the 15 m conservation buffer;
- It is advised that a drift fence be erected (such as heavy duty plastic) in order to prevent any sediment run-off or construction related earth works from entering the 15 m conservation buffer and the downgradient river. This drift fence can be erected along the inside of the permanent fence and must be manually inspected and cleared of any sediment.
- Areas which are to be cleared of vegetation, including Contractor laydown areas, must remain as small as possible, in order to reduce the risk of proliferation of alien vegetation, and in order to retain a level of protection to the river during construction (e.g., dust generation, sediment trapping, slowing of stormwater runoff – specifically due to the steep slope between the river and study area);
- Contractor laydown areas and equipment storage are to remain within the study area and outside the 15 m conservation buffer; and
- No indiscriminate driving within the 15 m conservation buffer is allowed. All vehicles and machinery must utilise existing roads or pre-planned construction roads within the authorised construction footprint area.
- Excavated materials may not be contaminated, and it must be ensured that the minimum surface area is taken up, and the stockpiles may not exceed 2 m in height to reduce dust generation that may impact the river.
- Any AIPs within the study area should ideally be removed prior to soil stripping to reduce seed loads within the topsoil (which will be used to revegetated post construction). This will assist in

reducing the long-term AIP management requirements.

- All stockpiles should not exceed 2 m in height. All exposed soil must be protected for the duration of the construction phase with a suitable geotextile (e.g., Geojute or hessian sheeting) to prevent erosion and sedimentation of the downgradient river.

**Cement usage**

- Concrete and cement-related mortars can be toxic to aquatic life. Proper handling and disposal should minimize or eliminate discharges into wetland. High alkalinity associated with cement, which can dramatically affect and contaminate both soil and ground water. The following recommendations must be adhered to:
  - Proper handling and disposal should minimize or eliminate discharges into wetland. High alkalinity associated with cement, which can dramatically affect and contaminate both soil and ground water. The following recommendations must be adhered to:
- Fresh concrete and cement mortar may only be mixed within the authorized construction footprint (limited to the study area). Mixing of cement may be done within the construction camp, may not be mixed on bare soil, and must be within a lined, bound or bunded portable mixer. Consideration must be taken to use ready mix concrete;
- No mixed concrete shall be deposited directly onto the ground. A batter board or other suitable platform/mixing tray is to be provided onto which any mixed concrete can be deposited whilst it awaits placing;
- Cement bags must be disposed of in the demarcated hazardous waste receptacles and the used bags must be suitably disposed of;
- Spilled or excess concrete must be disposed of at a suitable landfill site.
- Rehabilitation of the disturbed area must be undertaken, including re-vegetation with indigenous vegetation, inclusive of the 15 m conservation buffer that might have been impacted by the construction of the boundary fence; and
- Only indigenous vegetation species may be used as part of the landscaping of the development, and AIPs should be eradicated

**Operational Phase:**

- No vehicles are permitted to enter into the river or its marginal riparian vegetation zone. Any maintenance works must be undertaken manually, or the relevant authorisations obtained beforehand.
- As much indigenous terrestrial, wetland and riparian vegetation should be included into the landscaping of the erven located along the western boundary of the study area. Indigenous vegetation will reduce the irrigation requirements as well as fertilizers and prevent garden ornamentals dispersing into the adjacent river marginal zone.
- Care must be taken when using herbicides and pesticides within gardens, especially during the rainy season when stormwater runoff is high. These chemicals must be used in accordance with the prescribed quantities to prevent contamination of surface water in the nearby and downgradient river.
- The study area and the eastern embankment of the river must be annually inspected for any erosion or gully formation that may transport contaminated run-off water to the river. Any erosion/gullies must be actively repaired.
- Regular inspection of the stormwater outlet structures must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion. If erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation.
- All pipelines and open swales must be regularly cleaned, and all outlet structures checked to ensure there is no debris/blockages.

**Addendum to the freshwater Assessment (dated 12 November 2024) mitigation measures:**
The following mitigation measures are applicable to the to the stormwater attenuation system:

- Construction of the stormwater attenuation system must be undertaken during the dry summer period to minimise the volumes of sediment entering the Malgas River and to minimise water quality impacts;

- Areas outside the construction footprint of the stormwater attenuation system must be marked as a no-go area;

- Vegetation clearance must be kept to a minimum;

- Vehicle movement within the 15 m conservation buffer must be kept to a minimum, and preference should be given to undertaking construction activities by hand, where feasible. Drip trays are to be used for all vehicles not in use. All vehicles used as part of the construction of the stormwater attenuation system must be parked outside the 15 m conservation buffer when not in use;

- Sediment traps must be installed downgradient of the construction works prior to the commencement of construction. Sediment traps are to be inspected daily and accumulated sediment to be removed by hand on a weekly basis;

- Soil removed from the construction area must be stockpiled outside the 15 m conservation buffer and exposed soil must be protected for the duration of the construction phase with a suitable geotextile (e.g. Geojute or hessian sheeting) to prevent erosion and sedimentation of the river. Mixture of the lower and upper layers of the excavated soil should be kept to a minimum, so as for later usage as backfill material or as part of rehabilitation activities and the stockpiles may not exceed 2 m in height;

- Where possible, natural timber products and vegetation must be used for slope stabilisation considering the steep slope between the study area and the river;

- The gabion mattresses to be installed below the lowest stilling pond must be installed to be in line with the beds of the river and not below the ground level;

- Mitigation measures applicable to cement/ concrete use as outlined in FEN (2022) must also be implemented where the stormwater attenuation system will be constructed. A designated area within the construction footprint of the stormwater attenuation system may be assigned for the mixing and management of cement / concrete and the location thereof is to be agreed upon by

- Spilled or excess concrete must be cleaned up immediately and disposed of at a suitable landfill site;

- It is highly recommended that the stormwater attenuation system be vegetated with suitable indigenous wetland and/or riparian vegetation to assist in water quality management and velocity reduction. This will also improve the aesthetics of the stormwater attenuation system;

- Rehabilitation of the disturbed area must be undertaken, including re-vegetation with indigenous vegetation, inclusive of the 15 m conservation buffer that might have been impacted by the construction of the stormwater attenuation system. Only indigenous vegetation species may be used as part of the landscaping of the slopes adjacent to the Malgas River, and alien and invasive plants are to be eradicated;

- The operation of the stormwater attenuation system must ensure that stormwater is released into the Malgas River in a dissipated manner to mimic natural flow velocities;

- Silt removed from the siltation ponds may under no circumstances be stockpiled within the 15 m conservation buffer or discarded into the Malgas River and must be disposed of at a registered waste management facility; and

- Regular inspection of the stormwater attenuation system and and associated landscaped areas must be undertaken (specifically after large storm events) in order to monitor the occurrence of erosion, particularly of the landscaped areas surrounding the stormwater attenuation system. If

erosion has occurred, it must immediately be rehabilitated through stabilisation of the embankments and revegetation.

As part of the development and operation of the stormwater attenuation ponds, the following mitigation measures must be implemented:

- Attenuation ponds must be vegetated with indigenous obligate and facultative species suitable for seasonal saturation. This will assist with energy dissipation and prevent sedimentation and erosion as well as improve habitat provision. Wooden boardwalks could be developed over these ponds for pedestrian walkways should the developer so desire;

- Cobbles must be placed on the concrete aprons to further assist with energy dissipation;

- All materials used to construct the attenuation ponds should not generate toxic leachates or lead to significant changes in pH or dissolved salt concentrations; especially considering that outflow of the pond drains into the Malgas River;

- No plastic lining may be used as part of the attenuation pond construction as this has various ecological impacts, with special mention of impacts to faunal assemblages; and

- Rocks must be placed at any outlet pipes (downgradient of the attenuation pond), as required and indigenous vegetation established to bind the soil of the bed and to prevent erosion. This will also promote diffuse flow and decrease the velocity of water released downgradient towards the Malgas River.

For the planning, construction, and operational phases, the following recommendations are critical for ensuring the impacts are kept to a minimum as listed by the **Terrestrial Biodiversity Specialist:**

*Please note the report will be revised to include the stormwater layout plan and the assessment thereof.

1. The proposed layout plan must avoid the extreme western corner of the site that comes into proximity to the Malgas River. It is preferable that this section remains outside of the fence of the proposed development.
2. All components of the proposed development must remain outside the conservation buffer and the 32 m legislated buffer (see the aquatic assessment report by FEN Consulting, 2022).
3. All mitigation measures prescribed by the aquatic specialist must be implemented (see FEN Consulting, 2022)
4. An experienced, independent Environmental Control Officer (ECO) must be appointed to oversee the construction activities and compliance with the EMPr.
5. A formal Stormwater Management Plan should be compiled, and an appropriate stormwater management system must be incorporated into all the designs. This should be designed to at least a 1:50 year rainfall or flooding event.
6. The site must be cleared of all alien plants during the construction phase, and an Invasive Alien Plant (IAP) Species Management Plan must be compiled for future alien management. The development must be landscaped using only indigenous plants. Trees should form part of the landscaping plan.
7. During construction, no wild animal may under any circumstance be handled, removed, or be interfered with by construction workers. No wild animal may under any circumstance be hunted, snared, captured, injured, or killed. This includes animals perceived to be vermin.

| 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 terrestrial biodiversity and animal specialist recommended that:

1. *The proposed layout plan must avoid the extreme western corner of the site that comes into proximity to the Malgas River. It is preferable that this section remains outside of the fence of the*

*proposed development.*

2. *All components of the proposed development must remain outside the conservation buffer and the 32 m legislated buffer (see the aquatic assessment report by FEN Consulting, 2022).*

These recommendations were made based on the Freshwater Assessment Report of 2022. The freshwater specialist was requested to update their report in March 2023 after the Stormwater Report (Appendix G9) was compiled. The updated freshwater assessment report now includes the stormwater plans as well as the impact assessment thereof together with new recommendations in regard to the conservation buffer.

The freshwater report now only recommends the 15 m conservation buffer outside of the stormwater structure footprint be demarcated as a no-go area instead of the 32 m conservation buffer. This is to accommodate the stormwater structures and to allow for stormwater to be discharged into the Malgas River.

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

There will be some temporary noise, visual (construction site) and potential dust impacts during the construction phase which will be managed and mitigated by the EMPr and ECO during the construction phase.

The development could provide temporary jobs during the construction phase in the form of labour and casual work opportunities during the operational phase in the form of security, garden maintenance, house cleaning, etc.

| 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. |
|---|---|

The water saving fixtures and rainwater tanks will help to address the potential scarcity of water which climate change may bring on by reducing the demand on bulk water.

The solar systems will reduce the demand on fossil fuel derived power, reducing the carbon footprint of the houses.

| 6. | Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved. |
|---|---|

The terrestrial biodiversity specialist recommends that the proposed layout plan must avoid the extreme western corner of the site that comes into proximity to the Malgas River and that this section remains outside of the fence of the proposed development.

The botanical specialist does not recommend that the western corner be avoided as he stated that there is an extremely low probability that the erf would ever be returned to a near-original state, due to the high level of transformation. The site has no value in terms of ecosystem connectivity, apart from being close to the Malgas River, but even there, the riparian zone is highly disturbed.

| 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 specialist reports will be revised to include the Stormwater Management Layout once it has been finalised.

The recommendation of the specialists' revised reports will be incorporated into the EMPr, and compliance will be monitored by the appointed ECO during the construction phase.

| 8. | Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option. | |
|---|---|---|
| 1 | AVOID IMPACTS | The property is within the urban edge of George and is completely transformed. The property is thus suited for development. |
| 2 | MINIMISE IMPACTS | The recommended mitigation measures of the specialists reports in addition to the compressive mitigation measures contained in the EMPr will minimise the impact of the development. |
| 3 | RECTIFY | The rehabilitation measures in the EMPr are provided to return the impacted areas, outside of the development footprint, back to a functional state and the developer will be responsible for rectifying any |

| | | |
|---|---|---|
| | | non-compliances with the conditions of the EA and EMPr. |
| 4 | REDUCE | The incorporation of solar power systems, rainwater tanks and low consumption fixtures reduces the overall demand on resources. |
| 5 | OFFSET | None necessary. |

## SECTION J: GENERAL

### 1. Environmental Impact Statement

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

The proposal is aligned with the surrounding landuses (residential houses) with capacity and availability of bulk services. The proposal is in line with spatial planning for George and will result in optimising of vacant land within the urban edge of George.

**Freshwater Impacts**

FEN Consulting undertook the freshwater assessment. During the site assessment undertaken in April 2022, no watercourses (wetlands or rivers) were identified within the study area. As such, the study area can be considered of low aquatic biodiversity sensitivity. The Malgas River was identified outside the western boundary of the study area, within the investigation area. The results of the ecological assessment of the Malgas River located in the study area are discussed in Section 5 of this report is summarised in the table below:

| Watercourse | PES | Ecoservices | EIS | REC and RMO |
|---|---|---|---|---|
| Malgas River | D (Largely modified) | Moderately high to very low (indicator dependent) | Moderate to High | REC: Category D (Maintain)<br>BAS: Category D (Largely modified)<br>RMO: Maintain |
| Extent of modification | **None.**<br>Since the proposed development is located at least 15 m from the delineated extent of the river, no modification to the river is expected, should the recommended mitigation measures be implemented. | | | |

Following the ecological assessment of the Malgas River, the DWS Risk Assessment and an impact assessment was applied in order to ascertain the significance of possible impacts which may occur as a result of the proposed residential development. The results of this assessment are presented in Section 7 of the freshwater assessment report and show that assuming mitigation measures are strictly enforced, a 'Low' risk/impact to the overall integrity of the Malgas River is expected, with the implementation of the set-out mitigation measures and in particular, ecologically sensitive design of the proposed stormwater management system. This can be attributed to the proposed development located at least 15 m from the delineated extent of the river, and the assignment of a conservation buffer between the proposed development and the river. The 15 m conservation area outside of the stormwater structure footprint will limit any direct and indirect impacts to the river and must be rehabilitated post-construction (with specific mention of AIP control).

Although it is likely that the western slope down to the Malgas River can be rehabilitated following construction, it is strongly recommended that a suitably qualified specialist be appointed to compile a rehabilitation plan in order to provide site-specific guidance to the proponent in this regard.

**Table 4: Summary of the DWS Risk Assessment/Impact Assessment outcomes, with the implementation of mitigation measures.**

| Impact and Aspect | Risk | Reversibility of |
|---|---|---|

| | | | Impact |
|---|---|---|---|
| **Constructional Phase** | Site clearing prior to commencement of construction activities:<br>• Removal of vegetation within the study area | **Low** | Fully Reversible |
| | Possible indiscriminate driving within the 15 m conservation buffer along the western boundary of the study area | **Low** | Fully Reversible |
| | Construction activities related to building activities outside the delineated extent of the river and outside the 15 m construction buffer but within the 100 m GN509 Zone of Regulation assigned to the wetland | **Low** | Fully Reversible |
| **Operational Phase** | Operation of the residential development<br>• Potential fertilizers entering the river through stormwater run-off;<br>• Potential indiscriminate movement of vehicles within the river for perimeter inspections/ maintenance of the study area fence | **Low** | Fully Reversible |
| | Discharge of stormwater from the proposed development into the Malgas River | **Low** | Fully Reversible |

**Heritage Impact:**
Two public meetings were help with descendant communities of the Preto settlement and a third possible association; that of the WW2 George Aerodrome, was identified. Through ongoing engagement with the descendant community and through additional research, this report concludes that the site has a direct tangible link to the Preto settlement as well as associative significances to the settlement of Blanco, where the displaced community was moved to, and the aerodrome in terms of its proximity and perceived secondary uses (movement patterns, etc), a significance which does not apply anymore as the settlements had disappeared. The memory, however, remains and must be celebrated through symbolic representation of this memory.

The only potential other tangible heritage indicator was its limited aesthetic value relating to its sense of place provided by the tree-line along the river and its associated floodplain. No design informants were proposed in this regard, as the site falls outside the 1:100 year flood-line and the proposed subdivision plan already responds to the tree line, which abuts the sensitive area.

**Botanical Impact:**
The specialist, Dr David McDonald has concluded that, given the highly transformed condition of Erf 19374, the potential impact of a residential development would be Low Negative for both botanical and terrestrial biodiversity.

**Terrestrial Biodiversity and Animal Species Impacts:**
Overall, the site (and immediate surrounds) displays a low sensitivity from a terrestrial biodiversity and faunal perspective. The site is largely in a modified state due to previous land use practices (historical clearing for cultivation) and subsequent disturbances to the site. There is little to no indigenous vegetation remaining and the site is bordered by dense stands of alien trees. The Malgas River on the western border of the site is also invaded with alien vegetation (mostly Eucalyptus trees) and is in a degraded state. The habitat for fauna is of poor quality and likely only supports generalist species. The site has limited use by fauna and no animal SCC are expected to occur on the site.

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

Appendix B2

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

| Alternative | Positive | Negative |
|---|---|---|
| **Housing Layout 1** | • Transformation of an already disturbed and transformed area within the urban edge of George.<br>• Clearance of alien invasive vegetation.<br>• Housing opportunity and temporary employment of contractors and workers during construction phase. | • Transformation of an undeveloped area to a developed area.<br>• Temporary negative construction phase impacts (noise, visual, potential dust) |
| **Housing Layout 2 (preferred)** | • Transformation of an already disturbed and transformed area within the urban edge of George.<br>• More housing opportunity for wider variety of potential buyers and temporary employment of contractors and workers during construction phase. | • Transformation of an undeveloped area to a developed area.<br>• Temporary negative construction phase impacts (noise, visual, potential dust) |
| **Stormwater Structure Layout 1** | • Clearance of alien invasive vegetation.<br>• Management of stormwater<br>• | • Disturbance of the slope down to the river.<br>• Construction activities within the 32 m buffer of the Malgas River<br>• No detailed plan<br>• Greater possibility of erosion |
| **Stormwater Structure Layout 2 (preferred)** | • Clearance of alien invasive vegetation.<br>• Management of stormwater<br>• More detailed plan compiled | • Disturbance of the slope down to the river.<br>• Construction activities within the 32 m buffer of the Malgas River |

## 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 |
|---|---|

Potential impacts were assessed and mitigation measures to minimise the negative impacts were explored in greater depth Section G of this BAR.

Within the Environmental Management Programme (attached as Appendix H) the Environmental Impact Management has been separated into 4 sections, Planning and design phase; Pre-construction Phase, Construction phase and post construction rehabilitation phase.

**Table 5: Impact management objectives and impact management outcomes included in the EMPr.**

| IMPACT MANAGEMENT OBJECTIVES | IMPACT MANAGEMENT OUTCOMES |
|---|---|
| **PLANNING AND DESIGN PHASE** | |
| To appoint a suitably qualified and experienced Environmental Control Officer | The conditions of Environmental Authorisation and the requirements of the EMPr are implemented and monitored during all phases of the development, which will promote sound environmental management on site. |

| | |
|---|---|
| To compile a detailed design and site layout plan that adheres to the conditions of the Environmental Authorisation | Good environmental management is promoted on site |
| Update the Environmental Management Programme | Good environmental management is promoted on site |
| **PRE-CONSTRUCTION PHASE** | |
| Identify and demarcate no-go areas, working areas and site facilities | Future construction activities will be restricted to within the designated areas & environmentally sensitive areas (no-go areas) will be protected from disturbance |
| To set up and equip the site camp and associated site facilities in a manner that will promote good environmental management. | Site camp facilities do not impact significantly on environment. The equipment required to implement the provisions of the EMPr are provided on site. |
| Environmental Control Officer to conduct an inspection prior to the commencement of construction activities on site | Good environmental management is promoted and enforced by the ECO during the full pre-construction and construction phases.<br>Site facilities are appropriately located on site.<br>Construction workers receive environmental awareness training before commencing work on site. |
| **CONSTRUCTION PHASE** | |
| To prevent soil disturbance and loss on site | Soil erosion is kept to a minimum |
| To prevent altered runoff patterns, leading to increased erosion and sedimentation of the river. | No altered runoff patters established. |
| To prevent the dispersal of alien invasive plant seeds into the river. | Alien invasive plant programme is applied. |
| To create habitat free of alien vegetation | The level of alien infestation decreases over time. |
| To prevent avoidable noise and dust impacts | Avoidable noise and dust impacts are managed efficiently. |
| To create employment opportunities with potential for skills transfer, for members of the local community | The local community benefits from the employment opportunities created during the construction phase. |
| Capital influx for supporting service and goods providers | |
| **POST CONSTRUCTION REHABILITATION PHASE** | |
| To rehabilitate all areas disturbed by construction activities in an environmentally sensitive manner | The site is neat and tidy, and all exposed surfaces are suitably covered/ stabilised.<br>There is no construction-related waste or pollution remaining on site. |
| Prevent water contamination due to contaminates in stormwater | Stormwater system is inspected and cleaned regularly |

In order to obtain/reach the impact management objects the corresponding mitigation measures prescribed in the BAR and EMPr must be implemented.

The Impact monitoring will be undertaken by an appointed and independent ECO.

The impact management outcomes will be monitored by the appointed ECO, in addition to the implementation of mitigation measures during the duration of the development, if all management mitigation measures are implemented successfully the resulting impact management outcomes will mean that the develop was undertaken with no significant or avoidable impacts to the environment.

| | |
|---|---|
| 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 EMPr must be implemented, this is however a standard condition of Environmental Authorisation. All mitigation measures from the specialists will be incorporated into the EMPr and as such will be conditional to the environmental authorisation.

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

The Preferred Layout 2 should be authorised for development as it optimises the available area within the property to be developed.

Condition of Authorisation:

- The EMPr must be implemented.
- An ECO must be appointed to monitor compliance with the EMPr.
- Rehabilitation plan must be compiled for the Malgas River embankment.

| | |
|---|---|
| 2.4. | Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed. |

It is assumed that the proposed mitigation measures as listed in this report and the EMPr (Appendix H) will be implemented and adhered to as the significance of impacts ratings are conditional on implementation of the mitigation measures.
The Stormwater Management Plan has not been finalised or calculations done to infer whether the Stormwater Management Plan will cope with runoff from the hardened surfaces.

| | |
|---|---|
| 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. |

It is proposed to phase the development into four phases:

**Phase 1 – 22 units**

Primary Motivation:

- Ease of bulk service connections to municipal services.
- Most units unlocked with least roads and infrastructure around the estate entrance.
- Construction access considerations.

Development roll out:

1. Site Clearance – 3 weeks
2. Services – 6 weeks
3. Roads – 4 weeks
4. Civils –
5. Electrical –
6. Building – 6 months

**Phase 2 – 27 units**

Primary Motivation
Service connections to phase 1.
Construction assess considerations.

Development roll out:

1. Site Clearance during building of phase 1, - 3 weeks
2. Services – 6 weeks
3. Roads – 4 weeks
4. Civils –
5. Electrical –
6. Building – 6 months

**Phase 3 – 28 Units**

Primary Motivation
Service connections to phase 1 and 2.
Construction assess considerations.

Development roll out:

1. Site Clearance during building of phase 2, - 3 weeks
2. Services – 6 weeks
3. Roads – 4 weeks
4. Civils –
5. Electrical –
6. Building – 6 months

**Phase 4 – 33 Units**

Primary Motivation
Service connections to phase 1 and 2.
Construction assess considerations.

Development roll out:

1. Site Clearance during building of phase 3, - 1 weeks
2. Services – 6 weeks
3. Roads – 4 weeks
4. Civils –
5. Electrical –
6. Building – 6 months

Required validity period of the EA: 5 years

## 7. 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. |
|---|
| Rainwater harvesting will be standard at each home and throughout the estate. Each Home would be fitted with two (2) five thousand (5 000) litre water tank, or a single ten thousand (10000) litre tank. Owners would be encouraged to install water filters and pressurization pumps to connect the tanks within the homes, water reticulation system. An investigation is presently underway by the Client to determine the feasibility of a central water storage facility at the Flat units. The investigation further is to determine the feasibility of a treatment plant to treat the rainwater to potable standards for self-consumption within the Flat units. A further study is underway to determine the feasibility of recycling the stormwater collected within the estate and the treatment thereof to potables standards for self-consumption within the development. This will reduce the normal residential water demand. |

## 8. Waste

| Explain what measures have been taken to reduce, reuse or recycle waste. |
|---|
| An integrated waste management system must be adopted on site during the construction phase |

## 9. Energy Efficiency

| 8.1. | Explain what design measures have been taken to ensure that the development proposal will be energy efficient. |
|---|---|
| **Operational Phase:**<br>Around 2952.62 hours of sunshine are counted in George throughout the year. On average there are 97.07 hours of sunshine per month. It is therefore favourable for the incorporation of Solar Renewable | |

Energy solutions into the planned development.

The Development will implement renewable power solutions for the rental units and will encourage owners of the freehold units to install solar. Investigations are underway for a private electrical microgrid within the Estate to accommodate PV Solar renewable energy within the development with a single bulk SSEG electrical connection to Municipal Electrical grid.

## SECTION K: DECLARATIONS

### DECLARATION OF THE APPLICANT

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

I……**Shaun Gomez**……., ID number **8202235242082** in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

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

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

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

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

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

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

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

S.Gomez 13/02/2025

Signature of the Applicant: Date:

Urban Country Estate (Pty) Ltd

Name of company (if applicable):

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

I .....**Michael Jon Bennett**....., EAPASA Registration number .....**2021/3163**.....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: Date: 13 February 2025

Sharples Environmental Services cc

Name of company (if applicable):