

DRAFT BASIC ASSESSMENT REPORT
**The Proposed Construction of a Mixed Use, Sport, Adventure and Tourism Development
on Erf 12403, George Rex, Knysna**

“On 08 December 2014 the Minister of Environmental Affairs promulgated regulations in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), viz, the NEMA Environmental Impact Assessment (EIA) Regulations 2014, (GN R982, R983, R984 and R985 of 04 December 2014) as amended. The NEMA EIA Regulations, 2014 and listing notices, were subsequently amended on 07 April 2017 (refer to GN R324, R325, R327 of 07 April 2017) and is being referred to as NEMA EIA Regulations, 2014, as amended. The same referencing would apply to the listing notice containing the listed activities that would require Environmental Authorisation.

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Introduction

Erf 12403 is located in the Eastern parts of Knysna, directly West of George Rex Drive, between Marlin Street to the North and Howard Street to the South. The property is 19,4069ha in extent. The proposal now is to rehabilitate the wetland, include more Private Open Space as a green buffer and develop an area for mixed use commercial, recreation, institutional and residential purposes.

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services: physio-therapists, biokineticists, gym, massage, sport psychology, etc.

The proposed development will consists of the following mixed uses:

- 1 x “General Residential Zone III” portion (flats / sports village);
- 1 x “General Residential Zone V” portion (hotel);
- 5 x “Business Zone I” portions;
- 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion;
- 2 x “Open Space Zone II” portions;
- 1 x “Open Space Zone III” portion;
- 1x Transport Zone II portion; &
- 1x Transport Zone III portion,

Please refer to the attached town planning report for a full description. Attached as Appendix B

Scope of assessment and contents of basic assessment reports

Appendix 1 of Regulation 982 of the 2014 EIA Regulations describes the contents required to complete a basic assessment report. The below table indicates how Appendix 1 requirements were incorporated into the basic assessment report:

Scope of assessment and content of basic assessment reports	Index
(1) A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and must include -	
(a) Details of – (i) The EAP who prepared the report; and (ii) The expertise of the EAP, including curriculum vitae.	Section A of the Report.
(b) The location of the activity, including – (i) The 21 digit surveyor General Code of each cadastral land parcel. (ii) Where available the physical address and farm name. (iii) Where the required information items (i) and (ii) is not available, the co-ordinates of the boundary of the property.	(i) Section B of the Report. (ii) Section B of the Report. (iii) Section B of the Report.

<p>(c) a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is</p> <ul style="list-style-type: none"> (i) A linear Activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or (ii) On land where the property has not been defined, the coordinates within which the activity is to be undertaken. 	<p>Section C of this Report</p> <ul style="list-style-type: none"> (i) N/A (ii) N/A
<p>(d) a description of the scope of the proposed activity, including –</p> <ul style="list-style-type: none"> (i) All listed and specified activities triggered and being applied for; and (ii) A description of the activities to be undertaken including associated structures and infrastructure 	<p>Section D of this Report</p> <ul style="list-style-type: none"> (i) Section D of this Report (ii) Section D of this Report
<p>(e) A description of the policy and legislative context within which the development is proposed, including –</p> <ul style="list-style-type: none"> (i) An identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and have been considered in preparation of the report; and (ii) How the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks and instruments. 	<p>Section E of this Report</p> <ul style="list-style-type: none"> (i) Section E of this Report (ii) Section E of this Report
<p>(f) A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location.</p>	<p>Section F of this report</p>
<p>(g) A motivation for the preferred site, activity and technology alternative</p>	<p>Section G of this report.</p>
<p>(h) A full description of the process followed to reach the proposed preferred alternative within the site including:</p> <ul style="list-style-type: none"> (i) Details of all alternatives considered. (ii) Details of the public participation process undertaken in terms of regulation 41 of the regulations, including copies and supporting documents and inputs. (iii) A Summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them. (iv) The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects. (v) The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability 	<p>Section G of this report. Section H to be completed in Draft and Final BAR.</p> <p>Section H (1) to be completed in Draft and Final BAR.</p> <p>Section H (2) only the preferred alternative has been assessed as further updated specialist studies will be required. This is just a consultation BAR however a proposed alternative is mentioned. Section H (4) Same as above.</p>

<p>of the impacts, including the degree to which these impacts –</p> <p>(aa) can be reversed</p> <p>(bb) may cause irreplaceable loss of resources; and</p> <p>(cc) can be avoided, managed or mitigated.</p> <p>(vi) The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives.</p> <p>(vii) Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.</p> <p>(viii) The possible mitigation measures that could be applied and level residual risk</p> <p>(ix) The outcome of the site selection matrix</p> <p>(x) If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and</p> <p>(xi) A concluding statement indicating the preferred alternatives, including the preferred location of the activity.</p>	<p>Section H (3) of this report for the preferred alternative in the draft BAR and Final BAR this section will be completed fully.</p> <p>Section H (5) of this report for the preferred alternative in the draft BAR and Final BAR this section will be completed fully.</p> <p>Section I to be included in draft and Final BAR.</p> <p>Section G to be included in draft and Final BAR.</p> <p>Section I to be included in draft and Final BAR.</p>
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Section A

Details of the EAP who prepared the draft Basic Assessment Report

Consultation Basic Assessment Report has been compiled by:	Eco Route Environmental Consultancy
Environmental Assessment Practitioner:	Janet Ebersohn
Highest Qualification:	Bsc.Hons. Environmental Management
Postal Address:	P.O. Box 1252 Sedgfield 6573
Office Tel:	044 343 2232
Cell:	082 55 77 122
Fax:	086 402 9562
Email:	janet@ecoroute.co.za

Expertise of the EAP, including a Curriculum Vitae

EXPERIENCE AND COMPETENCY– Environmental Impact Assessment

Name of Team member and role	Project	Notes	Details of a Contactable reference
<p><u>Name</u> : Janet Ebersohn</p> <p><u>Role</u>: Environmental Assessment Practitioner.</p>	<p><u>Jukani Wildlife Sanctuary</u> Remainder of the Farm Oakhill No. 479, Bithou Municipality. DEA&DP Ref. No. EG 12/2/4/1-D1/14-0002/12</p>	<p>Environmental Authorization was obtained for the development of the Jukani Wildlife Sanctuary.</p>	<p>Welisa Holdings (Pty) Ltd.</p> <p><u>Contact</u> :</p> <p>Mr. Tony Bignaut 082 353 3643 Mr.Jurg Ohlsen</p>

			083 444 5216
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Control Officer.	<u>Jukani Wildlife Sanctuary</u> Remainder of the Farm Oakhill No. 479, Bithou Municipality. DEA&DP Ref. No. EG 12/2/4/1-D1/14-0002/12	ECO Work Completed	Welisa Holdings (Pty) Ltd. <u>Contact</u> : Mr. Tony Blygnaut 082 353 3643 Mr.Jurg Ohlsen 083 444 5216
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>Knysna Forrest Village</u> <u>Erf. No. 5084</u> Knysna Municipality. DEA Ref. No. EG 12/12/20/2506	Environmental Authorisation Obtained	Circle Developers. <u>Contact</u> : Mr. Schalk van der Merwe 082 891 2476
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>Boardwalk on Portion 111 of the Farm Brakkloof no. 443</u> DEA&DP Ref. No. EG 12/2/4/1/D1/14/0035/11	Environmental Authorisation obtained.	<u>Contact</u> : Mr.L. Dippenaar 011 – 282 8066
<u>Name</u> : Colleen & Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>Goose Bumps</u> (Log homes in Knysna Forest) DEA Ref. No EG 12/12/20/884/9	Environmental Authorisation obtained.	<u>Contact</u> : Mr. Mark Dale 021 – 794 8658
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>Lake Brenton Caravan Park</u> , compilation of Environmental Management Programme (EMP)	EMP Authorized and accepted. Eco Work Continuing	<u>Contact</u> : Mr. B. Stevenson 044 – 381 0065
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	License a Boat Launching Site within a Marine Protected Area at <u>Buffalo Bay / Goukamma Slipway, Buffalo Bay Knysna</u>	Authorisation granted by Cape Nature.	<u>Contact</u> : Mr. L. Hoatson 033 – 251 0977
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>River Deck Restaurant</u> <u>Portion 6 of Buffelsvermaak no. 212</u> , just off the N2, alongside the Goukamma River. Rectification of the unlawful commencement or continuation of listed activities: S24(G) of the National Environmental Management Act , 1998 (Act 107 of 1998) , as amended : DEA&DP. No. EG 14/2/1/D4/16/FARM 212/6	Environmental Authorisation obtained.	<u>Contact</u> : Mr.B. Terblance 044 – 383 0037
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	<u>Residential House in Noetzie.</u> DEA Ref. No. EG 14/12/16/3/3/1/557	Environmental Authorisation obtained.	<u>Contact</u> : Mr. J. van Wyk 011 – 442 8058
<u>Name</u> : Janet Ebersohn <u>Role</u> : Environmental Assessment Practitioner.	Proposed Residential Development on Portion 3 of the <u>Farm Ganse Vallei 447, Bitou.</u> DEA&DP Ref. No. EG 16/3/1/6/1/D1/15/0036/14	Basic Assessment Process Completed. Environmental Authorisation Obtained	<u>Contact</u> : Mr. Sean Mansfield 082 552 2244

Name : Janet Ebersohn Role : Environmental Assessment Practitioner.	The proposal for the construction and refurbishment of <u>seawalls/embankments/stabilising structures for the entire Leisure Isle, Theseen Island coarse way, Noetzie</u> near the old wagon road and along Charles de water street on Sedgfield Islands. DEA Ref. No. EG 14/12/16/3/3/1/1205	Still in the process with Basic Assessment Procedure. Project Closed by Knysna Municipality	Knysna Municipality Contact : Jonathan Mabula 044 302 6344 / 076 685 9110
Name : Janet Ebersohn Role : Environmental Assessment Practitioner/Wetland Specialist.	Proposed new Development <u>ERF 12403, Knysna</u> . DEA Ref. No. EG 14/12/16/3/3/1/1221	Still in the process with Basic Assessment Procedure.	Contact : Mr. Kosie Swart 083 250 9933
Name : Janet Ebersohn Role : Environmental Assessment Practitioner.	Dune Management Plan from <u>Glentana</u> CMU to Mossel Bay CMU.	Environmental Authorisation obtained.	Mossel Bay Municipality Contact : Mr. W. Manual 079 543 8202
Name : Janet Ebersohn Role : Environmental Assessment Practitioner.	Maintenance Management Plan ("MMP") for the proposed stormwater upgrade works in Trekker street, <u>Kranshoek</u> , and Plettenberg Bay.	Environmental Authorisation obtained	Nadeson Consulting Services Contact : Clint Stockwell 021 418 49888
Name : Janet Ebersohn Role : Environmental Assessment Practitioner	Request for extension for the proposed ERF 3216, <u>Myoli Beach</u> Sedgfield DEA REF: 14/12/16/3/3/1/979	Environmental Authorisation Obtained	Dr. Ralinala Veronica Nyamhaka 082 551 6958 011 318 0540
Name Janet Ebersohn Assessment Practitioner.	Amendment of the Environmental Management Plan (Empr) for the proposed Knysna Affordable housing Project, <u>Hornlee Sites: Knysna Local Municipality, Western Cape</u>	Environmental Authorisation obtained	ABSA Property Development (Pty) Limited Contact : Mr C. Witbooi 021 915 5345 082 563 2867
Name : Janet Ebersohn & Samantha Robertson Assessment Practitioner	Honeybush Investments Farm wittedrift 306/7, Plettenberg Bay, Western Cape. DEA Ref: G14/1/1/E3/4/2/3/L818/16/VOL 1	Preliminary Assessment S24G	Contact : Mike Mouwat 044 535 9086 082 562 9806
Name : Samantha Robertson Assessment Practitioner	Erf 154 Construction of a new single residential dwelling on Erf No. 154, Rotsalaan No. 1 Cape St Francis, Kouga Municipality.	Environmental Authorisation obtained	Contact : Mr L. Fourie 082 567 7744
Name : Janet Ebersohn Role : Environmental Assessment Practitioner	Lake Brenton Berm DEA REF:	Environmental Authorisation Obtained (BAR) Eco Work	Contact : Alan Dogget 083 290 5559
Name : Janet Ebersohn	Ptn 5 of the farm Roodeheuvel Nr 7. Proposed DAM	Scoping EIA Still in Process	Contact : Henky Du plesses 082 396 4094
Name :Janet Ebersohn Environmental Assessment Practitioner	Featherbed Sea wall	BAR Still In process	Contact : Tracey Brink 082 922 6775
Name :Janet Ebersohn Environmental Assessment Practitioner	Eco Brandwacht	Eco Work	Contact : Jaques Tel: (021) 863 5000 Fax: 086 767 1689 Cell: 084 900 9992

<u>Name</u> : Janet Ebersohn Environmental Practitioner	Oakhill School	Wetland Delineation Report	<u>Contact</u> : Marike Vreken 044 382 0420 082 927 5310
<u>Name</u> : Janet Ebersohn	Ptn 76 of the Farm Uitzicht 216 Lake Brenton	Screening Phase	<u>Contact</u> : Marike Vreken 044 382 0420 082 927 5310
<u>Name</u> : Janet Ebersohn Environmental Practitioner	SPK Umtata	Maintenance Management Plan and Water use Licenses Authorisation Obtained	<u>Samuel Makubo</u> <u>035 789 7161</u> <u>083 392 7941</u>
<u>Name</u> : Janet Ebersohn Environmental Practitioner	Portion 55 of the Farm Noetzie 394	BAR Environmental Authorisation Obtained	<u>James Van Wyk</u> <u>011 442 8058</u>
<u>Name</u> : Janet Ebersohn Environmental Practitioner	Erf 169 Hoekwill	Oscae Permit Obtained	<u>Lucille</u> <u>bookings@flytimeparagliding.com</u>
<u>Name</u> : Janet Ebersohn Environmental Practitioner	Ptn 189/130 Rondevlei	Oscae Permit Obtained	<u>Mr PDG Drever</u> <u>044 883 1027</u> <u>082 678 2328</u>
<u>Name</u> : Janet Ebersohn Environmental Practitioner	Erf 4012	Oscae Permit Obtained	<u>Contact</u> : <u>John Sayers</u> 011 – 794 8810
<u>Name</u> : Janet Ebersohn Environmental Practitioner	Lake Brenton Resort Portion 92 (A Portion of Portion 53 Of the farm Uitzicht, Farm no. 216, Western Cape DEA REF:12/12/20/487	Variouse DAFF Permits Obtained	<u>Alan Dogget</u> <u>083 290 5559</u>

CURRICULUM VITAE (CV)

Position Title and No.	Senior Environmental Assessment Practitioner
Name of Expert:	Janet Ebersohn
Date of Birth:	23/05/1977
Country of Citizenship/Residence	South Africa

Education:

Institution: Tshwane University of Technology and Unisa

Year: 1998

Degree: National Diploma in Food Service Management

Institution: University of South Africa

Year: 2012

Degree: BSc. Hons in Environmental Management

Institution: Stellenbosch University

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Year: 2012

Degree: Certificate on Flood Line Determination

Institution: Rhodes University

Year: 2013

Degree: Certificate on Wetland Delineation.

Employment record relevant to the assignment:

Period	Employing organization and your title/position. Contact info for references	Country	Summary of activities performed relevant to the Assignment
2008 -2010	Junior Environmental Assessment Practitioner Reference: Dr C Ebersohn / Peet Joubert	South Africa	Oscaer Permits, DAFF permits, Basic Assessment Reports
2010 -2018	Senior Environmental Assessment Practitioner Reference: Dr C Ebersohn	South Africa	<p>Social Impact Assessments, Wetland Delineation, Environmental Impact Assessments and Environmental Impact Reports pertaining to:</p> <ul style="list-style-type: none">• Residential Developments• Industrial Developments• Game Farm Management• Water use license applications• Air quality license applications• Permit applications for developments in identified sensitive areas <p>Environmental Management Programmes & Frameworks pertaining to:</p> <ul style="list-style-type: none">• Residential Developments• Industrial Developments• Game Farm Management• Water use license applications• Waste management license applications• Air quality license applications• Permit applications for developments in identified sensitive areas <p>Integrated Environmental and Conservation Planning with Multi Spectrum Participation:</p> <ul style="list-style-type: none">• Environmental Management Programmes and training for companies• Environmental Management Programmes and training for NGO's

Membership in Professional Associations:

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Language Skills:

Languages	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant’s Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
{List all deliverables/tasks as in TECH- 5 in which the Expert will be involved}	Ms Janet has completed various Environmental Impact Assessment Applications, Environmental Management Programmes and social impact assessment reports. She has worked on the assessment of goods and services that the wetlands provide, thereby aiding informed planning and decision making.

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Janet Ebersohn

Name of Expert	Signature	Date
PO Box 1252 Sedgfield, 6573		

Section B

Location Information

Province:	Western Cape
District Municipality:	Garden Route Municipality
Local Municipality:	Knysna Municipality
Ward number(s):	Ward 9
Nearest town(s):	Knysna
Erf name(s) and number(s):	Erf 12403

Property Information

Erf Number	Erf 12403
Surveyor General 21 digit code:	C03900050001240300000
Zoning:	Undetermined
Urban Edge:	Yes
Applicant name:	Jazz Spirit 130 (Pty)Ltd
Registration number (if applicant is a company):	2003/022155/07
Trading name (if any):	Jazz Spirit 130 (Pty)Ltd
Responsible person name:	Andries Adriaan Fourie
Applicant/ Responsible person ID number:	740606 5007 08 2
Responsible position, e.g. Director, CEO, etc.:	Director
Physical address of applicant:	6 Fish Eagle Drive. Belvidere Heights, Knysna 6571
Postal address:	P.O. Box 479, Knysna,
Postal code:	6570
Telephone:	082 925 4886
Fax:	086 402 9562
E-mail:	andries@kdpdg.co.za
GPS point middle of property:	-34°052121 23°72477

Property Description

Erf 12403 is situated within the Knysna Municipal Area and is located directly West of George Rex Drive, between Marlin Street to the North and Howard Street to the South. The premier Hotel is located directly opposite the site (West) and Hunters Home Estate directly behind the Site (East). The Waste Water Treatment Works is located North of the property. The property is 19,4069ha in extent.

The George Rex Wetland is located on a very shallow gradient slope on site that was historically linked directly with the Knysna Estuary as a floodplain. The site is relatively flat (<1:100) which drains gradually in a south and westerly direction. The soil has medium to low permeability and persistent rainfall will tend to pond on the surface (Outeniqua geotechnical Services Report, 2015).

The flow of water that historically flowed into the Knysna Estuary has been vastly altered by the construction of George Rex Drive, resulting in ponding of the water and the flooding of George Rex Drive during high rainfall events. The entire property is elevated 2 to 3m above mean sea level.

A man made Channel is located on the Eastern boarder of the property and the remaining wetland (wetland vegetation) on site predominantly located on the Southern and Western Boundary.

The site is vacant and there has been a long history of impacts namely:

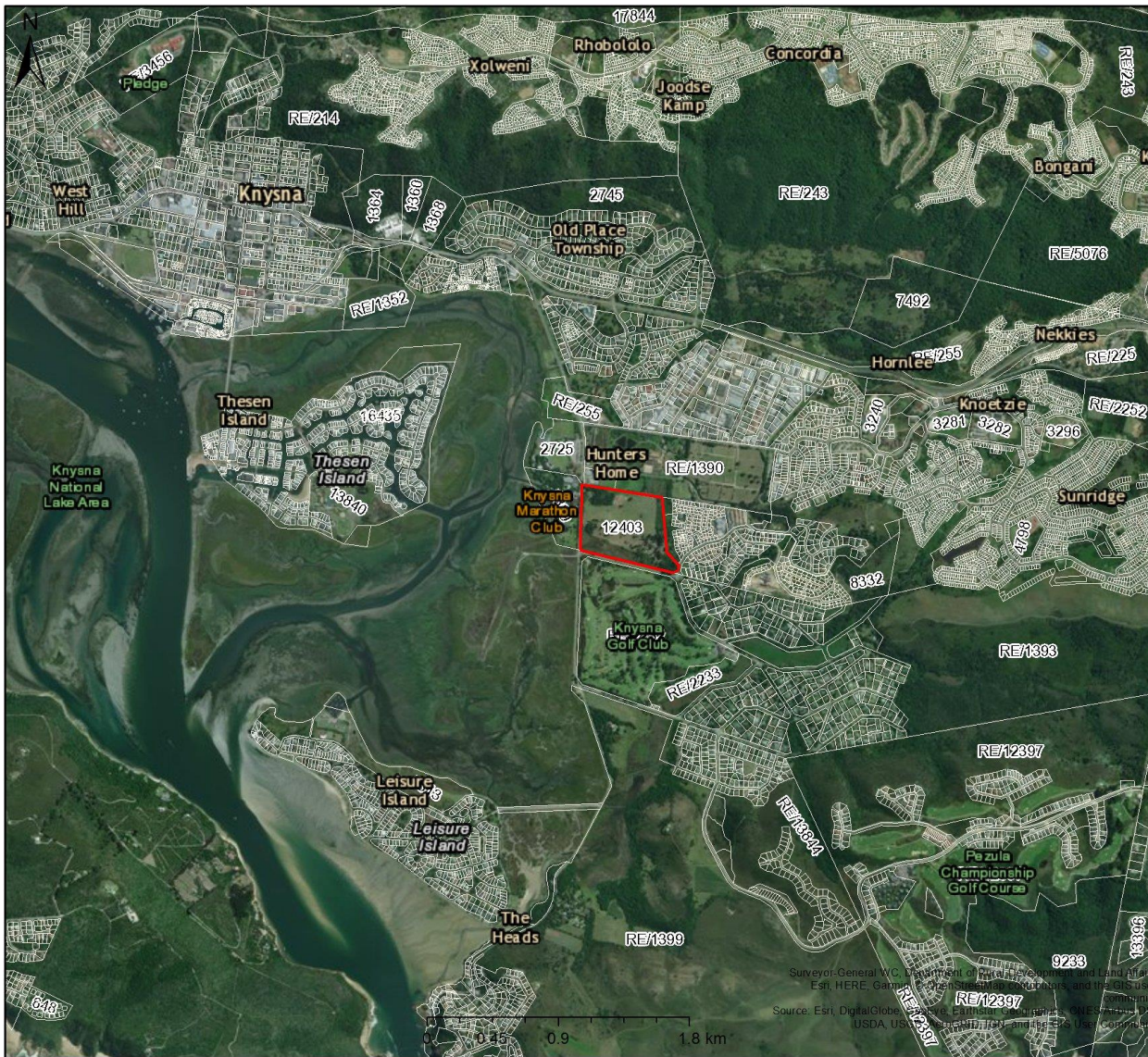
- Dumping of sawdust
- Invasion of alien trees
- Obstruction of the natural flow of fresh and estuarine water onto the property
- Elevated nutrient inflows from the adjacent catchment and nearby Waste Water Treatment Works (WWTW)

The result of the above impacts the Ecological state of the Wetland has declined from a Category C to a Category C/D condition. (Sherman and Colloty 2017, George Rex Wetland Reserve Knysna)

Ecological State Category C and C/D for describing the integrity of wetlands

Impact Category	Description	Present State Category
Moderate	Moderately modified. A moderate change in ecosystem processes ad loss of natural habitats has taken place but the natural habitat remains predominantly intact	C
Large	Largely modified. A large change in ecosystem processes and loss of natural habitat and Biota has occurred.	D
A WULA Licence for the proposed development was granted on 26/05/2021. Please refer to Appendix F		

Section C - Locality Map



Locality

Legend

Lat: -34.051187 | Lon: 23.073764
 SG Erf Info

Erf Nr: 12403
 Area (SQM): 194071.8
 SG Code: C03900050001240300000
 SG Region: KNYSNA
 Legal Status: Registered

PROPERTY BOUNDARY

Scale: 1:36 112

Date created: February 18, 2019

Compiled with CapeFarmMapper



**Western Cape
 Government**

Agriculture

Surveyor-General W.C. Department of Agriculture, Land Affairs, Est. HERE, GAMMA, Esri, HERE, Garmin, DeLorme, Swatch, IGN, and the GIS User Community
 Source: Esri, DigitalGlobe, GeoEye, Earthstar, CNES, USDA, USGS, AeroGRID, IGN, and the GIS User Community

SITE:



Site and surrounding Areas

Scale: 1:9 028
Date created: September 25, 2019

Compiled with CapeFarmMapper



Site Sensitivities and detailed approach for the Proposed Development

The remaining degraded/modified wetland on site played an enormous role in the planning of the proposed development. In order to ensure that the least environmental impacts occur as a result of the proposed Development the following Specialist were appointed to help assess the wetland, its functionality, its Ecological State and the percentage of land that can be developed:

- Sherman Colloty & Associates cc – George Rex Wetland Reserve, 2017.
- Aquatic Rehabilitation Plan for George Rex Wetland Knysna. Confluent Environmental (Pty) Ltd July 2019.
- Confluent Environmental (Pty) submitted an application for a WULA license.
- Geotechnical Site Investigation for the Proposed Development of Erf 12403, Knysna – Outeniqua Geotechnical Services, 2015.
- Several Previous studies from 2006 which is referred to in the Sherman Colloty & Associates report but that will not be attached in this Final BAR as it was well summarised in the 2017 report and assisted with the Reserve determination.

The general consensus of the reports indicate that the Wetland can be rehabilitated to a category C that will improve the condition and functionality of the wetland and provided a level of protection to the downstream Knysna Estuary against poor Effluent discharges from the non-compliant WWTW located adjacent to the Erf 12403 (Sherman Colloty and Associates, 2017).

The Proposed Site Development Plan (SDP) has been assessed, changed and modified over the years to ensure only 40% of the Erf is Developed and the Remaining 60% is rehabilitated as recommended by Sherman Colloty and Associates report.

A Water Use License has been obtained from Department of Water Affairs on 22/04/21 with the reference number of: WU9330 (see attached Appendix F). The description of the activity approved is as follow:

“The high confidence Reserve by Rountree and Scherman (2017) determined that development of 40% of the wetland and rehabilitation of the remaining 60% of wetland would still allow for an improvement in the PES from C/D to the Recommended Ecological Category (REC) of C. The Department of Water and Sanitation has approved the reserve on 1 March 2021 based on the 40/60 percent scenario.

Water ponding and the flooding of George Rex and Howard drive additionally played a major role in the development of the SDP. In order to mitigate negative environmental impacts on the receiving environment the following Specialist were appointed:

- Niewoudt & Kie Consulting Engineers- Preliminary Report on Bulk Civil Services for the proposed development, 2018.
- Niewoudt & Kie Consulting Engineers – Storm Water Management Plan 2019.

Increased traffic in the vicinity of the proposed development has been addressed by the appointing of the following Specialist:

- ITS, George Rex Sports and Adventure Centre, 2018 .

The long history of the project has resulted in various Site Development Plans. After careful consideration and the specialist's recommendations, meetings with DEA, DEA&DP, SANParks, Department of Water Affairs, Knysna Municipality and various NGO's the proposed new Site Development Plan and an alternative Site Development Plan will be assessed throughout this document, in order for the Competent Authority (DFFE) to make an informed Decision. The public has had several opportunities to comment on all the previous SDP's and proposals and will again be afforded a chance to comment on the Final proposed SDP.

Section D

Description of the scope of the proposed activity

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services: physio-therapists, biokineticists, gym, massage, sport psychology, etc.

The proposed development will consists of the following mixed uses:

- 1 x “General Residential Zone III” portion (flats / sports village);
- 1 x “General Residential Zone V” portion (hotel);
- 5 x “Business Zone I” portions;
- 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion;
- 2 x “Open Space Zone II” portions;
- 1 x “Open Space Zone III” portion;
- 1x Transport Zone II portion; &
- 1x Transport Zone III portion,

General Residential Zone

Portion "3" is proposed as "General Residential Zone III" for flats, for the development of a "sports village". This property is 6884m² in extent and allows for approximately 60x 2-bdr flats. The new Integrated Knysna Zoning Scheme Bylaw allows for a 60% coverage for flats.

Portion "6" is proposed as "General Residential Zone V" for a Hotel, for the development of a 3-storey hotel, with approximately 80 beds. This property is 5112m² in extent. The new Integrated Knysna Zoning Scheme Bylaw allows for a 100% coverage for hotels. The hotel portions are positioned to abut the wetland area in order to capitalise on the birdlife and views of the Knysna Lagoon

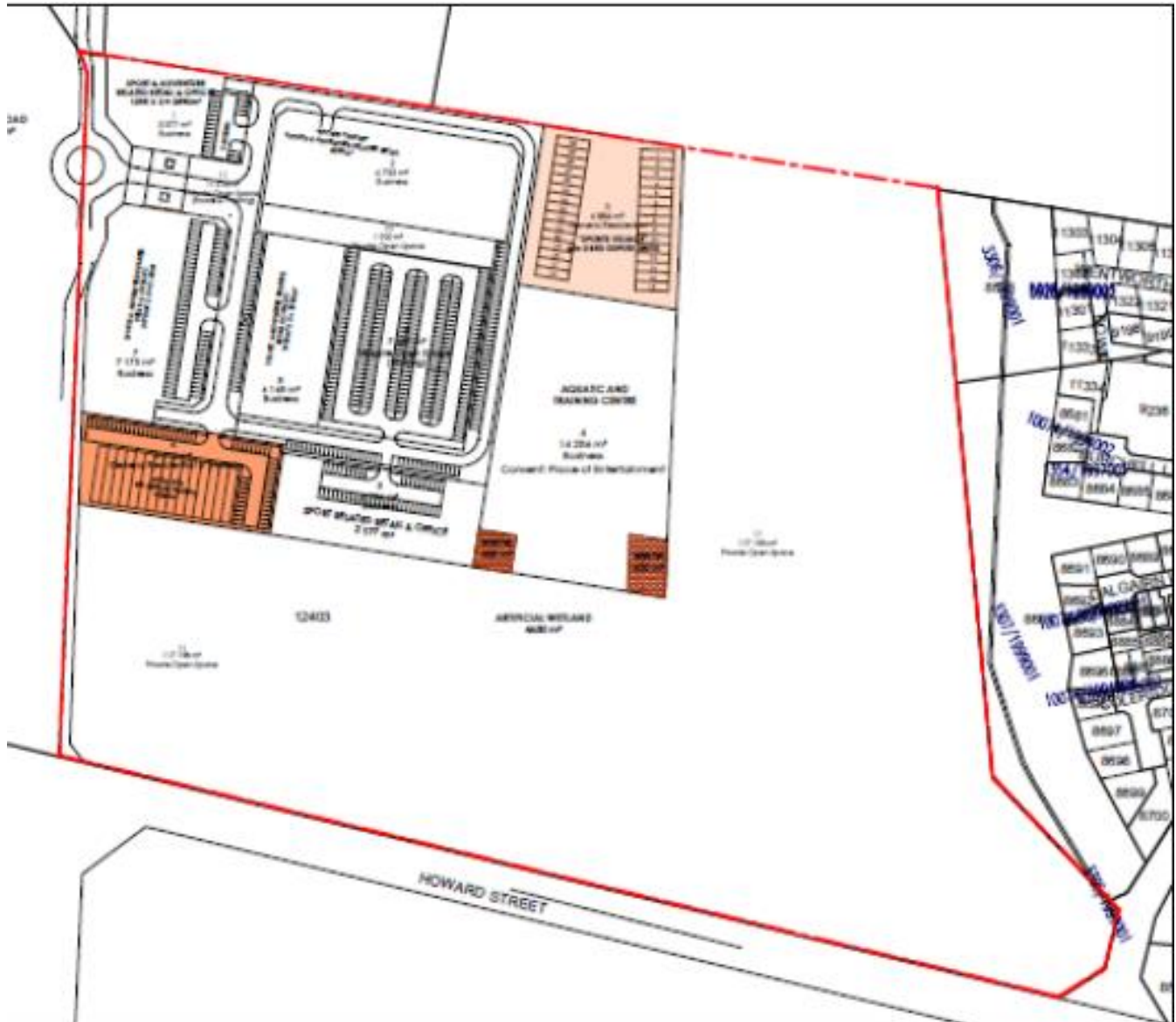


FIGURE 3: GENERAL RESIDENTIAL PROPERTIES

Business Zone

Five (5) "Business Zone I" properties are proposed. These are indicated as portions "1", "2", "5", "7" and "8" on the site development plan. The extent of the "Business Zone" portions are:

Portion 1	3377m ²
Portion 2	6733m ²
Portion 5	4796m ²
Portion 7	7173m ²
Portion 8	4148m ²

The intention of these properties will be to be developed into sports and wellness-orientated retail and offices / consulting rooms for sport & wellness related Professional services. The Knysna Zoning Scheme Regulations allows a 100% coverage for business zoned properties.

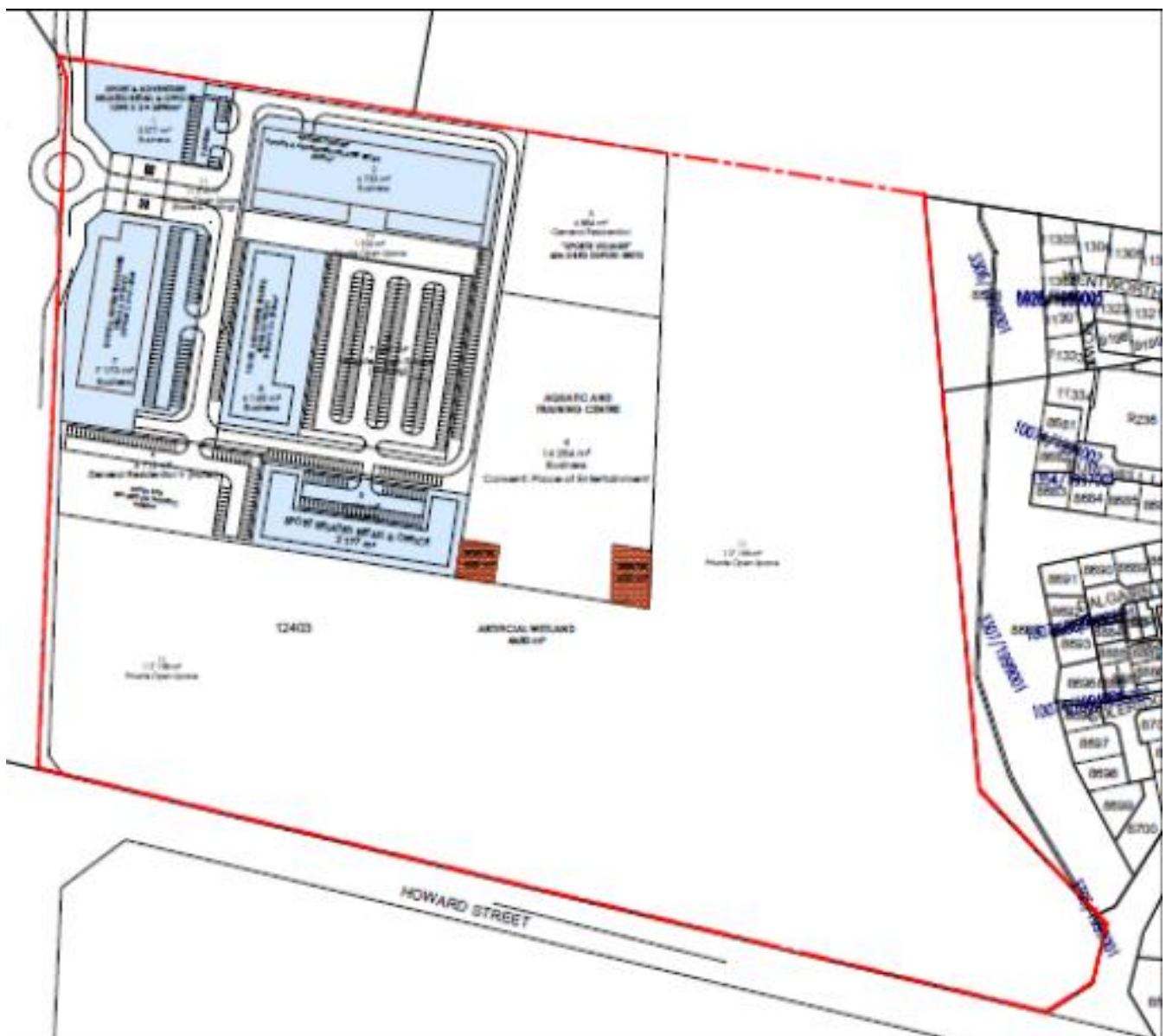


FIGURE 4: BUSINESS PROPERTIES

Business Zone II with Consent Use for a Place Of Assembly

One (1) "Business Zone II" property with a consent use to allow a 'Place of Assembly' is proposed. This portion is indicated as portion "4" on the site development plan.

Portion "4" will be 14286m² in extent. The intention of this property is to be developed with a heated Olympic size indoor pool and ancillary high-performance sports facilities that will be developed with recreation areas that could be used for assemblies such as concerts, conventions, exhibitions, etc

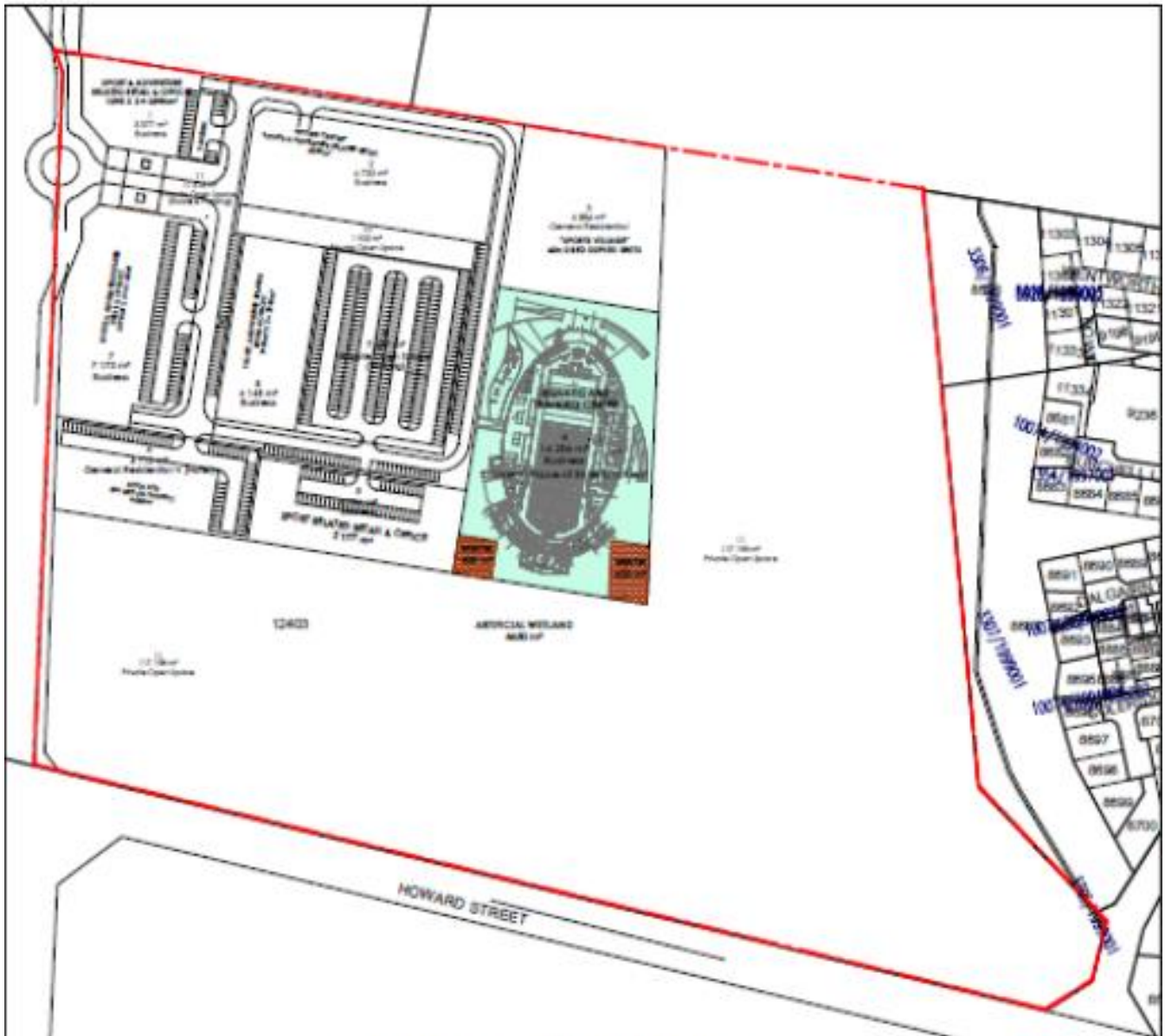


FIGURE 5: PROPOSED AQUATIC CENTRE

Open Spaces

Three (3x) portions, portions “9” - “11”, are proposed as Open Spaces.

Portions 9 & 10 are proposed as Private open spaces (Open Space Zone II) for private recreation and private parking purposes.

Portion 11 contains the wetland area and this site will be a private “Nature Conservation Area”, with bird hides. Portion “11” is 11,7198ha in extent. This open space will be developed as an open space system that will be protected and conserved in perpetuity and accessible to the public.

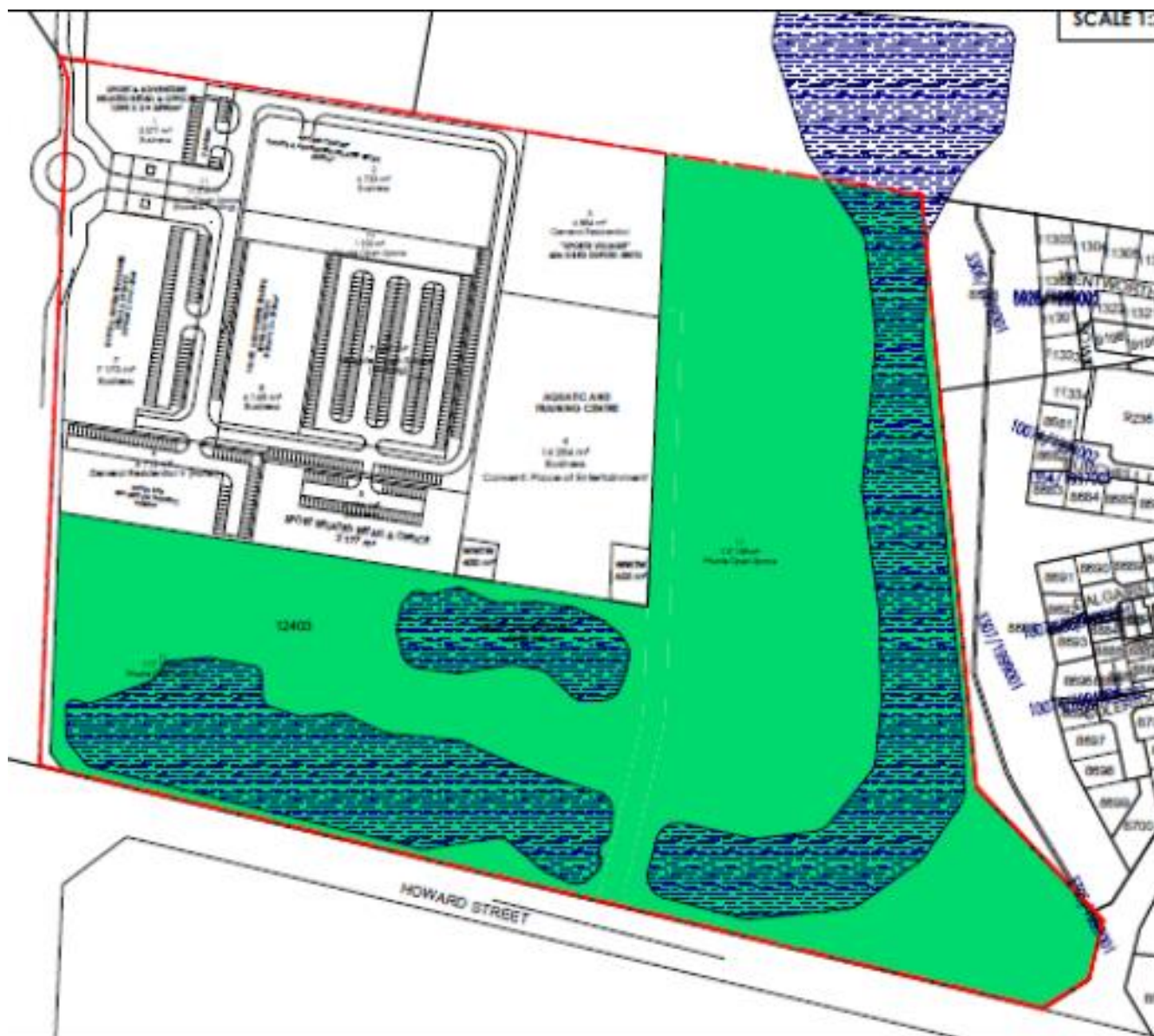


FIGURE 6: PROPOSED CONSERVATION AREA

Transport Zones (Roads)

Two (2x) Road portions, portions “11” and “12”, are proposed as Roads.

Portion 11 will be zoned as “Transport Zone III” for a private road and private parking, and Portion 12 will be zoned as “Transport Zone II” as a public road (i.e. the widening of George Rex Drive road reserve).

A circular movement system is proposed for the site. The proposed access road will be registered as an access servitude. The proposed private road covers approximately 1,1ha of the site. The proposed internal access road will circle through the site.



FIGURE 7: PROPOSED ROADS

Access and Egress

Access is proposed via a new traffic circle on George Rex Drive, opposite the entrance of the Premier hotel. A portion of land will be provided as widening of George Rex Drive. Figure 8 below shows the current access off George Rex Drive to the site.



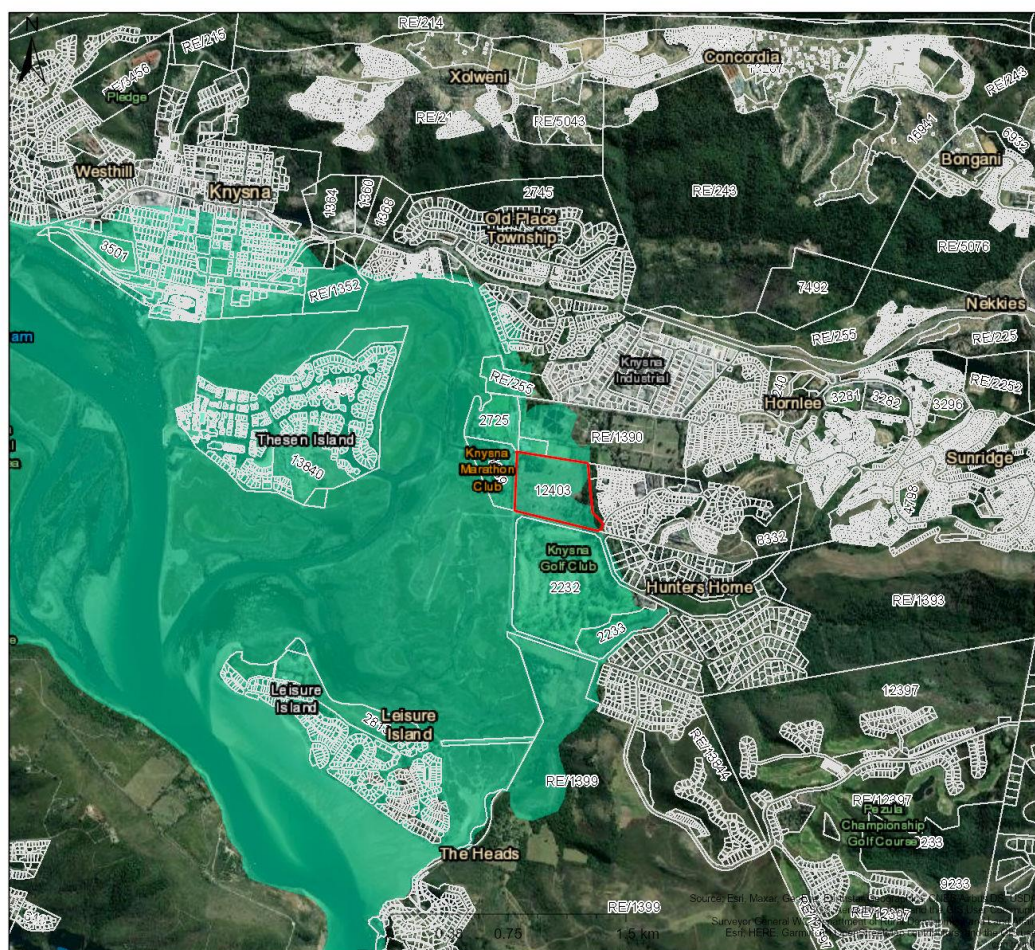
FIGURE 8: CURRENT ACCESS TO ERF 12403

The above information was obtained from Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes Prepared by Marike Vreken Urban and Environmental Planners December 2020. Please refer to full report attached as appendix B

Description of the NEMA listed activities associated with the project

Before any of the below listed activities can commence, authorisation must be obtained from the Department of Environmental Affairs (DEA). The following activities as per NEMA Regulations have been identified below:

Listed activity as described in GN R.325, 324, 327	Description of project activity
<p>GN R.327 activity 12:</p> <p>The development of –</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square meters or more</p> <p>Where such development occurs –</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse</p>	<p>The entire site is classed as a NEFPA wetland. Please note that half of the built up area in Knysna is declared a wetland.</p>



NEFPA

Legend

- Erf
- Wetlands (NEFPA)**
 - Estuaries
 - Natural

Scale: 1:36 112
Date created: October 6, 2021

Compiled with CapeFarmMapper



Western Cape Government
Agriculture

GN R.327 activity 17:

Development –

The Ashmead Channel is part of the Knysna Estuary. Even though it is manmade channel, it is still influenced by the tides. The proposed development is within 100

(v) if no development setback exists, within a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever is the greater;

In respect of –

(e) infrastructure or structures with a development footprint of 50 square meters or more

meters of the high water mark of the Ashmead channel please refer to map below that indicates the 100 meter buffer from Erf 12403.



100 meters

Scale: 1:4 514
Date created: September 30, 2019
Compiled with CapeFarmMapper



Western Cape Government
Agriculture

GN R.327 activity 19:

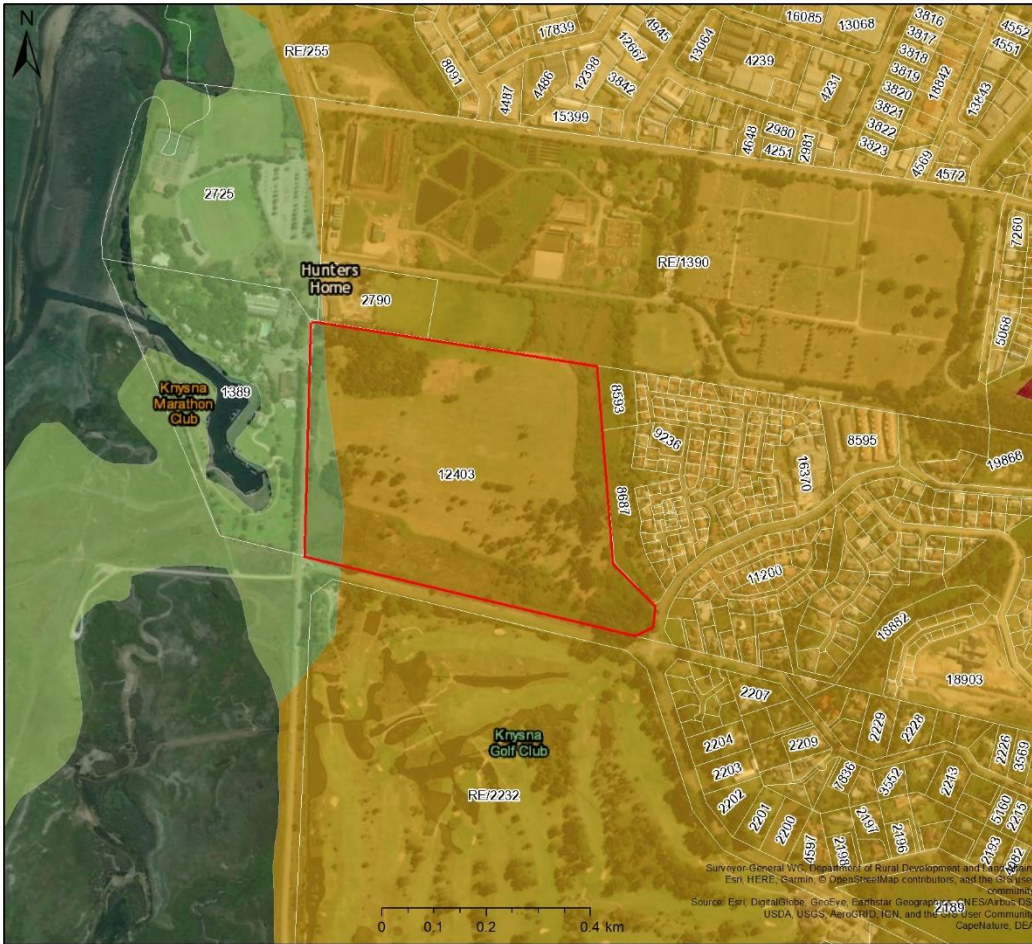
The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from –

(iii) the littoral active zone, an estuary or a distance of 100 meters or more inland of the high-water mark of the sea or estuary, whichever distance is the greater

This activity is included as per the George Rex Wetland Reserve March 2017 prepared by Scherman Colloty & Associates cc states the following:

“The hydrological functions of the wetlands – water quality amelioration and stormwater attenuation – are particularly important and rehabilitation interventions should aim to maximize these functions, as well as improve the condition of wetland vegetation generally, and specifically to increase the extent of brackish

	<p>estuarine wetland patches through improved tidal exchanges. The latter can be achieved by opening the Culvert in the southwestern corner of the wetland so as to allow estuarine movement into the wetland.”</p> <p>The Ashmead Channel is part of the Knysna Estuary Even though it is manmade channel, it is still influenced by the tides. The proposed development is within 100 meters of the high water mark of the Ashmead channel please refer to map above that indicates the 100 meter buffer from Erf 12403.</p>
<p>GN R.327 activity 19A:</p> <p>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from –</p> <p>(ii) the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater</p>	<p>This activity is included as per the George Rex Wetland Reserve March 2017 prepared by Scherman Colloty & Associates cc states the following:</p> <p>“The hydrological functions of the wetlands – water Quality amelioration and stormwater attenuation – are particularly important and rehabilitation interventions should aim to maximize these functions, as well as improve the condition of wetland vegetation generally, and specifically to increase the extent of brackish estuarine wetland patches through improved tidal exchanges. The latter can be achieved by opening the Culvert in the southwestern corner of the wetland so as to allow estuarine movement into the wetland.”</p> <p>The Ashmead Channel is part of the Knysna Estuary Even though it is manmade channel, it is still influenced by the tides. The proposed development is within 100 meters of the high water mark of the Ashmead channel please refer to map below that indicates the 100 meter buffer from Erf 12403.</p>
<p>GN R.327 activity 27:</p> <p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.</p>	<p>The vegetation on site is classed as Garden Route Shale Fynbos which has an ecosystem status of Endangered. Please refer to Map below.</p> <p>The site has been largely transformed with very little indication of Garden Route Shale Fynbos on Site.</p>



Ecosystem Threat Status

Legend

Erf

Ecosystem Threat Status 2016

- CR
- CR (A1 and D1)
- CR (D1)
- EN
- EN (A1 and D1)
- EN (C)
- EN (D1)
- LT
- NA
- VU
- VU (A1 and D1)
- VU (D1)

Scale: 1:9 028

Date created: February 21, 2019

Compiled with CapeFarmMapper



Western Cape
Government

Agriculture

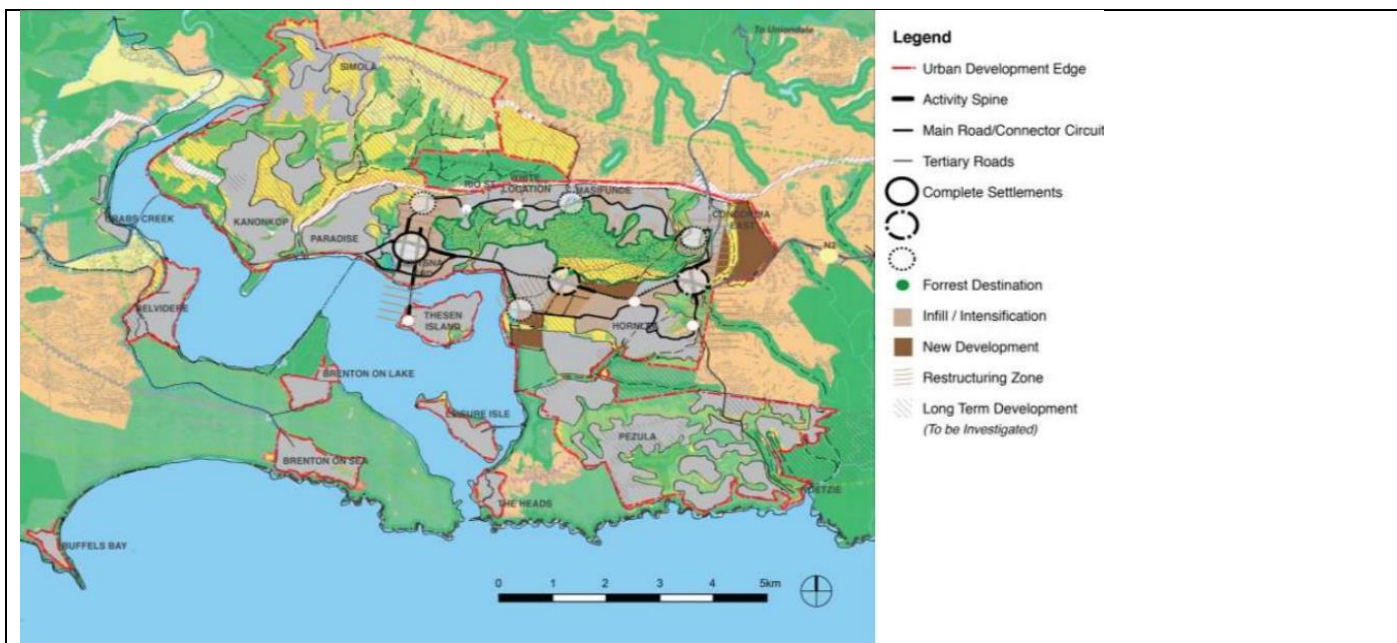
GN R.327 activity 28:

Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:

- (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares;

excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

The subject property is situated within the urban edge of Knysna, the Knysna SDF demarcate the area in which the property is situated as “New Development”. The Proposed development will be larger than 5 hectares.



KNYSNA SUSTAINABLE AND EQUITABLE GROWTH

GN R.324 activity 12:

The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

i. Western Cape

i. Within a 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 a critically endangered in the National Biodiversity Assessment 2004.

(iii) Within the littoral active zone or 100 meters inland from the high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind a development setback line on erven in urban areas.

The vegetation on site is classed as Garden Route Shale Fynbos which has an ecosystem status of Endangered

GN R.324 activity 6:

The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more

i. Western Cape

Erf 12403 lies within a protected area, Knysna National Lakes Area. Please refer to SAPAD Protected Area below.

The hotel will in all probability be 120 beds and a sports village will have 60 units to provide accommodation.

i. Inside a protected area identified in terms of NEMA



SAPAD Protected Area

Legend

- Erf
- SA Protected Areas**
 - Forest Nature Reserve
 - Forest Wilderness Area
 - Marine Protected Area
 - Mountain Catchment Area
 - National Park
 - Nature Reserve
 - Protected Environment
 - Special Nature Reserve
 - World Heritage Site

Scale: 1:18 056
Date created: February 21, 2019
Compiled with CapeFarmMapper



Principals contained in Section 2 of the National Environmental Management Act, 1998 (Act 107 of 1998), as amend Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. The property is currently vacant, but the proposal now is to rehabilitate the wetland, include more Private Open Space as a green buffer and develop an area for mixed use commercial, recreation, institutional and residential purposes.

Development must be socially, environmentally and economically sustainable:

Socially

The proposed development will create jobs (during construction and operational phase), bring more tourist to the area in line with sporting events (high-performance aquatic centre, a sports village, sport-orientated retail and professional services). The aim is to create an enabling environment for social development and economic growth.

Environmentally

Rehabilitation of the existing degraded wetland. As per the wetland report please note the following: *“Although no development has taken place since 2008, the site had been affected by previous impacts on and around the site, such that the PES had already been reduced to a C in 2008. Subsequent to this, due largely to land use management of the*

site (vegetation clearing at the request of the local municipality), the PES of the site has continued to decline (from a C in 2008 to a C/D in 2016)”

The main aim is to rehabilitate the wetland to at least obtain PES of a C, this can be managed by removal of alien vegetation, managing the water entering the system (artificial wetland) opening the North West culvert in order to obtain tidal interaction with the Knysna Estuary.

The above information was obtained from: George Rex Wetland Reserve March 2017 prepared by Scherman & Colloty.

A Water Use License has been obtained from Department of Water Affairs on 22/04/21 with the reference number of: WU9330 (see attached Appendix F). The description of the activity approved is as follow:

“The high confidence Reserve by Rountree and Scherman (2017) determined that development of 40% of the wetland and rehabilitation of the remaining 60% of wetland would still allow for an improvement in the PES from C/D to the Recommended Ecological Category (REC) of C. The Department of Water and Sanitation has approved the reserve on 1 March 2021 based on the 40/60 percent scenario.

A wetland rehabilitation report was compiled by Dr Jackie Dabrowski of Confluent Environmental (PTY) Ltd. Please see attached as appendix I.

Economically

Knysna town offers a wide variety of sporting events during the year. Various tourists visit the area to train in the summer months. The proposal will consists of a high-performance aquatic centre, a sports village (for accommodation for athletes and supporters), sports –orientated retail and professional services (physiotherapists, bio kinetics, gym, massage, ect). The proposed development will create more job opportunities in Knysna during construction and operational phase.

(a) Sustainable development requires the consideration of all relevant factors including the following:

(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

Historically, the entire George Rex wetland site comprised a combination of estuarine, freshwater and brackish wetland types. However, subsequent infilling, draining and surrounding infrastructure developments have reduced the functionality and condition of the wetlands in the area. The earlier Reserve of 2008 was based on preceding specialist detailed studies of the site (Bornman, 2005) and deemed that 71% of the site remained as a functional wetland.

Since this time, the PES of the site has declined from a C to a C/D condition between 2008 and 2016. The REC of a C was set for the site in 2008 and, as many of the more recent impacts are reversible, a C condition remains feasibly attainable and is suggested as the Recommended Ecological Condition (REC) for this site.

Off-site mitigation is not possible within this catchment as the vast majority of wetlands in the catchment and surrounding area have been lost to catchment development or are already protected and in good condition. There are no sites where rehabilitation of wetlands can be undertaken in the immediate catchment to offset losses within the site.

Rehabilitation within the site is however recommended to improve the condition and functionality of the wetlands, as well as to provide a level of protection to the downstream Knysna Estuary against poor effluent discharges from the non-compliant WWTW located adjacent to Erf 12403 (the study site). The hydrological functions of the wetlands – water quality amelioration and stormwater attenuation – are particularly important and rehabilitation interventions should aim to maximize these functions, as well as improve the condition of wetland vegetation generally, and specifically to increase the extent of brackish estuarine wetland patches through improved tidal

exchanges. The latter can be achieved by opening the culvert in the southwestern corner of the wetland so as to allow estuarine movement into the wetland.

In an evaluation of potential development and management scenarios for the site, Scenario 3b (allowing for a 40% development footprint) was identified as the scenario with the maximum development footprint that would still allow for a C Ecological Condition to be achieved. Using a hectare equivalent approach, between 51 to 58% of the site will be required to achieve the REC of a low C. Thus the remaining 60% of the site (remaining from the 40% development footprint) would comprise a combination of various wetland types (51-58% of the site) and small buffers. DWA (2013) noted that whilst large buffers are appropriate for surface water inputs, smaller buffers are likely to be sufficient to mitigate runoff from the catchment and adjacent land-use disturbances in wetland flats (wetland types like George Rex) as the wetlands are driven by groundwater rather than surface runoff.

The above information was obtained from: George Rex Wetland Reserve March 2017 prepared by Scherman & Colloty.

A Water Use License has been obtained from Department of Water Affairs on 22/04/21 with the reference number of: WU9330 (see attached Appendix F). The description of the activity approved is as follow:

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A wetland rehabilitation report was compiled by Dr Jackie Dabrowski of Confluent Environmental (PTY) Ltd. Please see attached as appendix I.

(ii) That pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

E.coli counts and nutrient levels (N and orthophosphate-P) outflows to the estuary should not be permitted to exceed guideline levels; meaning that effluent discharge standards should be met. The wetlands should be engineered and rehabilitated to promote diffuse flow through vegetated areas; to remove channelized flows (except for the tidal exchanges as these arise from culverts) and could consider the creation of open water areas within the reedbeds to improve oxidation and water quality enhancement functions of the wetland. Walkways and educational/recreational areas will also further demonstrate the value of improved wetland state.

The above information was obtained from: George Rex Wetland Reserve March 2017 prepared by Scherman & Colloty.

It is proposed that sewage disposal for the development include for normal waterborne sewage on site that is reticulated to two new pump stations both which are also to be located on site. Thereafter a new pumping main is to be laid through to the existing municipal WWTW, which is located approximately 100m away along George Rex Drive.

It is proposed that the solid waste disposal for the development be handled through the Municipal waste by rail system. It is proposed that the collection of waste from the site be done by the Municipality at one or more collection points within the property. The Development Management will collect the waste internally and store it at the municipal collection points.

Firstly, the overgrown storm water channels should be rehabilitated. Secondly, it is proposed that storm water runoff from the development be planned in such a way that the runoff be conveyed to the Private Open Space portions. This runoff should be discharged onto the surface of these portions to promote both attenuation and ground water recharge. This surface flow should then discharge into the rehabilitated channels where it will be conveyed to the South West corner of the property (corner of George Rex Drive and Howard Street) where the

existing 450mm diameter pipe culvert presently drains the area. However, this culvert is undersized and has a shallow invert level. This impacts on the overall effectiveness and hydraulic capacity of the drainage system on the property and results in regular flooding of Howard Street.

Due to the above restriction it is proposed to provide a connection to the existing Municipal storm water trench/channel on the south side of Howard Street and to upgrade the existing pipe culverts under George Rex Drive at the Knysna Golf Course. The invert level of this culvert is 700mm deeper than the 450mm culvert referenced above. The resulting drainage should be improved by using this 'lower' culvert.

The upgrading of the existing pipe culverts under George Rex Drive at the Knysna Golf Course has been previously recommended to the KM by SSI engineering consultants. The motive for this recommendation was to alleviate flooding of the lower lying sections of the residential area of Hunters Home. It is proposed to upgrade this culvert to at least a 1500 x 900mm box culvert.

Detailed storm water runoff calculations and culvert sizing will be performed during the detailed design stage of the project. The KM will be provided with a suitable design report and drawings for review and approval prior to implementation.

The above information was obtained from the: DEVELOPMENT GEORGE REX SPORT & ADVENTURE CENTRE ERF 12403, REX DRIVE, KNYSNA PRELIMINARY REPORT ON PROVISION OF BULK CIVIL SERVICES TO PROPOSED DEVELOPMENT Ref: N15/60 SEPTEMBER 2018

The approved Water Use Licence states the following:

9.1.4: "Installation of culverts under George Rex drive must avoid disturbance of wetland vegetation as far as possible. Culverts should ideally be installed during the dry season."

9.2.2: "Existing offsite storm water infrastructure must be upgraded to ensure better management of peak runoff and prevent or minimize the current localized flooding experienced in the immediate vicinity of the site."

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

A Record of Decision dated 11/02/2008 was reached by the Western Cape Department of Heritage, that no further heritage studies are required and that the development may proceed. Refer to Heritage approval under appendix G.

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;

The waste hierarchy will be followed during the construction and operational phase of the project.

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

No exploitation of non-renewable natural resources will be permitted during construction and operational phase. The Applicant has obtained a Water Use License for water uses associated with the development, in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998)(NWA). The WULA will seek authorisation for the following water uses:

- Section 21 (b) - Storage of Water
- Section 21 (c) - Impeding or Diverting the Flow of Water in a Watercourse
- Section 21 (i) – Altering the Bed Banks or Characteristics of a Watercourse

A wetland rehabilitation report was compiled by Dr Jackie Dabrowski of Confluent Environmental (PTY) Ltd. Please see attached as appendix I.

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

It is proposed that bulk potable water supply for the development be sourced from a combination of the following:

- rainwater harvesting from roofs of buildings in the development with dedicated reservoir(s) for storage provided on the property
- ground water from the aquifer on the property with aquifer re-charging measures provided through rainwater harvesting from parking areas/internal roads being directed to open spaces/wetlands
- **the Bigai Fountain (see below), of which the legal rights and yield are in the process of being determined**
- municipal water supply to augment the abovementioned water supply sources Note that there are other hotel/resort type developments in the KM that have similar combined type potable water supply arrangements as mentioned above which have been successfully implemented and operated for many years, i.e. Knysna Hollow with its 80-bed facility along the Welbedacht Road.

With respect to the Bigai Fountain; the title deed to the subject property is endorsed with rights to an equal portion of the water from the fountain. This stems from the original farm. Presently the Knysna Municipality makes use of this fountain water to augment their own supply requirements. It is understood (but yet to be confirmed) that this amounts to some 1,5ML per month or 50kL per day. Once these figures are confirmed along with the potential yield from the fountain, the water balance calculations will be updated to reflect the actual scenario. In the meanwhile, the calculations will assume that the current consumption by the municipality in the total potential yield from the fountain and that 50% of this can be credited to the water balance calculation for the site. This is assumed to be the most conservation route for the time being. Further measures such as water sterilization (of harvested and aquifer water) along with hydraulic water pressure boosting will be required.

Standby electrical supply will be provided for power interruptions as proposed by the appointed electrical consulting engineer.

The above information was obtained from the: DEVELOPMENT GEORGE REX SPORT & ADVENTURE CENTRE ERF 12403, REX DRIVE, KNYSNA PRELIMINARY REPORT ON PROVISION OF BULK CIVIL SERVICES TO PROPOSED DEVELOPMENT Ref: N15/60 SEPTEMBER 2018

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions;

A risk-averse and cautious approach is being applied when assessing the receiving environment and peoples environmental rights. The proposed SDP has been changed according to the George Rex Wetland Reserve March 2017 prepared by Scherman & Colloty.

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

Negative impacts on the environment and peoples environmental rights will be identified and mitigation measures put in place to prevent negative impacts and enhance positive impacts.

Section E

Description of the policy and legislative context within which the development is proposed:

The applicant is required to comply with all the required legislation and policies for the proposed development on Erf 12403. The following table below indicates the legislation, and guidelines of all spheres of government that are applicable to the application as contemplated in the EIA regulations.

LEGISLATION	ADMINISTERING AUTHORITY	TYPE Permit/ license/ authorisation/ comment / relevant consideration (e.g. rezoning or consent use, building plan approval)	APPLICABILITY TO THE PROPOSED DEVELOPMENT
ENVIRONMENTAL CONSERVATION ACT (ACT 73 OF 1989)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	<p>The Environment Conservation Act makes provision for the protection of areas which have particular environmental importance, which are sensitive, or which are under intense pressure from development. In many regions, our coastal zone needs protection for all these reasons.</p> <p>The Proposed development is within the urban edge and a wetland is present on site. A wetland reserve determination specialist was appointed and it was proposed</p>

			<p>that the development footprint may not exceed 40% of the property. This has now been taken into consideration with the preferred alternative of 40% development and 60% of the property being rehabilitated. A wetland rehabilitation report has been included in the EMPr.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) AND THE 2014 EIA REGULATIONS AS AMENDED IN 2017</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>In process of a BAR application. As per the Triggered listed activities in NEMA EIA Regulations 2014 as amended April 2017 (GN R324, R325, R326, R327) an application was submitted to DEA for Environmental Authorization.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (ACT NO 10 OF 2004)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>Cape Nature has commented on previous applications and notes that Biodiversity plays an important role even though the site is degraded. A wetland Rehabilitation plan and Alien Invasive management Plan has been included in the EMPr. The</p>

			<p>applicant is reminded of his duty to comply with the NEM:BA Act and remove alien vegetation regardless of Environmental Authorisation being granted. This is addressed in the “no-go” option.</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: INTEGRATED COASTAL MANAGEMENT ACT (ACT NO 24 OF 2008)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>The ICM Act is a specific environmental management act under the umbrella of NEMA.</p> <p>This Act is not applicable to the proposed development as we are not within the coastal Zone</p>
<p>NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (ACT 57 OF 2003)</p> <p>REGULATIONS FOR THE PROPER ADMINISTRATION OF THE KNYSNA PROTECTED ENVIRONMENT (R 1175 OF DEC 2009)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>(R 1175 OF DEC 2009): 8.(1) No person may, without prior authorisation in writing of the management authority, in the development control area – (a) undertake any development</p> <p>The opening of culverts needs to be authorized by SANParks, as the culverts are in close vicinity of a protected area and will drain storm water into the Knysna Estuary.</p>

NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT (ACT 59 OF 2008)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	The Waste Hierarchy will be adhered too during the construction and operational phase. The Empr covers the waste disposal aspect in detail.
NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT (ACT NO 39 OF 2004)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	N/A
NATIONAL FORESTS ACT (ACT 84 OF 1998)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. <u>DFFE Jurisdiction</u>	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	No protected trees to be cut, destroyed or damaged, DFFE provided comments on 11/011/2019 Stating that according to previous reports and site inspection DFEE mandate with regards to the NFA is not affected. Refer to Appendix G
FORESTRY LAWS AMENDMENT ACT (ACT 35 OF 2005)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities. <u>DAFF Jurisdiction</u>	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	Refer to above
NATIONAL WATER ACT (ACT 36 OF 1998)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	A Water Use License A Water Use License has been obtained

	<p>Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>Dept of Water Affairs Jurisdiction</u></p>		<p>from Department of Water Affairs on 22/04/21 with the reference number of: WU9330 (see attached Appendix F). in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998)(NWA). The WULA will authorised the following water uses:</p> <p>Section 21 (b) - Storage of Water.</p> <p>Section 21 (c) - Impeding or Diverting the Flow of Water in a Watercourse</p> <p>Section 21 (i) – Altering the Bed Banks or Characteristics of a Watercourse</p>
<p>WATER SERVICES ACT (ACT 108 OF 1997)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>Dept of Water Affairs Jurisdiction</u></p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>As above</p>
<p>SEA SHORE ACT (ACT 21 OF 1935)</p>	<p>Department of Environmental Affairs, Republic of South Africa.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT /</p>	<p>N/A</p>

	All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	RELEVANT CONSIDERATION	
WESTERN CAPE NATURE CONSERVATION LAWS AMENDMENT ACT (ACT 3 OF 2000)	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>CapeNature Jurisdiction</u></p>	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	<p>Cape Nature has commented on the previous applications and notes that Biodiversity plays an important role even though the site is degraded. A wetland Rehabilitation plan and Alien Invasive management Plan has been included in the EMPr. The applicant is reminded of his duty to comply with the NEM:BA Act and remove alien vegetation regardless of Environmental Authorisation being granted. This is addressed in the “no-go” option..</p>
CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>Dept. of Agriculture Jurisdiction</u></p>	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	<p>The property is located within the urban edge and agricultural practices is not viable on the property as the Knysna SDF has earmarked the property as developable land. The Department of Agriculture has been asked to provide comments.</p>

<p>NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>An application was submitted in 2008 and approved by the Department of Heritage, that no heritage resources are present on site.</p>
<p>NATIONAL HEALTH ACT (ACT 61 OF 2003)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>Dept. of Health Jurisdiction</u></p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>In terms of this Act, a Health and Safety Officer and protocol must be implemented during the construction phase, this is addressed in the EMPr.</p> <p>Please refer to comments received from the Department of Health regarding potable water and bulk service. Appendix K. Knysna Municipality has confirmed the availability of services as can be seen in Appendix k.</p>
<p>THE SOUTH AFRICAN ROADS AGENCY LIMITED AND NATIONAL ROADS ACT (ACT 7 OF 1998)</p>	<p>Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.</p> <p><u>SANRAL Jurisdiction</u></p>	<p>PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION</p>	<p>This Department commented that Knysna Municipality is the responsible authority. A town Planning application will be submitted to Knysna Municipality for Authorisation after an EA is obtained.</p>

Outiniqua Sensitive Coastal Area Extension Report (OSCAER)	Department of Environmental Affairs, Republic of South Africa. All State and Provincial Departments as well as Local Authorities that have been identified as relevant Competent Authorities.	PERMIT / LICENSE / AUTHORIZATION / COMMENT / RELEVANT CONSIDERATION	This is not an Oscae Erf. Therefore this is N/A
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POLICY/ GUIDELINES	ADMINISTERING AUTHORITY
EIA guideline and information document series. Guideline on transitional arrangements march 2013	Department of Environmental Affairs, Republic of South Africa. All Provincial Departments that have been identified as Competent Authorities.
EIA guideline and information document series. Guideline on Generic Terms of Reference for EAPS and Project Schedules	Department of Environmental Affairs, Republic of South Africa. The EAP needs to be independent and submit all required information as per the guideline, this is addressed throughout the BAR
EIA guideline and information document series. Guideline on Public Participation	Department of Environmental Affairs, Republic of South Africa. The correct public participation needs to be adhered to Addressed in the BAR
EIA guideline and information document series. Guideline on Alternatives	Department of Environmental Affairs, Republic of South Africa. Alternatives needs to be reasonable and feasible. This has been addressed in the Alternative section the BAR
EIA guideline and information document series. Guideline on Need and Desirability	Department of Environmental Affairs, Republic of South Africa. Need and desirability is addressed in the BAR
DEA&DP (2010) Guideline on Public Participation, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA&DP)	The correct public participation needs to be adhered to Addressed in the BAR

Section F

Need and Desirability for the proposed development

The need for and the desirability of a proposed development forms a key component of any EIA application. The consideration of proposed developments in context of the various spatial planning tools and policy applicable to the study area forms an integral part of the present environmental processes. The “need and desirability” will be determined by considering the broader community’s needs and interests as reflected in a credible IDP, SDF and EMF for the area, and as determined by the EIA. It is essential that national policies and strategies supports growth in the economy. It is also essential and that these policies takes cognisance of strategic concerns such as climate change, food security, as well as the sustainability in supply of natural resources and the status of our ecosystem services. In other words, to achieve our Constitutional goal of a better quality of life for all now and in future, through equitable access to resources and shared prosperity, it is essential that society improves on the efficiency and responsibility with which we use resources, and improve on the level of integration of social, economic, ecological and governance systems [DEA (2017), *Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa ISBN: 978-0-9802694-4-4*].

Need:

The need for the project has largely been dealt with elsewhere in this document, however for ease of reference these considerations will be highlighted here. Need, as defined by DEADP refers to the timing of the proposal, as such the question ‘do we need this development now?’ In answering this question the forward planning and land use policy of the area must be examined. Therefore the consistency with the existing approved Spatial Development Framework (SDF), the current Integrated Development Plan (IDP) and other municipal planning policy is important in the consideration of need – refer to Section 9 the Town Planning Report(Appendix B).

Further considerations of need include the need of the community/area of the activity & land use – is the development “a societal priority”? The proposed mixed use development and recreational facilities (pool, place of assembly) will be mainly aimed at attracting new regional events to Knysna and these events will create much needed local economic development. The proposed neighbourhood nodes will provide retail facilities that can serve the eastern neighbourhoods of Knysna.

Need for a project also relates to the services capacity and consistency with infrastructure planning – this issue will be dealt with by the various engineers involved with this project including the civil, electrical and traffic engineering specialists. There is a strong need for the economic development of Knysna as a whole. The provision of MICE facilities has been identified by the municipality as a strategic industry that would contribute to and strengthen the tourism industry of Knysna. There is therefore a strong need for this development at this time.

The above information was obtained from Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes Prepared by Marike Vreken Urban and Environmental Planners December 2020. Please refer to full report attached as appendix B

Desirability:

The desirability of a proposed development also relies heavily on the consistency with policy documentation, but has a distinctly spatial focus. This issue has also been dealt with in Section E of the Town Planning Report (Appendix B).

The guideline on Need and Desirability specifically poses the question “Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?” The information provided in section 9 of the Town Planning Report clearly demonstrates that the proposal is in line with the planning policy applicable to the area.

NEMA also links the desirability of a development to the concept of the "best practicable environmental option"; this refers to the option that provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term. The consideration of alternatives is therefore closely related to this concept – realistic options for the development of the property have been discussed in section 8 of the town planning report.

Specific locational factors that favour the proposed land-use are also important when desirability is assessed. Very close attention was paid to the selection of the site, which took into account the wider situation. These factors include:

- Accessibility for out of town visitors (regional events) – the site is located on George Rex Drive, the access directly on the N2 National Road. The proposed recreational facilities will be very accessible to locals as well as out of town visitors.
- Support of and cohesion with existing facilities. The application area is in close proximity to existing sporting facilities such as Loerie Park and the Knysna Driving Range.
- The site is accessible and in close proximity to the Knysna CBD and with other nearby amenities and facilities, such as municipal utilities, resorts (Premier Hotel); Loerie Park, informal traders, etc, the site is ideally located for a mixed use development, as it will strengthen existing nodes.

Potential impacts to the character of the area, people’s rights, and health and wellbeing are also important considerations of desirability.

Since the proposal is largely in line with the spatial planning for the area, allows for several positive impacts on the wider and economy and would have little detrimental impact on surrounding residents or visitors it can be concluded that the proposal is desirable for the selected site.

The above information was obtained from Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes Prepared by Marike Vreken Urban and Environmental Planners December 2020. Please refer to full report attached as appendix B.

Wetland:

As can be seen by the Scherman and Colloty Report the wetland has over the years degraded from a C status to a C/D status. With the above taken into consideration an aquatic rehabilitation plan has been developed in order to improve the wetland as recommended to a C status again.

The rehabilitation plan identifies the following actions in order to ensure successful rehabilitation of the degraded wetland:

- Storm water management on site
- Clearing the existing Drainage channels
- Upgrading culverts to ensure connectivity with the Knysna Estuary
- Alien Vegetation Management
- Establishment of indigenous wetland plants
- Eco- informative /education center, bird hides, owl and bat boxes

Identification of plans, guidelines, spatial tools, municipal development frameworks and instruments that are applicable to the proposed activity

The below table identifies all plans, guidelines, spatial tools, municipal development frameworks that are applicable to the proposed activity:

Is the activity permitted in terms of the properties existing land use rights?

Knysna Erf 12403 is currently zoned “Undetermined Zone” in terms of the Knysna Zoning Scheme Regulations (1992). In order to allow the proposed subdivision with associated uses, it is necessary to rezone the subject property from “undetermined Zone” to “Sub divisional Area”.

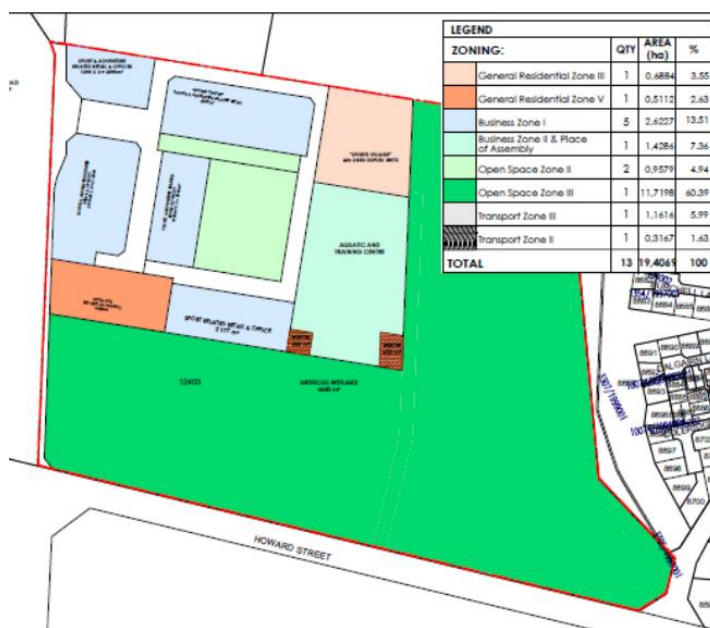
As per the Knysna Zoning Scheme Regulations (1992) a “Sub divisional Area” is defined as:

Land contemplated by section 22(1)(a) of The Ordinance which in terms of section 14(4), 16 and 18 are subject to:

- a. A density requirement;
- b. The conditions and stipulations contained in these regulations;
- c. The planning stipulations of any applicable structure plan;
- d. Any other conditions laid down at the time or the approval of the rezoning and has been rezoned to a sub divisional area.

The proposal is to develop a mixed use development on a portion of the subject property (Knysna Erf 12403). The property will be subdivided into (13) portions:

- 5 x Business Zone I portions;
- 1 x Business Zone II (with consent use to allow ‘a place of assembly) portion;
- 1 x General Residential Zone III portion;
- 1 x General Residential Zone V portion; ▪ 2x Open Space Zone II portions;
- 1x Open Space Zone III portion;
- 1x Transport Zone II portion; &
- 1x Transport Zone III portion



PROPOSED PREFERRED SUBDIVISION

The above information was obtained from Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020.

Will the activity be in line with the Provincial Spatial Development Framework (PSDF)

The Western Cape Provincial SDF was approved in 2014 by the Western Cape parliament and serves as strategic spatial planning policy that “communicates the provinces spatial planning agenda”.

The recent shift in legislative and policy frameworks have clearly outlined the roles and responsibility of provincial and municipal spatial planning and should be integrated towards the overall spatial structuring plan for the province to create and preserve the resources of the province more effectively through sustainable urban environments for future generations. This shift in spatial planning meant that provincial inputs are in general limited to provincial scale planning. However it is important to note some of the key policies laid down by the PSDF have a bearing on the application.

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

- (i) Greater productivity, competitiveness and opportunities within the spatial economy;
- (ii) More inclusive development in the urban areas;
- (iii) Strengthening resilience and sustainable development.

However it is important to note some of the key policies laid down by the draft PSDF have a bearing on the application.

Policy E1: Use Regional Infrastructure Investment to Leverage Economic Growth

6. Prioritise developing the required bulk infrastructure capacity to serve the connection and compaction of existing human settlements, over developing bulk infrastructure to serve outward growth of settlements.

7. Limit ne urban transport investment to spatial developments that reduce average travel times, as opposed to extending them.

Policy E3: Revitalise and Strengthen Urban Space-Economies as the Engine of Growth

5. Existing economic assets (e.g. CBDs, township centres, modal interchanges, vacant under-utilised strategically located public land parcels, fishing harbours, public squares and markets, etc) to be targeted to lever the regeneration and revitalisation of urban economies.

7. Incentives should be put in place to attract economic activities close to dormitory residential areas, facilitate brownfields development (e.g. mixed use development and densification in appropriate locations), and private sector involvement in the rental and gap housing markets.

POLICY S1: PROTECT, MANAGE AND ENHANCE SENSE OF PLACE, CULTURAL AND SCENIC LANDSCAPES

2. Promote smart growth ensuring the efficient use of land and infrastructure by containing urban sprawl and prioritising infill, intensification and redevelopment within settlements.

POLICY S3: PROMOTE COMPACT, MIXED USE AND INTEGRATED SETTLEMENTS

This policy reflects the main aim of the policy through targeting economic assists (e.g. Modal Interchanges underutilised strategically located land parcels) should be used as a lever to regenerate and revitalise urban settlements.

Promoting functional integration and mix land use to increase liability of urban areas. Thus, the policy specifies the importance to- increase density of settlements and number of units in new housing projects;

continue to deliver public investment to meet the needs in settlement developments; integrate packages of land, infrastructure and services as critical to promote densification and efficiency associated with agglomeration.

Planning Implication:

The Western Cape Spatial Development framework has a strong emphasis on revitalising urban spaces creating an urban living environment which is more convenient, efficient and aesthetically pleasing to residents. The proposal aims to contribute to efficient use of bulk infrastructure, by allowing a development that is situated within the urban edge and in close proximity to service connections. The proposal is also situated within an established township development area, which promotes the reduction of average travel times. The mixed use development allows for business and residential uses in close proximity to one another, allowing residents to live close to their work areas. The proposed development is situated on a vacant erf; thus the proposal promotes infill development and contains urban sprawl. The various proposed uses will also attract economic activities close to dormitory residential areas. The proposal is to allow an integration of uses to ensure economic sustainability and provide various opportunities to the residents of the adjacent areas. Therefore, the proposal is consistent with strategic objectives as set out by the Western Cape Spatial Development Framework.

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners August 2018*

The property is situated outside of the Urban Edge

No, The property is within Knysna's urban Edge

Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).

Knysna Spatial Development Framework (2017)

The spatial vision for the considered SDF for Knysna Municipality is to establish an authentic place that works for its residents and continues to attract visitors.

Equitable and inclusive access to spatial justice (improving access to opportunities, services and amenities) improving economic opportunities.

Improve the financial and economic viability of the town by promoting the intensification of existing urban areas (e.g. mixed use development in the existing industrial area), through infill, densification and redevelopment, which in turn makes more efficient use of existing infrastructure capacity and services.

The property is located within the urban edge and is considered suitable for urban development. The following spatial planning policies are encouraged for the area:

Invest in Smart Growth Settlements

To achieve the objectives of SPLUMA and align with regional planning policy frameworks, the establishment of a network of “complete towns and villages” is proposed. Each should have a strong and unique identity, retain and enhance the Knysna coast and forest character and feature:

- Balanced land use
- Densification
- Economic opportunity
- Accessibility
- A high-quality public environment
- Effective and sustainable social services

According to the Knysna SDF the subject property is demarcated for “New Development”.

The subject property is situated within the urban edge of Knysna, the Knysna SDF demarcate the area in which the property is situated as “New Development”. The proposal is most definite a new development that will increase employment opportunities, business opportunities, housing opportunities, efficient use of services, promote infill development and the utilisation of vacant land within the urban edge. The proposal is therefore consistent with Knysna Spatial Development Framework.

Knysna Integrated Development Plan (IDP) (2017 – 2022)

The Integrated Development Plan (IDP) is the principal strategic instrument of a municipality that gives effect to its developmental mandate as enshrined in the Constitution of South Africa. The concept of integrated planning has cemented itself as the strategic process within modern day local government as an effective way of ensuring that limited resources of a municipality are being optimised to foster partnerships between a vast array of stakeholders to collectively improve the livelihoods of communities. The external focus of an IDP is to identify and prioritize the most critical developmental challenges of the community whilst organizing internal governance and institutional structures in order to address those challenges. The IDP is a five-year plan which clearly stipulates the vision, mission and strategic objectives of Council and is reviewed annually to adjust to the changing socio-economic, infrastructural and environmental dynamics and the needs of communities.

Strategic objectives:

During its strategic planning process Council crafted a set of strategic objectives which are aligned to the national strategic focus areas as well as the Provincial Strategic Goals of the Western Cape Government. The following strategic objectives are relevant to the proposed development:

STRATEGIC OBJECTIVE
- To ensure the provision of bulk infrastructure and basic service through the upgrading and replacement of ageing infrastructure, and the expansion of new infrastructure.
- To promote a safe and healthy environment through the protection of our natural resources.
- To create an enabling environment for social development and economic growth.
- To grow the revenue base of the municipality.

The proposal is to development a mixed use development on a vacant property situated within the urban edge of Knysna, this will allow for the efficient use of bulk infrastructure and service delivery, as the proposal is in close proximity to various service connection points. The proposal ensures to protect the demarcated wetland areas, these areas will be managed a protected as per the recommendations of the specialist’s reports. Allowing various employment and business opportunities will most definitely ensure economic growth in Knysna and additional expenditure that will increase the revenue base of the Municipality.

Ward 9:

The subject property is situated within Ward 9 of the Knysna Municipality. The table below illustrate the SWOT Analysis of Ward 9; the following point are applicable to the proposed development:

Ward 9: SWOT Analysis	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Many jewels, natural beauty, forest, lagoon etc. • Established cultural identity e.g. literary festivals, crafts etc. • Local knowledge of indigenous plants and medicines • Location - The Heads, Leisure Island • Tourism Product • Vibrant Youth Council • Social Cohesion - well established • Foreign Residents 	<ul style="list-style-type: none"> • Limited capacity of SANParks management - lagoon policing and looking after resources that fall under their control • Limited business skills of business owners • Fading brand and lost icons • Unfriendly to people with disabilities • Poor storm water system • No business premises • Too few sports facilities, and facilities that are in place, are badly maintained sports facilities • High unemployment rate • Condition of roads, water and sewerage • Lack of investment into tourist requirements - combating crime, water capacity, road infrastructure • Lack of integration • Beautification of George Rex Drive
Opportunities	Threats

<ul style="list-style-type: none"> • A lot of water frontage • Regional marketing of Knysna as a place to live, play and work • Perfectly placed to develop as a sport destination - walking, cycling etc. by developing walking and cycling lanes • Good festivals can grow and attract more visitors • Tourism opportunities - home visits, craft tourism • Beautification of George Rex Drive 	<ul style="list-style-type: none"> • Environmental Decay (upkeep & modernization) • Repairs and maintenance of established areas always competing or less important than needs of previously disadvantaged areas
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The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020.*

Approved Structure Plan of the Municipality

There is no approved structure plan for this specific location.

An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)

As per the ISDF Knysna 08/12/2015 page 5 it is proposed that the ISDF be seen as an Environmental Management Framework (EMF) as defined under NEMA and therefore can be promoted as grounded within legislation. Therefore refer to above.

WESTERN CAPE LAND USE PLANNING ACT, 2014 (ACT 3 OF 2014)

The purpose of this Act is to consolidate legislation in the Province pertaining to provincial planning, regional planning and development, urban and rural development, regulation, support and monitoring of municipal planning and regulation of public places and municipal roads arising from subdivisions; to make provision for provincial spatial development frameworks; to provide for minimum standards for, and the efficient coordination of, spatial development frameworks; to provide for minimum norms and standards for effective municipal development management; to regulate provincial development management; to regulate the effect of land development on agriculture; to provide for land use planning principles; to repeal certain old-order laws; and to provide for matters incidental thereto.

The Western Cape LUPA has also identified certain land use planning principles that land development has to adhere to. These are:

- Spatial Justice: improved access to, and utilisation of land.
- Spatial Sustainability: promote land development that is spatially compact; promote land development in locations that are sustainable; limit urban sprawl; sustained protection of the environment; having regard to natural habitat, ecological corridors; climate change mitigation strategies, taking into consideration sea level rise.
- Spatial Efficiency: optimise the use of existing resources; integrated cities and towns, social, economic, institutional and physical aspects of land development is integrated, the availability of residential and employment opportunities in close proximity to each other, diverse combination of land uses is promoted, functionality of the public spatial environment is promoted.
- Good Administration: requirements of any law relating to land development and land use must be met timeously.

Spatial Resilience: flexibility in spatial plans, policy and land use management systems is accommodated to ensure sustainable livelihoods in communities most likely to suffer the impact of economic and environmental shocks.

Planning Implication:

The proposed development as being consistent with the LUPA Land Use Planning Principles, for the following reasons:

- Is located inside the urban edge
- Is located on an arterial route
- Includes mixed land uses
- Includes employment opportunities in close proximity to places of employment
- Has been informed by the environmental informants such as wetlands, etc.
- Is regarded as infill and not urban sprawl,

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners August 2018*

KNYSNA MUNICIPALITY STANDARD BY-LAW ON MUNICIPAL LAND USE PLANNING, 2016

Knysna Municipality adopted its new Land Use Planning By-law and it came into effect on 12 February 2016. All land use applications are now being processed and assessed in terms of this by-law. This by-law states that the following aspects will be considered when the decision are made:

- Desirability of the proposed utilisation of land
- The impact of the proposed land development on municipal engineering services
- The integrated development plan, including the municipal spatial development framework
- Provincial spatial development framework
- Policies, principles and the planning and development norms and criteria set by the national and provincial government
- The matters referred to in section 42 of the Spatial Planning and Land Use Management Act
- Principles referred to in Chapter VI of the Land Use Planning Act

Applicable provisions of the zoning scheme

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020*

Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)

The Guideline on Need and Desirability published by the Department of Environmental Affairs and Development Planning (DEADP) goes to great lengths to explain that the 'Need' for a project relates to its 'timing', where the 'Desirability' related to the 'placing' of the proposed development; i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed?

1.1. Need

The need for the project has largely been dealt with elsewhere in this document, however for ease of reference these considerations will be highlighted here. Need, as defined by DEADP refers to the timing of the proposal, as such the question 'do we need this development now?'

In answering this question the forward planning and land use policy of the area must be examined. Therefore the consistency with the existing approved Spatial Development Framework (SDF), the current Integrated Development Plan (IDP) and other municipal planning policy is important in the consideration of need – refer to Section 9 of the Town Planning Report.

Further considerations of need include the need of the community/area of the activity & land use – is the development “a societal priority”? The proposed mixed use development and recreational facilities (pool, place of assembly) will be mainly aimed at attracting new regional events to Knysna and these events will create much needed local economic development.

The proposed neighbourhood nodes will provide retail facilities that can serve the eastern neighbourhoods of Knysna. Need for a project also relates to the services capacity and consistency with infrastructure planning – this issue will be dealt with by the various engineers involved with this project including the civil, electrical and traffic engineering specialists.

There is a strong need for the economic development of Knysna as a whole. The provision of MICE facilities has been identified by the municipality as a strategic industry that would contribute to and strengthen the tourism industry of Knysna. There is therefore a strong need for this development at this time

1.2. Desirability

The desirability of a proposed development also relies heavily on the consistency with policy documentation, but has a distinctly spatial focus. This issue has also been dealt with in Section E above. The guideline on Need and Desirability specifically poses the question “Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?” The information provided in section 9 clearly demonstrates that the proposal is in line with the planning policy applicable to the area.

NEMA also links the desirability of a development to the concept of the "best practicable environmental option"; this refers to the option that provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term. The consideration of alternatives is therefore closely related to this concept – realistic options for the development of the property have been discussed in section 8 of this report.

Specific location factors that favour the proposed land-use are also important when desirability is assessed. Very close attention was paid to the selection of the site, which took into account the wider situation. These factors include:

- Accessibility for out of town visitors (regional events) – *the site is located on George Rex Drive, the access directly on the N2 National Road. The proposed recreational facilities will be very accessible to locals as well as out of town visitors.*
- Support of and cohesion with existing facilities. *The application area is in close proximity to existing sporting facilities such as Loerie Park and the Knysna Driving Range.*
- The site is accessible and in close proximity to the Knysna CBD and with other nearby amenities and facilities, *such as municipal utilities, resorts (Premier Hotel); Loerie Park, informal traders, etc, the site is ideally located for a mixed use development, as it will strengthen existing nodes.*

Potential impacts to the character of the area, people’s rights, and health and wellbeing are also important considerations of desirability.

Since the proposal is largely in line with the spatial planning for the area, allows for several positive impacts on the wider economy and would have little detrimental impact on surrounding residents or visitors it can be concluded that the proposal is desirable for the selected site.

1.3. Location Factors

Specific location factors that favour the land development application is important when desirability is assessed. The factors include:

- The site is located on George Rex Drive, the access directly on the N2 National Road. The proposed recreational facilities will be very accessible to locals as well as out of town visitors.
- The application area is in close proximity to existing sporting facilities such as Loerie Park and the Knysna Driving Range.
- The site is accessible and in close proximity to the Knysna CBD and with other nearby amenities and facilities, such as municipal utilities, resorts (Premier Hotel); Loerie Park, informal traders, etc
- The property is on a vacancy erf, within an established township, this will contribute to in-fill development.
- The property is in close proximity to various service connection points.
- The site has magnificent views of the Knysna Lagoon and Heads, tourist attraction.

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020.*

Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?

Bulk Services

The bulk civil services required for the proposed George Rex development will include the following; potable water supply, sewage disposal, roads (access), storm water management and solid waste disposal. Please refer to Appendix G with approval from Knysna Municipality regarding Bulk Services provision

Water Supply

It is proposed that bulk potable water supply for the development be sourced from a combination of the following:

- Rainwater harvesting from roofs of buildings in the development with dedicated reservoir(s) for storage provided on the property.
- Ground water from the aquifer on the property with aquifer re-charging measures provided through rainwater harvesting from parking areas/internal roads being directed to open spaces/wetlands.

• The Bigai Fountain (see below), of which the legal rights and yield are in the process of being Determined

- Municipal water supply to augment the abovementioned water supply sources. A letter from Knysna Municipality will be obtained in the process to confirm the suitability of the above proposal.

Note that there are other hotel/resort type developments in the KM that have similar combined type potable water supply arrangements as mentioned above which have been successfully implemented and operated for many years, i.e. Knysna Hollow with its 80-bed facility along the Welbedacht Road.

With respect to the Bigai Fountain; the title deed to the subject property is endorsed with rights to an equal portion of the water from the fountain. This stems from the original farm. Presently the Knysna Municipality makes use of this fountain water to augment their own supply requirements. It is understood (but yet to be confirmed) that this amounts to some 1,5ML per month or 50kL per day. Once these figures are confirmed along

with the potential yield from the fountain, the water balance calculations will be updated to reflect the actual scenario. In the meanwhile, the calculations will assume that the current consumption by the municipality in the total potential yield from the fountain and that 50% of this can be credited to the water balance calculation for the site. This is assumed to be the most conservation route for the time being. Further measures such as water sterilization (of harvested and aquifer water) along with hydraulic water pressure boosting will be required.

Sewage Disposal

It is proposed that sewage disposal for the development include for normal waterborne sewage on site that is reticulated to two new pump stations both which are also to be located on site. Thereafter a new pumping main is to be laid through to the existing municipal WWTW, which is located approximately 100m away along George Rex Drive.

Note that the re-use of the grey water component as a potential potable water source will be considered only if it is required to further augment the water supply to the development. However, the cost effectiveness thereof is doubtful, i.e. collection, storage, treatment, etc. In addition to this, it can be seen from the water balance calculation, that the water demand on the municipal water supply is extremely low for a development of this nature which will negate the need for an additional water source in the form of grey water recirculation. The above will be discussed with Knysna Municipality and their approval/comments obtained in writing.

Please refer to Appendix G with approval from Knysna Municipality regarding Bulk Services provision

Solid Waste

It is proposed that the solid waste disposal for the development be handled through the Municipal waste by rail system. It is proposed that the collection of waste from the site be done by the Municipality at one or more collection points within the property. The development management will collect the waste internally and store it at the municipal collection points.

The local train service is out of commission to convey the waste, consequently road trucks are used to transport the solid waste in specialized containers. Presently municipal waste is transported to the Petro SA site near Mossel Bay. This arrangement expires at the end of 2018. By June/July of 2019 a new site developed by the Garden Route District Municipality (formerly the Eden District Municipality) will be operational. Capacity has been set aside in this site for the waste from Knysna. The capacity set aside for Knysna is enough for the current and future demands of the area.

The proposed development intends to apply strict recycling measures in waste disposal management.

It is anticipated that this will reduce the volumes going to the municipal system by 50%. Most solid waste recycling activities will be accommodated inside the development with sorting taking place at the source with a 3-bag collection system for the extraction of recyclable materials, etc. The waste set aside for recycling will be collected by a private company that will be contracted to the development.

The above information was obtained from ERF 12403, REX DRIVE, KNYSNA PRELIMINARY REPORT ON PROVISION OF BULK CIVIL SERVICES TO PROPOSED DEVELOPMENT Ref: N15/60 SEPTEMBER 2018. Prepared by Nieuwoudt & Kie

Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?

Knysna Spatial Development Framework (2017) The spatial vision for the considered SDF for Knysna Municipality is to establish an authentic place that works for its residents and continues to attract visitors.

Equitable and inclusive access to spatial justice (improving access to opportunities, services and amenities) improving economic opportunities. Improve the financial and economic viability of the town by promoting the intensification of existing urban areas (e.g. mixed use development in the existing industrial area), through infill, densification and redevelopment, which in turn makes more efficient use of existing infrastructure capacity and

services. The property is located within the urban edge and is considered suitable for urban development. The following spatial planning policies are encouraged for the area:

Invest in Smart Growth Settlements To achieve the objectives of SPLUMA and align with regional planning policy frameworks, the establishment of a network of “complete towns and villages” is proposed. Each should have a strong and unique identity, retain and enhance the Knysna coast and forest character and feature:

- Balanced land use
- Densification
- Economic opportunity
- Accessibility
- A high-quality public environment
- Effective and sustainable social services
-

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020.*

Is this project part of a national programme to address an issue of national concern or importance?

This is a private development

Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)

Specific location factors that favour the land development application is important when desirability is assessed. The factors include:

- The site is located on George Rex Drive, the access directly on the N2 National Road. The proposed recreational facilities will be very accessible to locals as well as out of town visitors.
- The application area is in close proximity to existing sporting facilities such as Loerie Park and the Knysna Driving Range.
- The site is accessible and in close proximity to the Knysna CBD and with other nearby amenities and facilities, such as municipal utilities, resorts (Premier Hotel); Loerie Park, informal traders, etc
- The property is on a vacancy erf, within a establish township, this will contribute to in fill development.
- The property is in close proximity to various service connection points.
- The site has magnificent views of the Knysna Lagoon and Heads, tourist attraction.

The above information was obtained from *Knysna Erf 12403 Specialist Planning Report for Environmental Authorisation Purposes prepared by Marike Vreken Urban and Environmental Planners December 2020.*

Is the development the best practicable environmental option for this land/site?

Yes. Various specialist studies have been done to address what percentage of the property can be developed. The most recent one was concluded by Prepared by: Mark Rountree and P-A Scherman Scherman Colloty & Associates cc. Project: George Rex Wetland Reserve, March 2017 attached as Appendix C to this report.

The proposed development required an authorisation in terms of the National Water Act, (which has been obtained) before the proposed development may commence. A wetland reserve determination was conducted by Scherman Colloty & Associates cc during 2017, and the conclusion of this study was that 40% of the site can be developed and 60% of the site has to be conserved for wetland reverse purposes.

Will the benefits of the proposed land use/development outweigh the negative impacts of it?

Yes. Please refer to Mark Rountree and P-A Scherman Scherman Colloty & Associates cc. Project: George Rex Wetland Reserve, March 2017 attached as Appendix C to this report:

Executive Summary

Off-site mitigation is not possible within this catchment as the vast majority of wetlands in the catchment and surrounding area have been lost to catchment development or are already protected and in good condition. There are no sites where rehabilitation of wetlands can be undertaken in the immediate catchment to offset losses within the site.

Rehabilitation within the site is however recommended to improve the condition and functionality of the wetlands, as well as to provide a level of protection to the downstream Knysna Estuary against poor effluent discharges from the non-compliant WWTW located adjacent to Erf 12403 (the study site). The hydrological functions of the wetlands – water quality amelioration and stormwater attenuation – are particularly important and rehabilitation interventions should aim to maximize these functions, as well as improve the condition of wetland vegetation generally, and specifically to increase the extent of brackish estuarine wetland patches through improved tidal exchanges. The latter can be achieved by opening the culvert in the southwestern corner of the wetland so as to allow estuarine movement into the wetland.

There appears to be a fluctuation of discharge quality from the WWTW (or Knysna STP) adjacent to Erf 12403. Conditions were poor in the past, e.g. as shown by the 2006 WSP Environmental report, with an improvement due to the upgrade of the WWTW in 2013.

However, data from 2013-2016 indicated problematic water quality issues related to final discharge effluent although it was not possible to ascertain whether, or how much of the final effluent from the STP was seeping through the George Rex wetland (i.e. erf 12403 or the study site). Recent events (last quarter of 2016 and early 2017) have indicated issues with the quality of discharge effluents from the WWTW. Under these conditions it is certain that the wetland would be serving a scrubbing function, particularly in terms of nitrogen levels and faecal coliforms, which would assist in reducing the risk of contaminated water reaching the sensitive Knysna Estuary via the Ashmead Channel.

E.coli counts and nutrient levels (N and orthophosphate-P) outflows to the estuary should not be permitted to exceed guideline levels; meaning that effluent discharge standards should be met. The wetlands should be engineered and rehabilitated to promote diffuse flow through vegetated areas; to remove channelized flows (except for the tidal exchanges as these arise from culverts) and could consider the creation of open water areas within the reedbeds to improve oxidation and water quality enhancement functions of the wetland. Walkways and educational/recreational areas will also further demonstrate the value of improved wetland.

Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?

No. The property is currently vacant, and situated within the urban edge.

Will any person's rights be negatively affected by the proposed activity/ies?

The proposal does not prevent any surrounding land owner to exercise their existing land use rights. This section will be reevaluated after the consultation BAR has been placed in the public domain.

What will the benefits be to society in general and to the local communities?

Employment opportunities will be created for local communities. Will attract sporting events to Knysna increasing tourism in the area.

Any other need and desirability considerations related to the proposed activity?

The proposed development will:

- Stimulate rural economic expenditure contribute to local economic growth and economic expenditure within the Knysna local municipality.
- Contribute to the creation of new permanent employment opportunities.
- Attract tourism and sporting events.

The proposed development will improve the surveillance and security in the area and thereby improve the desirability and popularity of this area as a tourism destination.

The proposed development will be an asset to the area. This statement is supported by the following aspects:

- (i) The environment will be managed and rehabilitated contributing towards a more attractive landscape – *i.e. a more sought after area to live and invest*;
- (ii) The buildings will comply with aesthetical requirements and contribute to the existing character of the – *i.e. higher property values*;
- (iii) The development will diminish crime and illicit related activities on the property promoting safety and security to surrounding property – *i.e. a more desirable to live and invest*
- (iv) Promotion of tourism offerings within the area.

Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

The general objective of integrated environmental management has been taken into account as follow:-

- (a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;
- (b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;
- (c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;
- (d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;
- (e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and
- (f) Identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. The property is currently vacant.

The developer intends to develop the property into a Mixed use, Sport, Adventure and Tourism Development on Erf 12403, George Rex, Knysna

Development must be socially, environmentally and economically sustainable.

- The developers intentions is to negotiate with the Knysna Municipality to rehabilitate the existing wetland to improve the condition and functionality of the wetlands, as well as to provide a level of protection to the downstream Knysna Estuary against poor effluent discharges from the WWTW located adjacent to Erf 12403.
- As a result of Knysna hosting several big sporting events and the lack of sports medical facilities the proposed development should in all probability is socially acceptable. However this section will be re-addressed after the first round of public participation on the consultation BAR.
- The proposed development will in all probability be economically sustainable. The developers have a long history of profitable developments.

(a) Sustainable development requires the consideration of all relevant factors including the following:

- (i) That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;**

The developers intentions is to negotiate with the Knysna Municipality to rehabilitate the existing wetland to improve the condition and functionality of the wetlands, as well as to provide a level of protection to the downstream Knysna Estuary against poor effluent discharges from the WWTW located adjacent to Erf 12403.

(ii) that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;

As per Mark Rountree and P-A Scherman Scherman Colloty & Associates cc. Project: George Rex Wetland Reserve, March 2017 attached as Appendix C to this report:

The earlier Reserve of 2008 was based on preceding specialist detailed studies of the site (Bornman, 2005) and deemed that 71% of the site remained as a functional wetland. Since this time, the Present Ecological State of the site has declined from a C to a C/D condition between 2008 and 2016. The Recommended Ecological Category of a C was set for the site in 2008 and, as many of the more recent impacts are reversible, a C condition remains feasibly attainable and is suggested as the Target Ecological Condition for this site.

Rehabilitation within the site is however recommended to improve the condition and functionality of the wetlands, as well as to provide a level of protection to the downstream Knysna Estuary against poor effluent discharges from the non-compliant WWTW located adjacent to Erf 12403 (the study site). The hydrological functions of the wetlands – water quality amelioration and stormwater attenuation – are particularly important and rehabilitation interventions should aim to maximize these functions, as well as improve the condition of wetland vegetation generally, and specifically to increase the extent of brackish estuarine wetland patches through improved tidal exchanges. The latter can be achieved by opening the culvert in the southwestern corner of the wetland so as to allow estuarine movement into the wetland.

E.coli counts and nutrient levels (N and orthophosphate-P) outflows to the estuary should not be permitted to exceed guideline levels; meaning that effluent discharge standards should be met. The wetlands should be engineered and rehabilitated to promote diffuse flow through vegetated areas; to remove channelized flows (except for the tidal exchanges as these arise from culverts) and could consider the creation of open water areas within the reed beds to improve oxidation and water quality enhancement functions of the wetland. Walkways and educational/recreational areas will also further demonstrate the value of improved wetland state.

(iii) that the disturbance of landscapes and sites that constitute the nation's cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

This is not a cultural site.

(iv) that waste is avoided, or where it cannot be altogether avoided, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner;

The waste hierarchy will be followed during the construction and operational phase of the project.

(v) that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;

No wastage will occur on site during the construction phase. The Applicant has obtained a Water Use License for water uses associated with the development, in terms of Section 21 of the National Water Act, 1998 (Act No. 36 of 1998)(NWA). The WULA will seek authorisation for the following water uses:

- Section 21 (b) - Storage of Water
- Section 21 (c) - Impeding or Diverting the Flow of Water in a Watercourse
- Section 21 (i) – Altering the Bed Banks or Characteristics of a Watercourse

(vi) that the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised;

Rainwater tanks and solar energy will be implemented. Rehabilitating the wetland, will protect and enhance the ecosystems on site. Only 40% of the erf12403 will be developed and 60% will be used for wetland area as recommended in the Wetland report

(vii) that a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions;

A risk-averse and cautious approach is being applied when assessing the receiving environment and peoples environmental rights. The proposed SDP has been changed according to the Wetland Assessment and recommendations after consultation with the Department of Water Affairs.

(viii) that negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

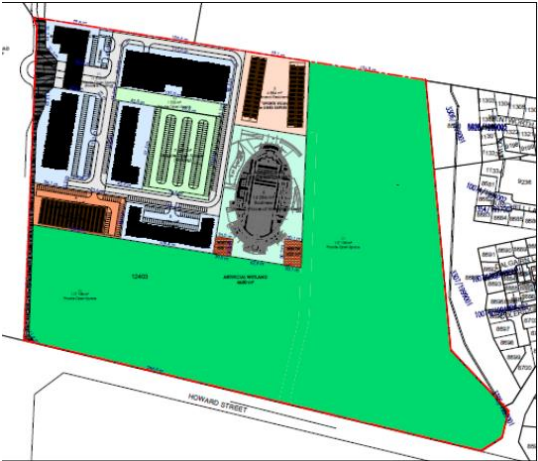
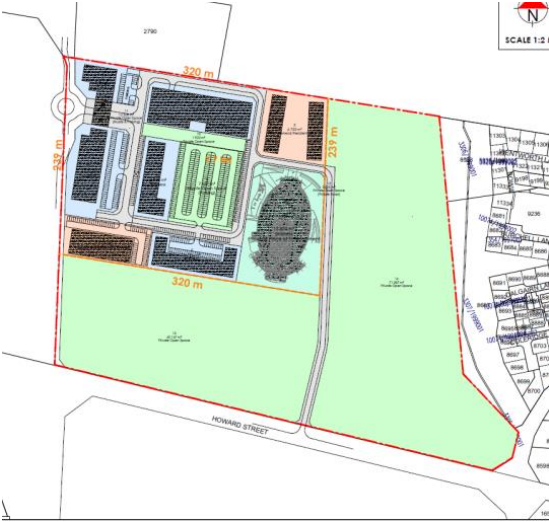
Negative impacts on the environment and peoples environmental rights will be identified and mitigation measures put in place to prevent negative impacts and enhance positive impacts. These impacts and mitigation measures will also be identified in the EMPr.

Section G

A motivation for the preferred site, activity and technology alternative

“Alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity which may include alternatives to –

(a) The property on which, or location where, it is proposed to undertake the activity	There is only one site.
(b) The type of activity to be undertaken	<p>Preferred alternative</p> <p>The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services: physio-therapists, biokineticists, gym, massage, sport psychology, etc.</p> <p>This proposal consists of 40% development and 60% conservation / wetland rehabilitation.</p> <p>The proposed development will consists of the following mixed uses:</p>

	<ul style="list-style-type: none"> ➤ 1 x “General Residential Zone III” portion (flats / sports village); ➤ 1 x “General Residential Zone V” portion (hotel); ➤ 5 x “Business Zone I” portions; ▪ 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion; ➤ 2 x “Open Space Zone II” portions; ➤ 1 x “Open Space Zone III” portion; ➤ 1x Transport Zone II portion; & ➤ 1x Transport Zone III portion, <p>No access over wetland to Howard Street to Howard Street</p> <p>Alternative 1 40% development with 60% rehabilitation and access to Howard street</p>
(c) The design or layout of the activity	<p>Preferred alternative- below</p>  <p>Alternative 1 -below</p> 
(d) The Technology to be used in the activity	N/A
(e) The operation aspect of the activity	Preferred alternative will cover 40% development and 60% conservation/ wetland rehabilitation

	<p>Alternative 2 This proposal consists of 40% development and 60% conservation / wetland rehabilitation including access to Howard Drive over the wetland.</p> <p>No Go Option – The site will remain as is. There are vagrants on site and the wetland will not be rehabilitated therefore the wetland condition as assessed in wetland report will in all probability degrade even further. As per instruction given by the Fire Department mowing of the reeds will need to continue as it poses a fire risk to the area. Alien removal will continue as prescribed by NEMBA.</p>
(f) The option of not implementing the activity	This option must always be assessed and is addressed below.
(g) A motivation for the preferred site, activity and technology alternative.	<p>There is only one site.</p> <p>As the proposed development has already been subjected to a previous Basic Assessment Procedure and the preferred alternatives at that stage was not accepted by the Department of Water Affairs as a result of the size of the development and the impacts it will have on the wetland present on site. The applicant appointed Mark Rountree and P.A Scherman Scherman Colloty & Associates to conduct the George Rex Wetland Reserve, study March 2017 the applicant reconsidered the development proposal to be more in line with what would be acceptable by commenting authorities. The now preferred alternative is 40% development and 60% conservation and wetland rehabilitation has been approved by the Department of Water Affairs.</p>
(h) A full description of the process followed to reach the proposed preferred alternative	<p>The proposed development has been through several Environmental Applications since 2006. The major concern on site was the wetland and the percentage of site that may be developed. The options of development ranged as follow:</p> <ul style="list-style-type: none"> • 80% of the site developed and conserving 20% • 70% of the site developed and conserving 30% • 40% of the site developed and conserving 60% (alternative 2 in this BAR) and a access Howard to Howard Drive over the wetland. • 40% of the site developed and conserving 60% (Preferred Alternative in this BAR) <p>Several specialist studies were conducted to ensure that the receiving environment is protected and rehabilitated. This is attached to the BAR as historical documentation.</p>

(I) Details of the Alternatives Considered:

Details of the alternatives considered

As the proposed development has already been subjected to a previous Basic Assessment Procedure and the preferred alternative at that stage was not accepted by the Department of Water Affairs. The applicant appointed Mark Rountree and P.A Scherman Scherman Colloty & Associates to conduct the George Rex Wetland Reserve, study March 2017 the applicant reconsidered the development proposal to be more in line with what would be acceptable by commenting authorities. The now preferred alternative is 40% development and 60% conservation and wetland rehabilitation and **no** road over the wetland to provide access from Howard Drive.

A Water Use License has been obtained from Department of Water Affairs on 22/04/21 with the reference number of: WU9330 (see attached Appendix F). The description of the activity approved is as follow:

“The high confidence Reserve by Rountree and Scherman (2017) determined that development of 40% of the wetland and rehabilitation of the remaining 60% of wetland would still allow for an improvement in the PES from C/D to the Recommended Ecological Category (REC) of C. The Department of Water and Sanitation has approved the reserve on 1 March 2021 based on the 40/60 percent scenario.”

Please note that the Water Use Licence approved an Access over the wetland to Howard Drive. However as a result of previous applications Cape Nature and SANParks objected to a road over the wetland as a result the road has now been removed from the Final SDP for the Preferred Alternative.

The preferred Alternative 1:

40% developed area of the site and 60% of the site will be used for conservation and wetland rehabilitation and no access the wetland

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services (physio-therapists, biokineticists, gym, massage, sport psychology, etc).

The proposed development will consist of the following mixed uses:

- 1 x “General Residential Zone III” portion (flats / sports village);
- 1 x “General Residential Zone V” portion (hotel);
- 5 x “Business Zone I” portions;
- 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion;
- 2 x “Open Space Zone II” portions;
- 1 x “Open Space Zone III” portion;
- 1x Transport Zone II portion; &
- 1x Transport Zone III portion

Please refer to attached SDP and town Planning Report

Alternative 1: 40% development with 60% rehabilitation and access to Howard street

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services (physio-therapists, biokineticists, gym, massage, sport psychology, etc). The proposed development will consist of the following mixed uses:

- 2 x “General Residential Zone” portions;
- 5 x “Business Zone” portions;
- 1 x “Business Zone” with consent use for a ‘Place of Entertainment’ portion;
- 4 x “Private Open Space” portions;
- 2 x “Special Zone” portions.

Alternative 2: 60% DEVELOPMENT / 40% REHABILITATION ALTERNATIVE

This Alternative is no longer relevant as a Water Use Licence has been obtained allowing only 40% Development therefor this alternative will not be assessed.

ALTERNATIVE 2 CONSISTS OF A SIMILAR, BUT LARGER DEVELOPMENT CONCEPT, WITH ACCESS TO THE NORTHWEST OFF GEORGE REX DRIVE AND AN ALTERNATIVE ACCESS ONTO HOWARD STREET TO THE SOUTH. THIS PROPOSAL CONSISTS OF 60% DEVELOPMENT AND 40% CONSERVATION / WETLAND REHABILITATION.

The proposed development will consist of the following mixed uses:

- 1 x “Transport Zone” for a helipad ($\pm 0,77$ ha);
- 1 x “Institutional Zone” for a day hospital ($\pm 1,23$ ha);
- 2 x “Business Zone” for commercial and retail purposes ($\pm 2,86$ ha);
- 2 x “Business Zone” with consent uses for places of assembly ($\pm 2,74$ ha);
- 1 x “General Residential Zone” for a 70 bedroom hotel ($\pm 1,09$ ha);
- 1 x “Group Housing Zone” for a group housing development of approximately 115 group housing units ($\pm 3,85$ ha);
- 2 x “Private open space” for a private nature area ($\pm 5,29$ ha);
- Private Road ($\pm 1,58$ ha);

The No Go Alternative

The site will remain as is. There are vagrants on site and the wetland will not be rehabilitated therefore the wetland condition as assessed in wetland report will in all probability degrade even further. As per instruction given by the Fire Department mowing of the reeds will need to continue as it poses a fire risk to the area. As per NEM:BA the applicant will comply to removal of alien species on site.

Section H

1. Details of the public participation process undertaken in terms of regulation 41 of the regulations, including copies and supporting documents and inputs.

Section 41 in Chapter 6 of regulation 982 details the public participation process that needs to be adhered to as part of an environmental process. Compliance of the Public Participation Process as per the Legislated Requirements is indicated in the table below:

Regulation with regard to conducting a Public Participation Process	Description to adherence of the Legislated Requirements
<p>1) If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for environmental authorisation in respect of such an activity, obtain written consent of the landowner or person in control of the land to undertake such activity on that land</p>	<p>The proponent (applicant) is the landowner and therefore consent is not required.</p>
<p>2) <i>The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties on an application or proposed application which is subjected to public participation by -</i></p>	
<p>(a) Fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of –</p> <p>(i) The site where the activity to which the application or proposed application relates or is to be undertaken;</p> <p>(ii) Any alternative site</p>	<p>(i) A site notice was placed on site. (ii) There is no alternative site.</p>
<p>(b) Giving written notice, in any of the manners provided for in section 47D of the Act, to –</p> <p>(i) The occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site where the activity is to be undertaken and to any alternative site where the activity is to be undertaken.</p> <p>(ii) Owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and any alternative site where the activity is to be undertaken.</p> <p>(iii) The municipal councillors of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community.</p>	<p>(i) The applicant is the owner of the site and is in control of the site. The site is vacant and there is only one site.</p> <p>(ii) The owners of the land adjacent to the site have been notified via registered mail. There is only one site.</p> <p>(iii) The ward Councillor (Knysna Municipality) has been notified. The ratepayers association has been notified</p> <p>(iv) Knysna Municipality has been notified</p>

<p>(iv) The Municipality which has jurisdiction in the area</p> <p>(v) Any organ of state having jurisdiction in respect of any activity; and</p> <p>(vi) Any other party as required by the competent authority</p>	<p>(v) Please refer to Appendix G showing a list of organs of state notified.</p> <p>(vi) Please refer to Appendix G showing a list of all organisation, NGO's and public that has been notified.</p> <p><i>Please note that all I&AP's registered in the previous process has automatically been included in this process.</i></p>
<p>(c) Placing an advertisement in –</p> <p>(i) One Local Newspaper; or</p> <p>(ii) Any official Gazette that is published specifically for the purpose of providing public notices of applications or other submissions made in terms of these Regulations;</p>	<p>(i) Knysna Plett Herald Newspaper a local free newspaper was advertised in on 22/10/2021.</p>
<p>(d) Placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond its boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not to be complied with if an advertisement has been placed in an official gazette referred to in paragraph (c)(ii); and</p>	<p>This is not applicable top this proposed activity as there is no impact (i.e air emissions) that extends beyond the boundaries of the district municipality.</p>
<p>(e) Using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to –</p> <p>(i) Illiteracy</p> <p>(ii) Disability; or</p> <p>(iii) Any other disadvantages</p>	<p>N/A at this stage. But if required will comply.</p>
<p>3) A notice, notice board or advertisement referred to in sub regulation (2) must –</p> <p>(a) Give details of the application or proposed application which is subjected to public participation ; and</p> <p>(b) State –</p> <p>(i) Whether basic assessment or S&EIR procedures are being applied to the application;</p> <p>(ii) The nature and location of the activity to which the application relates;</p> <p>(iii) Where further information on the application or proposed application can be obtained; and</p> <p>(iv) The manner in which and the person to whom representations in respect of the application or proposed application may be made.</p>	<p>Yes</p>

<p>4) A notice board referred to in sub regulation (2) must –</p> <ul style="list-style-type: none"> (a) Be of a size of at least 60cm by 42cm; and (b) Display the required information in lettering and in a format as may be determined by the competent authority 	<p>Yes.</p>
<p>5) Where public participation is conducted in terms of this regulation for an application or proposed application, sub regulation (2)(a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19(1)(b) or 23(1)(b) or the public participation process contemplated in regulations 21(2)(d), on condition that –</p> <ul style="list-style-type: none"> (a) Such a process has been preceded by a public participation process which included compliance with sub regulation (2)(a), (b), (c) and (d); and (b) Written notices is given to registered I&AP's regarding where the – <ul style="list-style-type: none"> (i) Revised basic assessment report or , EMPr or closure plan, as contemplated in regulation 19(1)(b); (ii) Revised environmental impact assessment report or EMPr as contemplated in regulation 23(1)(b); or (iii) Environmental impact assessment report and EMPr as contemplated in regulation 21(2)(d); (iv) <p>May be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due.</p>	<p>Please see attached appendix J, As Per the approved Public Participation Plan.</p>
<p>6) When complying with this regulation, the person conducting the public participation process must ensure that –</p> <ul style="list-style-type: none"> (a) Information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and (b) Participation by potential or registered interested and affected parties is facilitated in such a manner that all registered interested and affected parties are provided with a reasonable opportunity to comment on the application or proposed application. 	<p>Please see attached appendix J</p>

<p>7) Where an environmental authorisation is required in terms of these Regulations and an authorisation, permit or licence is required in terms of a specific environmental management Act, the public participation processes contemplated in this Chapter may be combined with any public participation processes prescribed in terms of a specific environmental management Act, on condition that all relevant authorities agree to such a combination of processes.</p>	<p>Please see attached appendix J</p> <p>The WULA Licence has been obtained from the Department of Water Affairs.</p>
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Registration of Key Stake Holders

As this is not the first application the key stakeholders identified in the previous application have automatically been registered and will be given an opportunity to comment on the consultation Basic Assessment Report. A list of key stakeholders for this process is included in the table below, this will be updated in the Final BAR:

STATE DEPARTMENTS			
Name	Contact Person	Postal Address	HC/CD/L
Department of Agriculture Western Cape	Mr Cor van der Walt	P/Bag X1 Elsenburg 7607	corvdw@elsenberg.com
Department of Agriculture - National		P/Bag X120 Pretoria 0001	info@elsenberg.com Enquiries@daff.gov.za
Department of Agriculture, Forestry & Fisheries	Mss Melanie Koen	P/Bag X12 Knysna 6570	mkoen@environment.gov.za
Department of Economic Development & Tourism- Western Cape	Mr Mark Lakay	P.O. Box 979 Cape Town 8000	mark.lakay@pgw.c.gov.za
Department of Environmental Affairs & Development Planning	Mr Danie Swanepoel Jessica Christie	P/Bag X6509 George. 6530	Danie.Swanepoel@westerncape.gov.za
Department of Provincial Health	Manie Abrahams	P/Bag X6592 George 6530	Manie.Abrahams@westerncape.gov.za
Department of Rural Develop. & Land Reform	Glen Smith	P.O. Box 872 George 6530	ghsmith@ruraldevelopment.gov.za
District Roads Engineer	John Daniel	Private Bag X12 George 6530	johnd@gardenroute.gov.za

Department of Transport & Public Works	Devlin Fortuin	P/Bag X617 Oudshoorn 6620	Devlin.Fortuin@westerncape.gov.za
Department of Water Affairs	C Abrahams	P/Bag X16 Sanlamhof 7532	cabrahams@bgcma.co.za
South African National Roads Agency	Colleen Runkel	P/Bag X19 Bellville 7535	Runkelc@nra.co.za
Gouritz WMA: BGCMA	Rabokale Mphahlele	Private Bag X16 Sanlamhof Bellville 7532	rmphahlele@bgcma.co.za

ORGANS OF STATE

Name	Contact Person	Postal Address	HC/CD/L
Cape Nature – Western Cape	Meghan Simons	P/Bag 6546, George. 6530	msimons@capenature.co.za
Eskom Western Cape – Land & Rights	Lianne Muller MullerLE@eskom.co.za HansSS@eskom.co.za	P.O. Box 222 Brackenfell 7561	WayleavesWesternOU@eskom.co.za
Heritage Western Cape	C. van Wijk	P/Bag X9067 Cape Town. 8000	info@hwc.co.za calvin.vanwijk@westerncape.gov.za
SANParks	Maretha Alant	P.O. Box 3542 Knysna 6570	maretha.alant@sanparks.org

NGO's

Name	Contact Person	Postal Address	HC/CD/L
Knysna Ratepayers Association	Mr. Ian Uys	P.O. Box 2475, Knysna. 6570	knysna.ratepayers.assoc@gmail.com
Knysna Catchment Management Forum	Johan de Klerk	P.O.Box Knysna 6570	johan.deklerk@sanparks.org
Ward 9 Councillor Knysna Municipality	MSrs Sharon Sabbagh	P.O. Box 21, Knysna. 6570	St.sabbagh@gmail.com

MUNICIPALIES

Name	Contact Person	Postal Address	HC/CD/L
Knysna Municipality – Environmental Management	Pam Booth	P.O. Box 21 Knysna 6570	pbooth@knysna.gov.za

PUBLIC	
Name	EMAIL ADDRESS
Lorna Watt - WESSA	lornawatt@telkomsa.net
Pat Nurse -Chair Lakes Bird Club	jgn@lantic.net
Roger and Stella Wain-Heapy	rwhbath@btinternet.com
Chris Gow	chrisandtinx@telkomsa.net
Dave Edge	orachrysops@gmail.com
Steve Gettliffe (co-chair KEF) the Knysna Environmental Forum	stebar@barkly.co.za
Judy Harrison	judyh883@gmail.com
Lisa Elis	lisa.ellis100@gmail.com
Julian Lincow	julian@primesecurity.co.za
Ms. Althea Mason	altheamason@yahoo.com
Claudia Pirker	pirker@afrihost.co.za
Ms. Christel Riley Halse	rileyfirestarter@gmail.com
Bridget O'Meara	omeara@telkomsa.net
Judy Harrison	judyh883@gmail.com
Mrs. Penny Foyn	pennyfoyn@yahoo.com
Mrs. E.E. Pawson	elrob@isat.co.za
Nadia Miln	nadiam@l2b.co.za
Marius Kannenberg Hunters Village Home Owners Association	kannenbergmarius@gmail.com
John Kennedy	jkennedy@telkomsa.net
Chris Gould Representing: Knysna Ratepayers Association	knysna.ratepayers.assoc@gmail.com
Charles Breen For Chairman, Hunters Village Home Owners Association	breenc39@gmail.com
Terry Cohen	accommodation@restinnknysna.co.za
Boets Smuts	boets@smutsdekokk.co.za

E. Pwason	elrob@isat.co.za
Brenton Rate Payers	brentonratepayers@gmail.com
Charles Breen	breenc39@gmail.com
Yvonne O'Neil	yvonne@mvb.co.za
Siphokazi Hans	HansSS@eskom.co.za
Ecoroqne	ecoroqne@superbia.aserv.co.za
Marius Kanneberg	kannenbergmarius@gmail.com
Rob Stocker	rstoker@knysnaprimary.co.za
	ecohead@westerncape.gov.za
Adrian Morison	morison@webmail.co.za
Heinie Dixon	kea@global.co.za
Noel Bell	pringlebell@cyberperk.co.za
Owen Roberts	ojroberts@telkomsa.net
Mr P van Halderen	vanhalderen@mweb.co.za
Douglas Fleet	douglasfleet@telkomsa.net
	elrob@isat.co.za
Debbie	debbiedv@value.co.za
	agriland@nda.agric.za
Hans	hans@edendem.co.za
Roger Wain-Heapy	rwhbath@btinternet.com
Lisa Ellis	lisa.ellis100@gmail.com
	pirker@afrihost.co.za
Ms. Christel Riley Halse	rileyfirestarter@gmail.com
Ms. Althea Mason	altheamason@yahoo.com
Miss Bridget O'Meara	omeara@telkomsa.net
Mrs. Penny Foyn	pennyfoyn@yahoo.com

Availability of the Draft Basic Assessment Report

Registered I&AP's including all identified I&AP's were notified to the availability of the report. The registered I&AP's as well as the notice in the newspaper advertised that the digital copy could be obtained at www.ecoroute.co.za.

The Basic Assessment report was made available for a 30 day commenting period from 22/02/2019 to 22/03/2019. The Draft BAR will be in the public domain from 25/10/2021 – 26/11/2021.

Proof of notifications and availability of the report is will be included in the final BAR.

Comments and Response Report on the Consultation BAR

This Section will be completed in the Final BAR.

SITE MEETING 01/11/2019 Minutes of meeting Below

Minutes off Site meeting & Site Visit for projects in Knysna with Eco-Route Environmental Consultancy.

1. ERF 12403 George Rex

Present:

- Zama Langa: (DEA:IEA Pretoria)
- Danie Smit : (DEA IEA Pretoria)
- Francois Naudê (DEA&DP George)
- Malusi Madonsela (DEA Pretoria)
- Maretha Alant: (SANParks (Knysna)
- Janet Ebersohn : (Eco Route)
- Corrine Taylor: (Eco Route)
- Andries Fourie (Jazz Spirit)
- Arnold Wedel (Nieuwood & Kie)

<u>ERF 12403 GEORGE REX KNYSNA</u>	
Janet	<ul style="list-style-type: none">• Janet briefing Malusi DEA case officer-• This is the final we have to make a decision the client has allot of specialist studies done• Basically the department of Water affairs said 40% development and 60% rehabilitation.
Maretha Alant SANParks	<ul style="list-style-type: none">• There is also a 80/20 document

Janet Ebersohn	<ul style="list-style-type: none"> • Years ago.
Andries Fourie	<ul style="list-style-type: none"> • That document was included in the title deed
Maretha Alant	<ul style="list-style-type: none"> • The title deed need to be added
Andries Fourie	<ul style="list-style-type: none"> • That's already been done/added
Janet Ebersohn	<ul style="list-style-type: none"> • Janet Explains Water Affairs 40%-60%
Maretha Alant	<ul style="list-style-type: none"> • I would suggest the 40/60% stand
Janet Ebersohn	<ul style="list-style-type: none"> • Janet reading Alternative 2 from the hardcopy.
Maretha Alant	<ul style="list-style-type: none"> • Do Alternative
Andries Fourie	<ul style="list-style-type: none"> • What land can we work on, so now we got 40% to develop, what Alternative must we use.
Maretha Alant	<ul style="list-style-type: none"> • A specialist must say what you can use and what not
Janet Ebersohn	<ul style="list-style-type: none"> • It's what the specialist recommends, Jacky Dabrowski agreed with my first report we decided to get the most feasible report.
Danie Smit	<ul style="list-style-type: none"> • The call is very far, what are you going to put in your report
Janet Ebersohn	<ul style="list-style-type: none"> • The project has been subjected to several SDP changes over the years and the alternatives now relevant is according to the latest specialist studies
Francois Naude	<ul style="list-style-type: none"> • They as the decision makers can consider anyone.
Danie Smit	<ul style="list-style-type: none"> • I would always like to see all specialist report
Francois Naude	<ul style="list-style-type: none"> • The EAP did not give us a wetland report • The EAP must include all information
Janet Ebersohn	<ul style="list-style-type: none"> • I agree with what you are saying. All the reports are different that's why we appointed Patsy Sherman and she combined all the reports in one. • The client was not happy with Patsy Sherman
Danie Smit	<ul style="list-style-type: none"> • We will seldom go against specialist reports
Maretha Alant	<ul style="list-style-type: none"> • We would like to see if the specialist didn't come with other alternatives. • The public is very interested
Francois Naude	<ul style="list-style-type: none"> • If there are alternatives in different layout
Janet Ebersohn	<ul style="list-style-type: none"> • I am not happy with that it takes so many years
Andries Fourie	<ul style="list-style-type: none"> • I am standing here as a developer with us that has been a regression
Francois Naude	<ul style="list-style-type: none"> • Were it stated off with is under conservation act, but legislation has change. Each application is new. • There may be different layout
Andries Fourie	<ul style="list-style-type: none"> • Remember as the developer nobody sits with a decision, we don't know.
Francois Naude	<ul style="list-style-type: none"> • Your process is going to dictate that.
Danie Smit	<ul style="list-style-type: none"> • In your report you showing where it comes from, put that information in you got a layout if were not happy than we can reject it, put 40% in and we see were we go.
Janet Ebersohn	<ul style="list-style-type: none"> • I did a consultation DBAR and no comments were received.
Danie Smit	<ul style="list-style-type: none"> • It seems like it's going to be ok • We need the history
Andries Fourie	<ul style="list-style-type: none"> • Just so it won't keep up the process?
Danie Smit	<ul style="list-style-type: none"> • No it won't, it's in a process
Danie Smith	<ul style="list-style-type: none"> • That's your preferred Alternative
Zama Langa	<ul style="list-style-type: none"> • New information: The public needs to see that significant change.

Andries Fourie	<ul style="list-style-type: none"> • If you want to confuse the public than I will throw everything in as a matter of presentation.
Francois Naude	<ul style="list-style-type: none"> • You could have 10 different applications that's a matter of administration; it's about the background information.
Danie Smit	<ul style="list-style-type: none"> • Give us the background information
Janet Ebersohn	<ul style="list-style-type: none"> • I don't have a problem but my 90 days started. • I will ask for 50 day extension
Danie Smit	<ul style="list-style-type: none"> • Just send us a letter
Francois Naude	<ul style="list-style-type: none"> • If there is an appeal than you can say all the info was sent.
Danie Smit	<ul style="list-style-type: none"> • You must inform us
Francois Naude	<ul style="list-style-type: none"> • Please show us were you make the changes.
Danie Smit	<ul style="list-style-type: none"> • The easiest way you make an amendment to the report. • If I look at the whole process this close to December
Janet Ebersohn	<ul style="list-style-type: none"> • We will see what comments come in and we put it out • Andries I need that CD • Janet explain private open space on the map
Francois Naude	<ul style="list-style-type: none"> • What is it that you want to achieve
Maretha Alant	<ul style="list-style-type: none"> • We want conservation
Francois Naude	<ul style="list-style-type: none"> • Don't do the Zoning you will confuse Danie, the Zoning can be different.
Janet Ebersohn	<ul style="list-style-type: none"> • We want to do boardwalks
Danie Smit	<ul style="list-style-type: none"> • There is allot of things that needs to get done we need to see your options: no go options, put it in you 50 day extension letter. • You will get a decision early in the new year
Malusi Madonsela	<ul style="list-style-type: none"> • Your specialist studies: you did not use the current debate
Janet Ebersohn	<ul style="list-style-type: none"> • I will in my final BAR
Zama Langa	<ul style="list-style-type: none"> • We are in the middle of the development
Maretha Alant	<ul style="list-style-type: none"> • I am coming again with scientist • We have to infill to raise it. • Who said 2.3 I think its 3 rather lift up while you doing your infilling, make it clear.
Janet Ebersohn	<ul style="list-style-type: none"> • Andre can you peg it sometime
Maretha Alant	<ul style="list-style-type: none"> • I want to see the conservation areas. • We need more information here. • How many houses?
Janet Ebersohn	<ul style="list-style-type: none"> • Two story high • 62 bedrooms apartments • Hotel explain Janet
Maretha Alant	<ul style="list-style-type: none"> • Are you asking for zero setback line • Where is your excess road
Janet Ebersohn	<ul style="list-style-type: none"> • Indicating on the card
Maretha Alant	<ul style="list-style-type: none"> • Our scientist said they are not in favour • But we will come back. • And the boardwalk as proposed?
Janet Ebersohn	<ul style="list-style-type: none"> • We just want one boardwalk
Maretha Alant	<ul style="list-style-type: none"> • We can't even now walk to site • If people don't want to walk there now, in future will people not be too scared to walk there.

Janet Ebersohn	<ul style="list-style-type: none"> • Janet explain what the specialist said • It is going to be natural
Francois Naude	<ul style="list-style-type: none"> • We can decide on the birding.
Danie Smit	<ul style="list-style-type: none"> • If you got comments of the water outflow, put it in your comments give us your wording Maretha.
Maretha Alant	<ul style="list-style-type: none"> • SDP into the future fine
Danie Smit	<ul style="list-style-type: none"> • I don't want amendments
Maretha Alant	<ul style="list-style-type: none"> • We will do a site visit again
Janet Ebersohn	<ul style="list-style-type: none"> • When you come Maretha invite me to be present at that site visit.
Maretha Alant	<ul style="list-style-type: none"> • We won't come without you Janet.
Danie Smit	<ul style="list-style-type: none"> • Fix it now because if you come with a second application than this will cause problems, so fix it now.
Andries Fourie	<ul style="list-style-type: none"> • Indicate were the dune come from • Have a separate plan from your engineer
Danie Smit	<ul style="list-style-type: none"> • Sort it out any change of a layout plan become a part 2 amendment

2. Site Description and Environmental Attributes

Geographical and Physical Aspects

The following Geographical and physical aspects are located on site or within 100 meters from the site:

- Wetland on site.
- Drainage channels on site.
- Within 100 meters from the Knysna Estuary (the manmade Ashmead channel).
- The entire property is elevated 2 to 3m above mean sea level.

The Negative Environmental Attributes currently on site:

- Adjacent Waste Water Treatment Works resulting in increased nitrates found within the wetland.
- The wetland has been blocked off from the Knysna Estuary through construction of George Rex Drive and blocked culverts.
- The drainage channels on site and adjacent to site is blocked and overgrown.
- Saw dust dump that was used for infill of site.
- Alien vegetation on site.
- Mowing of site as per instruction of the Fire Department.

Positive Environmental Attributes on site:

- Even though the wetland is degraded it still plays an important role within the receiving environment:
 - Reduce impacts of flooding.
 - Provide a habitat for fauna and flora.
 - Pollution filter.
 - Recreation and tourism.
 - Groundwater recharge.

As indicated above it is clearly evident why the wetland on site plays an important role in the environment and why the rehabilitation of this wetland is important to the receiving environment, even though the wetland is located within an urban area.

The proposal now is to rehabilitate the wetland, include more Private Open Space as a green buffer and develop an area for mixed use commercial, recreation, institutional and residential purposes. The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south.

Biological Components

VEGETATION

The desktop study of the vegetation on site:

Vegetation Type: Garden Route Shale Fynbos

FFh 9 Garden Route Shale Fynbos (sensu Mucina & Rutherford, 2006)

Distribution:

Western and Eastern Cape Provinces: Patches along the coastal foothills of the Langeberg at Grootberg (northeast of Heidelberg), the Outeniqua Mountains from Cloete's Pass via the Groot Brak River Valley, Hoekwil, Karatara, Barrington and Knysna to Plettenberg Bay. Patches from the Bloukrans Pass along coastal platform shale bands south of the Tsitsikamma Mountains via Kleinbos and Fynboshoek to south of both Clarkson and the Kareedouw Mountains. Altitude between 0-500m amsl.

Vegetation & Landscape Features:

Undulating hills and moderately undulating plains on the coastal forelands. Structurally this is tall, dense proteoid and ericaceous fynbos in wetter areas, and graminoid fynbos (or shrubby grassland) in drier areas. Fynbos appears confined to flatter more extensive landscapes that are exposed to frequent fires – most of the shales are covered with Afrotemperate forest. Fairly wide belts of *Virgilia oroboides* occur on the interface between fynbos and forest. Fire-safe habitats nearer the coast have small clumps of thicket, and valley floors have scrub forest (Vlok & Euston-Brown 2002).

Geology & Soils:

Acidic, moist clay-loam, prisma-cutanic and pedocutanic soils derived from Caimans Group and Ecca (in the east) shales. Land types mainly Db and Fa.

Climate:

MAP 310-1 120 mm (mean: 700 mm), relatively even throughout the year, but with a slight low in winter. Mean daily maximum and minimum temperatures 27.6 degrees Celsius and 6.5 degrees Celsius for January and July, respectively. Frost incidence of 2 or 3 days per year. See also climate diagram for FFh 9 Garden Route Shale Fynbos.

Conservation:

Endangered. Target 23%. Statutorily conserved in the proposed Garden Route National Park (4%) and Boosmansbos Wilderness Area (1%). A further 3% are protected in other (mainly private) conservation areas such as Robbe Hoek Forest Reserve.

More than half of the area has already been transformed for cultivation and pine plantations. Much of the remaining veld has been converted to pasture.

Remnants are found largely on steep inclines and in areas unsuitable for agriculture. Alien plants such as *Hakei sericea* and various species of *Acacia* locally infest natural remnants. Erosion very low and moderate.

Ecosystem Status according to the NEM:BA.

National Environmental Management: Biodiversity Act (NEMBA), 2004

(Act No. 10 of 2004)

National List of Ecosystems that are threatened and in need of protection, in terms of Section 52 of the NEM:BA. – Endangered.

As per the Aquatic wetland Report attached as appendix I.

Alien Vegetation

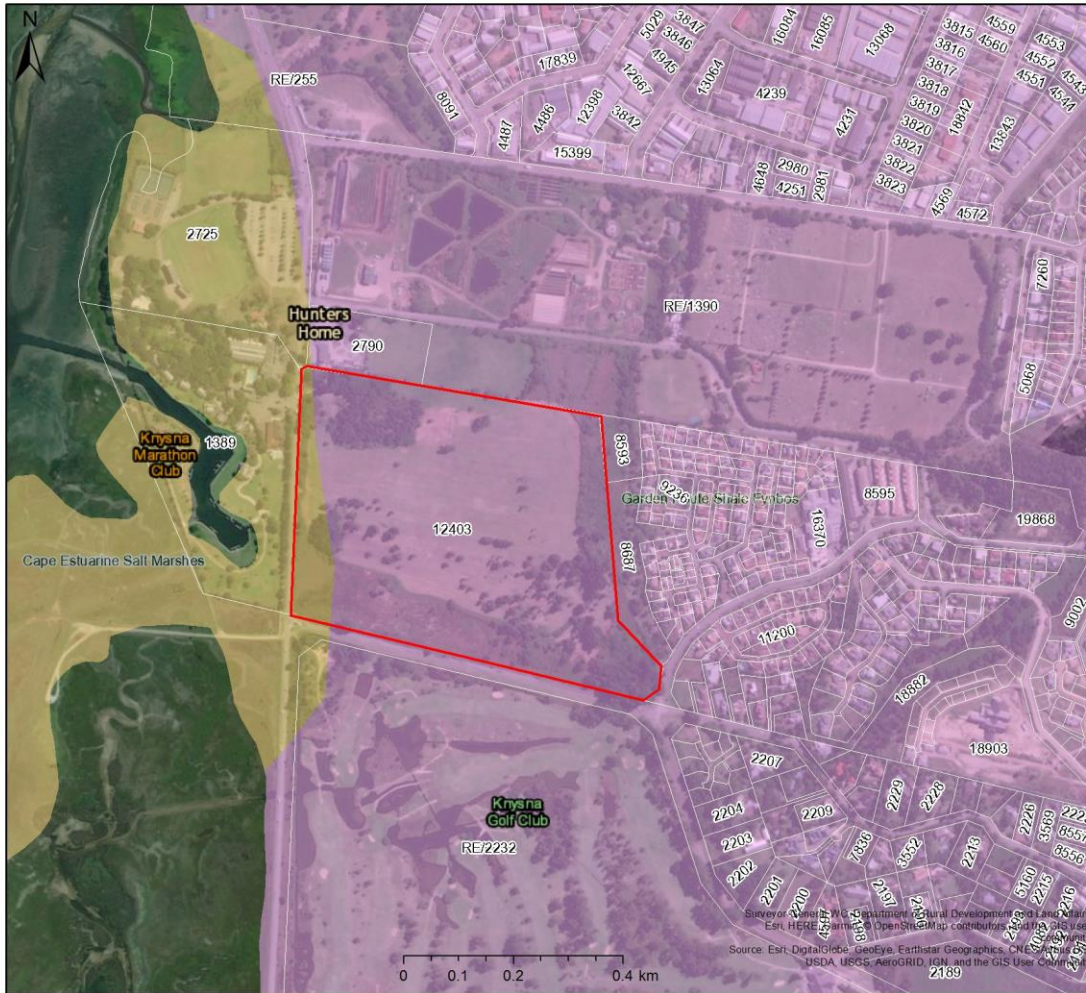
Alien plant species have invaded all disturbed areas of the wetland, including the soil stockpile (Orange outline in figure below), drainage channel banks, along roads and around the old farm house. Extensive alien vegetation corresponds with the red outline of drainage channel shown in below figure. More isolated alien trees (as well as indigenous trees) are located in the extensively mown area.



Garden Route Shale Fynbos (EN)

Legend

Erf



Scale: 1:9 028

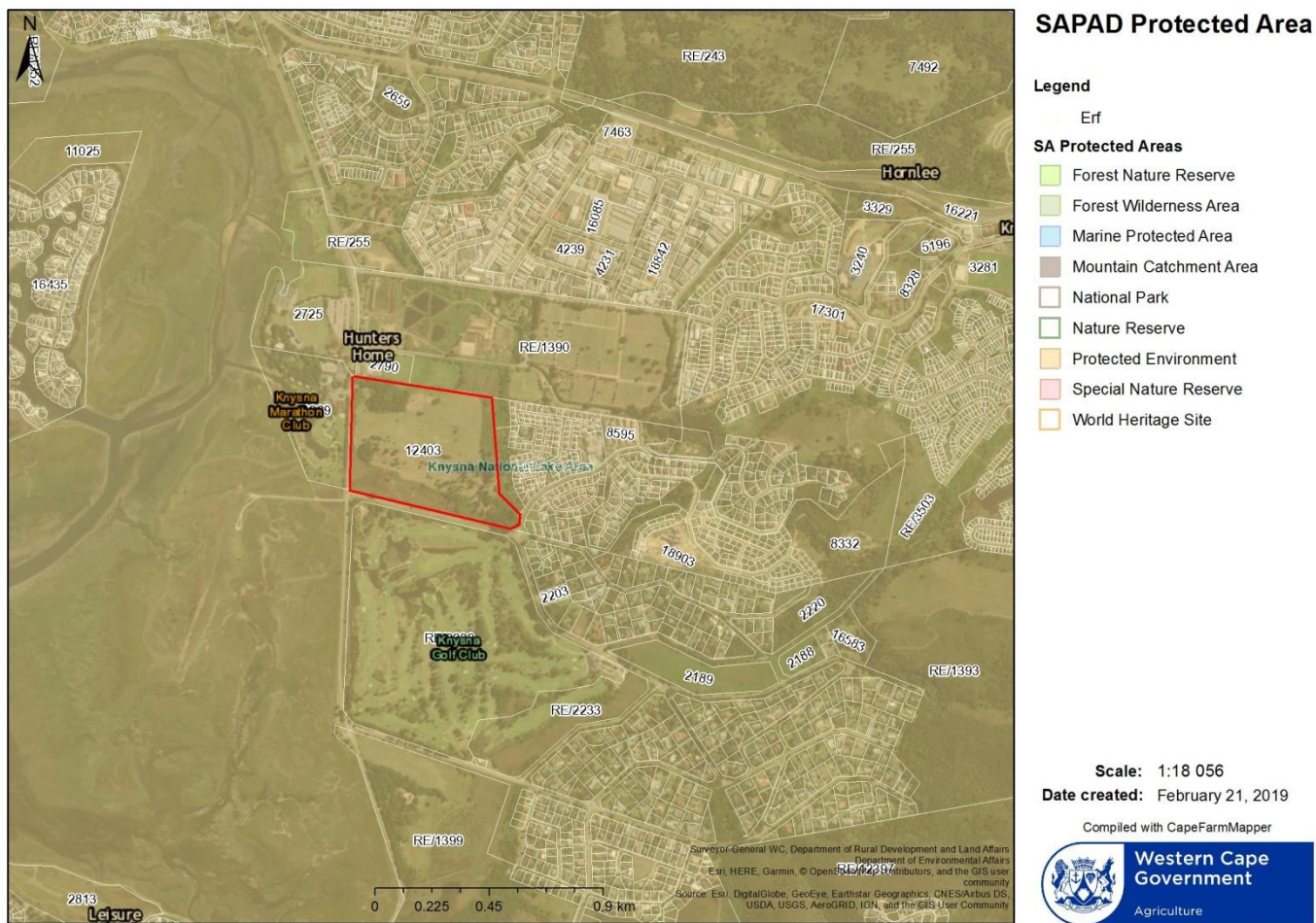
Date created: February 14, 2019

Compiled with CapeFarmMapper



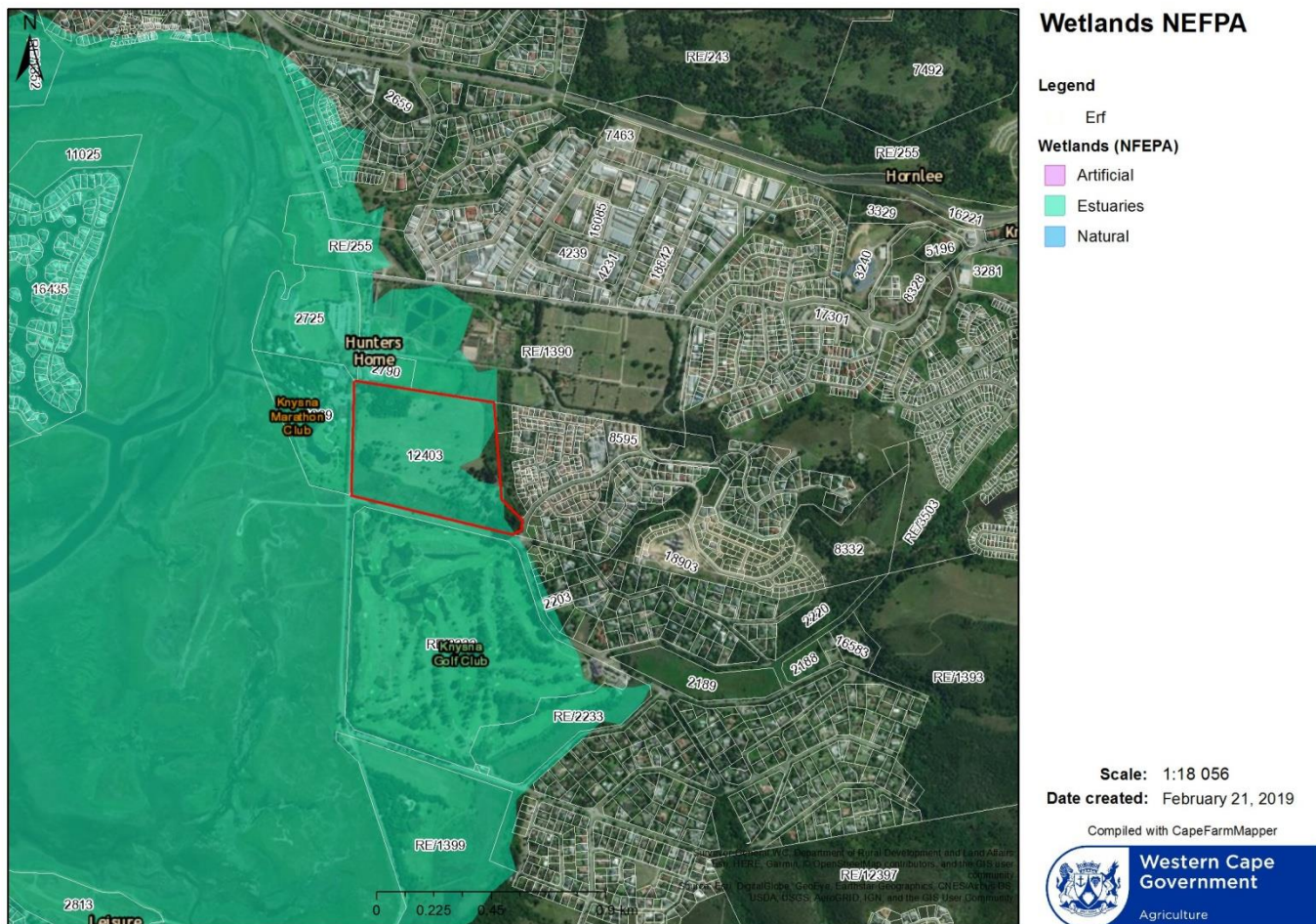
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Protected Area



As per Cape Farm Mapper ver 2.1.3 a portion of the property falls within the Knysna National Lakes area.

National Fresh Water Ecosystem Priority Areas



Social Economic Value of the Activity

What is the expected capital value of the activity on completion?

R 605,000,000.00

What is the expected yearly income that will be generated by or as a result of the activity?

R61,125,000.00

Will the activity contribute to service infrastructure?

YES NO

Is the activity a public amenity?

YES NO

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

400

What is the expected value of the employment opportunities during the development and construction phase?

R95,000,000.00

What percentage of this will accrue to previously disadvantaged individuals?

>75%

How many permanent new employment opportunities will be created during the operational phase of the activity?	400
What is the expected current value of the employment opportunities during the first 10 years?	R 301,700,000.00
What percentage of this will accrue to previously disadvantaged individuals?	>75%

The vision of the Knysna Municipality as stated in the IDP (2012-2017) (p. 16) is to develop an economy that creates more jobs. In order to achieve this vision, economic growth is required that will transform the economy and provide decent work to the residents of Knysna. ***As can be seen above an additional 400 job opportunities will be created during the construction and operational phase of the proposed development***

The IDP therefore acknowledges that significant action is required to regenerate the economy of the municipal area, address the increasing levels of unemployment and declining skills levels. In order to achieve the long-term vision, a requirement exists to understand the economy and context of different sectors that generate economic income and employment.

The Knysna economy contributed approximately 15.53% to the economy of the Eden District Municipality in 2009 . In terms of absolute numbers, the economy of Knysna generated R2 174 million of Gross Value Added (GVA8), when compared to R13 998 million recorded in the Eden District. The GVA contribution of the Knysna economy to the Eden District decreased slightly from 15.77% in 2001 to 15.53% in 2009. Notwithstanding, the Knysna economy grew in nominal terms by 6.12% 9 per annum from 2001 to 2009 or 60.89% over the period.

The largest sectors of the Knysna economy are Wholesale and Retail Trade which includes catering and accommodation.

Heritage

The Department of Heritage sent a letter in 2008 stating no heritage resources will be impacted on see below:

Reference: HM/KNYSNA/Erf 12403
Enquiries: Gregory Ontong
E-mail: grontong@pgwc.gov.za
Tel: (021) 483 9689
Fax: (021) 483 9842
Date: 11 February 2008



Heritage Western Cape hereby notifies:

Quahnita Samie
Vidamemoria
P O Box 15688
Vlaeberg
8018

RECORD OF DECISION

of its decisions, comments and recommendations in terms of
Section 38(2) of the National Heritage Resources Act, 1999 (Act 25 of 1999)

For: Notification of the Intent to Develop.
At: Erf 12403, George Rex Drive, Knysna

DECISIONS, COMMENTS AND RECOMMENDATIONS:

I can hereby confirm that your application submitted terms of Section 38 of the National Heritage Resources Act 25 of 1999 is hereby endorsed, as follows:

- That a Landscape Plan and estimate be submitted to the local authority for scrutiny
- That all mature trees be retained
- That the edges of the site and the uppermost row of proposed units be effectively screened
- **That no further assessments are required as the nature of the proposed development and contextual analysis reveals that the development does not warrant such action.**
- **The development may proceed and all other approvals must be handled at the local municipality.**
- **If any archaeological material is discovered during earth moving activities all works must be stopped and HWC must be notified immediately.**

Please note that this approval relates to heritage related aspects of the proposal only and does not exonerate the applicant from obtaining approval from any other authority.

Please feel free to contact this office for any other information.

Yours

Gregory Ontong
for **Accounting Officer: Heritage Resource Management Service**
• Copy to: Copy to Knysna Municipality, P O Box 21, Knysna, 6570

www.capegateway.gov.za/culture_sport

3. Methodology for Assessment of Impacts

There are mainly three categories of environmental impacts:

Direct Impacts: These impacts are caused by the development itself for example the clearing of vegetation for a development.

Indirect Impacts: These impacts are usually linked closely with the project and may have more profound results than the direct impacts for example the degradation of surface water due to soil erosion emanating from the site where vegetation clearance has taken place.

Cumulative Impacts: These impacts can be defined as the ability of natural and social environments to incorporate cumulative stresses placed on them and the likelihood of negative synergistic effects. Cumulative impacts also arise when existing future development rights set a precedent in an area. The process of cumulative impacts may arise from any of the following four events:

- A single larger event
- Multiple interrelated events
- Sudden or catastrophic events
- Incremental change

Definition of key terminology:

Nature of the Impact – A description of positive or negative impacts of the project on the affected environment. This description should include who or what would be affected and how.

Extent – the impact could:

- Be-site specific
- Be limited to the site and its immediate surroundings
- Have an impact on the region
- Have an impact on a national scale
- Have an impact across international borders

Duration – It is important to indicate whether or not the lifetime of the impact will be:

- Short term (e.g. during construction)
- Medium term (e.g. during part or all of the operational phase)
- Long term (e.g. beyond the operational phase, but not permanently)
- Permanent (where the impact is for all intents and purposes irreversible. An irreversible negative impact may also result in irreplaceable loss of natural capital or biodiversity, if it were to result in extinction or loss of species or ecosystem); or

Intensity or Magnitude - The size of the impact (if positive) or its severity (if negative):

- Low, where biodiversity is negligibly affected or where the impact is so low that remedial action is not required.
- Medium, where biodiversity pattern, process and/or ecosystem services are altered, but not severely affected, and the impact can be remedied successfully; and

- High, where, pattern, process and/or ecosystem services would be substantially be affected. If a negative impact, could lead to irreplaceable loss of biodiversity and/or unacceptable consequences for human wellbeing.

Probability –Should describe the likelihood of the impact actually occurring indicated as:

- Improbable, where the possibility of the impact is very low either because of design or historic experience
- Probable, where there is a distinct possibility that the impact will occur.
- Highly probable, where it is most likely that the impact will occur, or
- Definite, where the impact will occur regardless of any prevention measures.

Significance – The significance of impacts can be determined through a synthesis of the assessment criteria.

Significance can be described as:

- Low, where it would have negligible effect on biodiversity, and on the decision.
- Medium, where it would have a moderate effect on biodiversity, and should influence the decision.
- High, where it would have, or there would be a high risk of, a large effect on biodiversity. These impacts should have a major influence on the decision.
- Very high, where it would have, or there would be a high risk of, an irreversible negative impact on biodiversity and irreplaceable loss of natural capital or a major positive effect. Impacts of very high significance should be a central factor in decision making.

Confidence – The level of confidence in predicting the impact can be described as:

- Low, where there is little confidence in the prediction, due to inherent uncertainty about the likely specialists. However co-operation between these specialists and the biodiversity specialist is recommended, as biodiversity values are often overlooked by specialists in these other disciplines.
- Medium, where there is a moderate level of confidence in the prediction; or
- High, where the impact can be predicted with a high level of confidence.

4. The impacts and risks identified for the preferred alternative

Impact assessment in terms of Regulation 22(2)(i) of GN R.543

The main **current** impacts on site were identified in the wetland report:

- The dumping of sawdust and soil on the wetland surface;
- Cutting off of saltwater from the estuary (due to the small culvert beneath George Rex Drive) and increased freshwater flows from the upstream catchment (which have caused a change from estuarine/brackish to freshwater wetland vegetation across large parts of the site);
- Increased nutrients arising from seepage from the adjacent sewage works;
- Alien trees which have shaded out the wetland vegetation in places; and Small drains which have been constructed to drain the wetland. Although the site was affected by these impacts, the persistent areas of Phragmites reedbeds and patches of estuarine wetland vegetation represented natural vegetation for the site; albeit at different proportions from the historic condition.

All the above current impacts were taken into consideration to mitigate and improve the receiving environment, this includes rehabilitation of the wetland. This formed part of the planning phase. All remedial measures has been address in the attached Aquatic rehabilitation Plan.

Alternative 1 – Preferred Alternative Impact Assessment

The preferred Alternative 1

40% developed area of the site and 60% of the site will be used for conservation and wetland rehabilitation, with no access over the wetland towards Howard Drive.

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services (physio-therapists, biokineticists, gym, massage, sport psychology, etc).

The proposed development will consist of the following mixed uses:

- 1 x “General Residential Zone III” portion (flats / sports village);
- 1 x “General Residential Zone V” portion (hotel);
- 5 x “Business Zone I” portions;
- 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion;
- 2 x “Open Space Zone II” portions; ▪ 1 x “Open Space Zone III” portion;
- 1x Transport Zone II portion; &
- 1x Transport Zone III portion,

As per the identified triggered Activities in NEMA the following impacts need to be assessed:

Listed Activity described in GN R. 325, 324, 327	Activity description	Identified Impacts
GN R. 327 Activity 12	The development of – (ii) infrastructure or structures with a physical footprint of 100 square meters or more Where such development occurs – (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse	<ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary & Wetland • Pollution entering the Knysna Estuary & wetland • Soil compaction • Flow and water quality of hydrological linkages entering the system.
GN R.327 activity 17:	Development – (v) if no development setback exists, within a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever is the greater; In respect of – (e) infrastructure or structures with a development footprint of 50 square meters or more	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation

		<p>The construction of the proposed development within 100 meters from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil compaction • Flow and water quality of hydrological linkages entering the system.
<p>GN R.327 activity 19:</p>	<p>The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from –</p> <p>(iii) the littoral active zone, an estuary or a distance of 100 meters or more inland of the high-water mark of the sea or estuary, whichever distance is the greater</p>	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation <p>The construction of the proposed development within 100 meters from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil Compaction • Flow and water quality of hydrological linkages entering the system.
<p>GN R.327 activity 19A:</p>	<p>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles</p>	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing</p>

	<p>or rock of more than 5 cubic metres from –</p> <p>(ii) the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater</p>	<p>and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation <p>The construction of the proposed development within 100 meters from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil Compaction • Flow and water quality of hydrological linkages entering the system.
GN R.327 activity 27:	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.	<p>The proposed 40% development on Erf 12403 will result in the following:</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Alien Control Plan • Rehabilitation of Wetland (60% of site) <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Loss of indigenous vegetation
GN R.327 activity 28:	<p>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</p> <p>(ii) will occur inside an urban area, where the total land to be</p>	<p>The subject property is situated within the urban edge of Knysna, the Knysna SDF demarcate the area in which the property is situated as “New Development”. The Proposed development will be larger than 5 hectares.</p> <p>The property is zoned undetermined but has been used to mow vegetation for agricultural feed.</p>

	<p>developed is bigger than 5 hectares;</p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	<p>No negative impacts are associated with the development as a result of Agricultural Practises.</p> <p>Positive impacts for not using the property for agricultural practises include:</p> <ul style="list-style-type: none"> • Pesticides and fertilizers carried in rainwater, and irrigation runoff can pollute waterways and harm wildlife. • Soil carried off in rain or irrigation water can lead to sedimentation of wetlands, estuary and coastal areas. • Food production is one of the primary causes of biodiversity loss through habitat degradation. • Surface water pollution owing to livestock wastes. • Trampling and consumption of wetland vegetation.
<p>GN R.324 activity 12:</p>	<p>The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>i. Western Cape</p> <p>i. Within a 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 a critically endangered in the National Biodiversity Assessment 2004.</p> <p>(iii) Within the littoral active zone or 100 meters inland from the high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind a development</p>	<p>The vegetation on site is classed as Garden Route Shale Fynbos which has an ecosystem status of Endangered as per Cape Farm Mapper.</p> <p>“The vegetation of Erf 12403 are currently characterised by predominantly freshwater wetlands with some brackish/estuarine communities occurring in the vicinity of the culvert. The 20 ha site contain 7.3 ha of intact freshwater wetlands, 0.7 ha of estuarine wetlands and 5.1 ha of reeds and rushes. Approximately 7.5 ha are degraded by alien trees and sawdust dumping.</p> <p>The majority of the property is covered in vegetation characteristic of wetland environments. Large areas have been invaded by alien (exotic) species. The past and present vegetation distribution is discussed below.” <i>Bornman, T.G. 2006. Biodiversity Impact</i></p>

	<p>setback line on erven in urban areas.</p>	<p><i>Assessment of the wetlands and vegetation of Erf 12403, Knysna. Confidential report prepared for Pieter Badenhorst Professional Services CC. CER Report No. C07/06. 105 pp.</i></p> <p>T.G Borman further states <i>“From the 1936 aerial photograph it can be assumed that the vegetation on Erf 12403 consisted of 5.8 ha of estuarine wetlands, 10.4 ha of brackish wetland and 2.3 ha of freshwater wetlands”</i></p> <p><i>“The vegetation of the George Rex development is currently characterised by predominantly freshwater wetlands with some brackish/estuarine communities occurring in the vicinity of the culvert. The wetlands on the property fall within the southern coast wetland region (Cowan 1995). Adopting the classification system for the South African National Wetland Inventory, estuarine wetlands are present near the south-western corner of the property (Juncus community) and palustrine wetlands cover the majority of the remainder of the property. Within the Palustrine System, the wetlands on Erf 12403 may be classed as Emergent Wetlands. This wetland class is characterised by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years, usually maintaining the same appearance from one year to another.”</i></p> <p>The Area has been frequently mowed as a result of the property being identified as a high fire risk area which impacted the vegetation on site.</p>
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		<p>The authors therefore still endorse the findings of Bornman (2006) who recognised that, whilst historically almost the entire site would have been covered by wetland vegetation, under the present day conditions some of these areas have been lost as functional wetlands due to infilling at the site. Based on the findings of Bornman (2006), in 2008 the DWS accepted that 71% of the site was regarded as wetland and the remaining 29% of the site could be regarded as “non-wetland” due to the degraded nature of some portions of the site. Under present conditions, because the hydrological drivers are still operating, if the mowing of the vegetation was stopped, alien vegetation removed and the draining of flows around and across the site reduced through rehabilitation of the excavated canal and drain, then wetland vegetation is likely to re-establish across the majority of the site, as was documented in 2003 and observed by this author in 2008. <i>Scherman Colloty & Associates cc. 2017.</i></p> <p>Therefor the vegetation on site is not classed as Garden Route Shale Fynbos.</p> <p>The Area to be developed is not adjacent to the Estuary with development having occurred to the west of the development (Premier hotel, George Rex Drive) therefor the negative impacts are minimal.</p> <p>Negative impacts</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil Compaction
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		<ul style="list-style-type: none"> Flow and water quality of hydrological linkages entering the system
GN R.324 activity 6:	<p>The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more</p> <p>i. Western Cape</p> <p>i. Inside a protected area identified in terms of NEMA</p>	<p>Erf 12403 lies within a protected area, Knysna National Lakes Area.</p> <p>The hotel will in all probability be 120 beds and a sports village will have 60 units to provide accommodation.</p> <p>To the west of the proposed development is an already establish Premier Hotel.</p> <p>Negative impacts</p> <ul style="list-style-type: none"> Increased hard surfaces = increased amount of storm water Sedimentation of the Knysna Estuary Pollution entering the Knysna Estuary Soil Compaction <p>Flow and water quality of hydrological linkages entering the system.</p> <p>Positive Impacts:</p> <ul style="list-style-type: none"> Only 40% of the site will be developed and the remaining 60% will be conserved.

Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

Potential impacts on geographical and physical aspects:	
Nature of impact:	<p>Soil compaction as a result of the construction of:</p> <ul style="list-style-type: none"> ➤ 1 x “General Residential Zone III” portion (flats / sports village); ➤ 1 x “General Residential Zone V” portion (hotel); ➤ 5 x “Business Zone I” portions; ➤ 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion;

	<ul style="list-style-type: none"> ➤ 2 x “Open Space Zone II” portions; ▪ 1 x “Open Space Zone III” portion; ➤ 1x Transport Zone II portion; & ➤ 1x Transport Zone III portion,
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	As a result of the construction this impact cannot be mitigated or reversed.
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources anticipated
Cumulative impact prior to mitigation:	Storm Water runoff
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Typical sustainable drainage systems, often referred to as SuDS, and the associated stormwater infrastructure and management thereof take the following key principles into account:</p> <ul style="list-style-type: none"> • Storing runoff and releasing it slowly (attenuation) • Harvesting and using the rain close to where it falls • Allowing water to soak into the ground (infiltration) • Slowly transporting (conveying) water on the surface • Filtering out pollutants • Allowing sediments to settle out by controlling the flow of the water <p>Each of the above and how they are accommodated/included in the proposed stormwater system are discussed below:</p> <p>1. Storing runoff and releasing it slowly (attenuation): This will be achieved in two ways. Firstly, all runoff from the roofs on the development will be harvested and stored in a lined surface water dam located within the open space portions allocated within the wetlands (refer to Section 8.5 of the report). This is a form of retention and will therefore have the benefit of attenuation. Secondly, the remaining</p>

surface water from grassed areas, parkings, etc. will be discharged into the wetlands as sheet flow (refer to Sections 8.3 and 8.5 of the report). This will dramatically increase the time that the water takes to reach the formal 'bulk' stormwater system and thus Page 3 of 4 attenuating the runoff and therefore releasing it slowly. In addition to this, a substantial amount of this water can be expected to soak into the ground causing further attenuation, albeit somewhat permanent.

2. Harvesting and using the rain close to where it falls: As discussed above, all runoff from the roofs will be harvested by collecting and storing it within the wetlands (refer to Section 8.5 of the report). This is immediately adjacent to the area to be developed on the site. This water will be treated on-site and stored in reservoirs as potable water for use in the development. This will achieve the objective of both harvesting the rain water and using it close to where it falls.

3. Allowing water to soak into the ground (infiltration): As discussed above, the surface water from grassed areas, parkings, etc. will be discharged into the wetlands as sheet flow (refer to Sections 8.3 and 8.5 of the report). As the wetland area is for all intents and purposes flat, a substantial amount of this discharged water will initially soak into the ground and promote recharge of the aquifer. Some developments also encourage infiltration within the parking areas through the use of permeable paving, etc. In this case this is not recommended as the in-situ soils are not amenable for development directly on top of them. Therefore, an engineered fill will be constructed within the area to be developed. If one was to encourage infiltration through the parking surface and onto/through the engineered fill it would cause it to fail and substantially reduce the service life thereof. This would not be sustainable and therefore would be counterproductive to the purpose of a sustainable development. However, by recharging the aquifer in the wetland adjacent to the area to be developed, it would be quite likely that ground water mounding would take place and cause some lateral movement of the ground water. This would cause a measure of recharge to the aquifer below the developed area without having compromised the engineered fill above.

4. Slowly transporting (conveying) water on the surface: This is covered in items 1 and 3 above as it pertains to flow across the surface of the wetlands. Insofar as it pertains to

	<p>the area to be developed; the site is particularly flat and will essentially be developed as such. Accordingly, with very flat lawns and parking areas the net result is slow flow of water across these surfaces and thus achieving the principle of this item.</p> <p>5. Filtering out pollutants: All rainwater from the roofs is to be harvested. This water will be treated on-site prior to use as a potable water. This treatment would remove any pollutants in this water. Water discharging from the remaining surface areas, namely grassed and parking areas, etc., will be discharged into the wetlands. This water will be treated in the wetlands through environmental contact and exposure to UV in the wetlands (refer to Section 8.5 of the report). The extent to which this treatment will act will require input from a suitable specialist.</p> <p>The above mitigation measures were identified in the Storm water management plan by Tony Liebold Pr Tech Eng Appendix L.</p> <ul style="list-style-type: none"> • No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	No impact is expected after mitigation measures are set in place to redirect water runoff
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impact on biological aspects:	
Nature of impact:	<p>Loss of vegetation as a result of:</p> <ul style="list-style-type: none"> ➤ 1 x “General Residential Zone III” portion (flats / sports village); ➤ 1 x “General Residential Zone V” portion (hotel); ➤ 5 x “Business Zone I” portions; ➤ 1 x “Business Zone II” with consent use for a ‘Place of Assembly’ portion; ➤ 2 x “Open Space Zone II” portions; ▪ 1 x “Open Space Zone III” portion; ➤ 1x Transport Zone II portion;
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	No loss of natural resources are expected, 40% of the site is to be developed and 60% of the site will be rehabilitated and conserved. The 40% development will occur on an area where soil was stored in a heap that is covered with alien vegetation.
Cumulative impact prior to mitigation:	Loss of ecological corridors
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<ol style="list-style-type: none"> 1. It is imperative that impacts on the continuity of ecological processes and corridors be taken into consideration irrespective of the type of land use proposed or envisaged in the region as a whole. 2. Open Space III contains the wetland area and this site will be a wetland conservation area. This area will be used to ensure ecological corridor connectivity. The open spaces will be developed as an open space system that will be protected and conserved in perpetuity and be accessible to the public. 3. An onsite nursery needs to be established and a plant rescue needs to be carried out prior to any construction activities occurring on site.

Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	
Nature of impact:	Impact on the wetland and drainage cannels
Extent and duration of impact:	During construction phase
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Pollution of wetland may lead to pollution of the Knysna Estuary
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Open Space III contains the wetland area and this site will be a wetland conservation area. This area will be used to ensure ecological corridor connectivity. The open spaces will be developed as an open space system that will be protected and conserved in perpetuity and be accessible to the public and needs to be demarcated as a “No-Go” area and fenced off. No person may be allowed to enter this area during the construction phase. All construction water used on site, needs to be stored in sediment ponds, to prevent polluted water entering the system.</p> <ul style="list-style-type: none"> • No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and

	<p>contaminated soil/ material disposed of appropriately at a registered site.</p> <ul style="list-style-type: none"> • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	Pollution of the Knysna Estuary
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

The Environmental Impacts associated with the proposed development within 100 meters from the high water mark of the Knysna Estuary and infilling within 100 meters from the high water mark of the Knysna Estuary.

The impacts associated with this listed activity is few as a result of the construction of George Rex Road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.

Positive Environmental Impacts:

- Reduce risk of flooding
- Salt water intrusion into wetland
- Wetland Rehabilitation

The construction of the proposed development within 100 meters from the high water mark of the Estuary:

Negative Environmental Impacts:

- Increased hard surfaces = increased amount of storm water
- Sedimentation of the Knysna Estuary
- Pollution entering the Knysna Estuary
- Soil compaction
- Flow and water quality of hydrological linkages entering the system.

Potential impacts on geographical and physical aspects:	
Nature of impact:	Climate Change and Storm Surges

	<p>The property itself is generally low lying and very flat. Ground levels vary only slightly with the average contour line at 2,0m MSL. This is lower than both the road level along George Rex Drive which is at +/-2,5m MSL, as well as the ground level at The Moorings, which is positioned between the subject property and the Knysna Lagoon.</p> <p>Ponding and flooding on the property and surrounding streets have been experienced in recent flood conditions.</p> <p>Drainage of runoff towards the Knysna Lagoon from Erf 12403 is impacted upon by the higher road and ground levels adjacent to the site. Additionally, there is only a single pipe culvert (450mm diameter) provided under George Rex Drive in the South West corner of the property (corner of George Rex Drive and Howard Street).</p> <p>No other culverts could be found along the 400m long property boundary with George Rex Drive. This is unlike the rest of George Rex Drive where culvert spacing is much more regular and of a bigger size.</p> <p>An open earth drainage channel, approximately 2m x 1m in size, is used to convey runoff across/around Erf 12403, from East to West. This channel terminates at the above mentioned 450mm diameter culvert under George Rex Drive. This channel is routed along the Eastern and Southern sides of the property over a distance of approximately 800m. There is practically no fall along the entire length of this channel and it is totally overgrown.</p> <p>During periods of exceptional high tide, the culvert under George Rex Drive gets submerged. This will dictate the water level in the rehabilitated wetlands on the property.</p> <p>This situation will be the same as the rest of the culvert outlets along George Rex Drive and elsewhere along the Knysna Lagoon.</p> <p>The above information was obtained from the Civil Engineering report</p>
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	High
Degree to which the impact may cause irreplaceable loss of resources:	No loss of irreplaceable resources is anticipated.
Cumulative impact prior to mitigation:	<ul style="list-style-type: none"> • Storm water runoff resulting in erosion. • Pollution of the Knysna Estuary. • Loss and damage to infrastructure.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Firstly, the overgrown storm water channels should be rehabilitated.</p> <p>Secondly, it is proposed that storm water runoff from the development be planned in such a way that the runoff be conveyed to the Private Open Space portions. This runoff should be discharged onto the surface of these portions to promote both attenuation and ground water recharge. This surface flow should then discharge into the rehabilitated channels where it will be conveyed to the South West corner of the property (corner of George Rex Drive and Howard Street) where the existing 450mm diameter pipe culvert presently drains the area. However, this culvert is undersized and has a shallow invert level.</p> <p>This impacts on the overall effectiveness and hydraulic capacity of the drainage system on the property and results in regular flooding of Howard Street.</p> <p>Due to the above restriction it is proposed to provide a connection to the existing Municipal storm water trench/channel on the south side of Howard Street and to upgrade the existing pipe culverts under George Rex Drive at the Knysna Golf Course. The invert level of this culvert is 700mm deeper than the 450mm culvert referenced above. The resulting drainage should be improved by using this 'lower' culvert.</p> <p>The upgrading of the existing pipe culverts under George Rex Drive at the Knysna Golf Course has been previously recommended to the KM by SSI engineering consultants.</p> <p>The motive for this recommendation was to alleviate flooding of the lower lying sections of the residential area of Hunters Home. It is proposed to upgrade this culvert to at least a 1500 x 900mm box culvert.</p> <p>Detailed storm water runoff calculations and culvert sizing will be performed during the detailed design stage of the project. The KM will be provided with a suitable design report and drawings for review and approval prior to implementation.</p> <p>The above information was obtained from the Civil engineering report.</p> <ul style="list-style-type: none"> No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and

	<ul style="list-style-type: none"> • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	<p>Biodiversity reduction as a result of the construction of the preferred alternative. However it needs to be noted as mentioned in the wetland report the site has been transformed greatly as a result of:</p> <ul style="list-style-type: none"> • The saw dust dump • The Stockpile of soil on site • The alien trees • The mowing of the site, requested by the Fire Department as it poses a fire risk to neighbouring properties
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impacts on geographical and physical aspects:	
Nature of impact:	Soil compaction as a result of the proposed development
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	As a result of the construction this impact cannot be mitigated or reversed, however it must be noted that the preferred alternative will only result in 40% of the property being developed and the remaining 60% will be conserved and the wetland rehabilitated.
Degree to which the impact may cause irreplaceable loss of resources:	No loss of irreplaceable resources are anticipated, in all probability the wetlands rehabilitation efforts will improve the conditions on site and off site.
Cumulative impact prior to mitigation:	Storm water runoff resulting in erosion and siltation.

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Concentration of street and surface runoff is to be limited by diverting runoff to suitable open areas at regular intervals/spacing. This will facilitate the recharging of the aquifer through surface percolation.</p> <p>To prevent erosion and siltation during and after construction use will be made of silt traps, silt screens, at suitable locations.</p> <p>Rainwater harvesting of runoff from roofs will form a substantial part of the planned water resources for the project. This water will not be collected in rainwater tanks, but rather will directed to a lined surface water dam located within the open space portions allocated within the wetlands. This pond can be developed in such a way that it looks natural and part of the environment. It will also form a surface water for bird and aquatic life and therefore contribute to the environmental benefit of the project.</p> <ul style="list-style-type: none"> • Overgrown storm water channels on site are to be rehabilitated. • Surface runoff from hardened areas, such as roads and parking areas is be diverted and discharged onto the surface of the open space areas/wetlands. In doing this one is able to promote natural treatment of pollutants in the water through environmental contact time and exposure to UV. In addition to this it will have the added benefits of promoting attenuation and recharge of ground water resources. • Surface water that does not percolate into the ground water system but that continues to travel across the surface of the wetlands will ultimately discharge into the existing rehabilitated surface channel around the perimeter of the site and leave the site via further formal drainage infrastructure. • Upgrades to the existing offsite storm water infrastructure will further ensure better management of peak runoff and prevent or minimize the current localized flooding experienced in the immediate vicinity of the site. • Erosion and siltation during and after construction will be achieved by the use of silt traps and silt screens, at suitable locations along energy dissipaters at storm water outlets. <p>The above was taken from the Civil Engineering report</p> <ul style="list-style-type: none"> • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly

	demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	
Nature of impact:	Loss of indigenous vegetation (biodiversity) as a result of construction of the proposed development. The site has been largely modified by the dumping of saw dust, the mowing and the presence of alien vegetation.
Extent and duration of impact:	During the construction phase only
Probability of occurrence:	Low
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	With correct management in all probability the degree to which the impact may cause irreplaceable loss of resources is low.
Cumulative impact prior to mitigation:	Loss and further degradation of the wetland on site
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	It is imperative that impacts on the continuity of ecological processes and corridors be taken into consideration irrespective of the type of land use proposed or envisaged in the region as a whole. The proposed development should allow for a vegetated buffer strip, set back from the wetland. Stormwater erosion control measures need to be implemented regardless of development being authorised on the property. 1. Removal of Alien Invasive Species during construction phase 2. The proposal now is to rehabilitate the wetland, include more Private Open Space as a green buffer. Please refer to the attached SDP. Operational Water Use Licence Recommendations:

	<ul style="list-style-type: none"> ➤ All storm water outlets should be monitored regularly to ensure that no preferential flow paths from which may lead to erosion of wetland habitat. ➤ Existing offsite storm water infrastructure must be upgraded to ensure better management of peak runoff and prevent or minimize the current localised flooding experienced in the immediate vicinity. ➤ Access points and routes into the wetland should be carefully planned to minimize excessive traffic through and disturbance to wetland. ➤ Any activities requiring vehicular access (e.g. removal of berms and clearing of felled alien invasive trees) should ideally be undertaken during the dry season to minimize disturbance to the wetland. ➤ Openings in the existing storm water drainage channel should be made in locations with abundant alien vegetation, causing minimal disturbance to indigenous plants. ➤ Cleared vegetation must be removed from site and dumped at a municipal waste site. ➤ Mowing of wetland vegetation must be ceased. ➤ Retain a network of mown paths from which to access areas of regenerating vegetation as well as established vegetation to control alien plants; and ➤ The wetland should be monitored annually to ensure that a trajectory towards and improved PES is achieved. Monitoring must be done according to the monitoring plan in the George Rex Wetland Rehabilitation Plan. ➤ The developer must ensure that their wetland rehabilitation plan/program for bigger area incorporate work with other property owners and the municipality to improve the status of wetlands and rivers in town. This is in line with the DWS no net loss principle for wetlands and rivers in the town. This is in line with the DWS no net loss principle for wetlands and to manage the resources at Recommended Ecological Category of at least a C. <p>The mitigation and rehabilitation measures proposed in the July 2019 Technical Report, aquatic rehabilitation plan and previously suggested should be carried out. E.g enlarging the culvert underneath George Rex drive to improve water exchange with the estuary etc.</p>
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measure are implemented

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	
Nature of impact:	Pollution of the salt marshes and wetlands.
Extent and duration of impact:	Throughout the lifespan of the proposed development
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium
Cumulative impact prior to mitigation:	Pollution of the Knysna Estuary
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>The rehabilitation of the wetland and the introduction of wetland vegetation will mitigate this impact.</p> <ul style="list-style-type: none"> • No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	N/A

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
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The Socio-economic impacts associated with the proposed Development

Potential impacts on socio-economic aspects:	No negative impacts on the socio-economic aspects are foreseen as the proposed construction will create work opportunities during construction and operational phases.
Nature of impact:	Job creation- Positive Impact
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	Not a negative impact on socio-economic aspects
Degree to which the impact may cause irreplaceable loss of resources:	Not applicable
Cumulative impact prior to mitigation:	Not applicable
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Not applicable
Proposed mitigation:	Not applicable
Cumulative impact post mitigation:	Not applicable
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Not applicable

Identified Noise Impacts during the construction phase

Potential noise impacts:	
Nature of impact:	Impacts associated with general building construction noise
Extent and duration of impact:	Only during construction phase
Probability of occurrence:	High
Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	No cumulative impact foreseen

Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Construction work and noise generation only allowed during weekday working hours
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Identified Noise Impacts during the operational phase

Potential noise impacts:	
Nature of impact:	Impacts associated with sport events
Extent and duration of impact:	During the life Span of the proposed development
Probability of occurrence:	High
Degree to which the impact can be reversed:	None
Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	No cumulative impact foreseen
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	Low
Proposed mitigation:	Most sporting events are scheduled during the day
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Visual Impacts associated with the proposed development

Potential visual impacts:	
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Nature of impact:	The proposed development will be visible from Hunters home and George Rex drive.
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>The design of the proposed development must account for visual impacts. The development must blend into the natural environment as much as possible – down lighting, earthy colours and strategic placement of satellite dishes is a sensible mitigation measure.</p> <p>During construction phase the proposed development will be screened off from the N2 using green shade cloth.</p>
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

(b) Impacts that may result from the construction and operational phase for increased **traffic** (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

Potential traffic impacts:	
Nature of impact:	<p>The TIA report investigates the expected transport related impacts of a sport and adventure centre planned on Erf 12403 in Knysna. Based on the findings of this investigation, the following are concluded:</p> <p>Existing Traffic: N2/George Rex Drive intersection currently operates at capacity. It is recommended that this intersection be upgraded to a traffic signal.</p> <p>Background Traffic: George Rex Drive/Bokmakierie Street operates at capacity. The traffic along Bokmakierie Street has alternative routes to access the larger road</p>

	<p>network. Signal control at this intersection will not be warranted and the relatively low side road traffic volume along Bokmakierie Street compared to the volumes along George Rex Drive does not justify a roundabout.</p> <p>Total Traffic: George Rex Drive/Bokmakierie Street will operate at capacity. Although traffic along Bokmakierie Street has alternative routes to access the larger road network. Signal control at this intersection will not be warranted and the relatively low side road traffic volume along Bokmakierie Street compared to the volumes along George Rex Drive does not justify a roundabout.</p>
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Existing Traffic: N2/George Rex Drive intersection currently operates at capacity. It is recommended that this intersection be upgraded to a traffic signal.</p> <p>Total Traffic: George Rex Drive/Bokmakierie Street will operate at capacity. Although traffic along Bokmakierie Street has alternative routes to access the larger road network. Signal control at this intersection will not be warranted and the relatively low side road traffic volume along Bokmakierie Street compared to the volumes along George Rex Drive does not justify a roundabout.</p> <p>A Roundabout should be considered at this intersection in the long term depending on the availability of funding. George Rex Drive/Marlin Road will also operate close to capacity and westbound right-turn traffic along Marlin Road will experience long average delays per vehicle. However, there is still sufficient capacity for side road traffic to safely enter the traffic stream along George Rex Drive.</p>
Cumulative impact post mitigation:	N/A

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
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A specialist traffic impact assessment was done for George Rex Sport & Adventure Centre, Erf 12403 Transport Impact Assessment Knysna, Western Cape October 2018 by ITS innovative transport solutions

This transport impact assessment is reported only in a summary table instead of a lengthy report to assist review and interpretation of the results. This summary table includes all the relevant information that is normally contained in a report. It should be sufficient for review and interpretation of the expected transport impacts as well as the comprehension of the required measures to mitigate the transport impact.

Please refer to attached Traffic Impact Assessment Report in Appendix E.

Alternative 2 –Impact Assessment

ALTERNATIVE 2: 40% DEVELOPMENT WITH 60% REHABILITATION AND ACCESS TO HOWARD STREET (Plan 2: Site Development Plan)

The applicant intends to develop a mixed use development, with access to the northwest off George Rex Drive and an alternative access onto Howard Street to the south. The purpose of this development is to have a “sport; adventure and tourism” focus. The proposal will consist of a high-performance aquatic centre, a sport’s village (for accommodation for athletes and supporters), sports-orientated retail and professional services (physio-therapists, biokineticists, gym, massage, sport psychology, etc. The proposed development will consist of the following mixed uses:

- 2 x “General Residential Zone” portions;
- 5 x “Business Zone” portions;
- 1 x “Business Zone” with consent use for a ‘Place of Entertainment’ portion;
- 4 x “Private Open Space” portions;
- 2 x “Special Zone” portions;

Impact assessment in terms of Regulation 22(2)(i) of GN R.543

(a) Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

Listed Activity described in GN R. 325, 324, 327	Activity description	Identified Impacts
GN R. 327 Activity 12	The development of – (ii) infrastructure or structures with a physical footprint of 100 square meters or more Where such development occurs – (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse	An access road connecting Howard street through the wetland to the sports complex has been proposed as part of the traffic plan: Negative Environmental Impacts: <ul style="list-style-type: none"> • Loss of terrestrial habitat and portion of wetland ecosystems

		<ul style="list-style-type: none"> • Reduction in habitat connectivity • Loss and disturbance of fauna and flora species • Hydrological connectivity • Embankment Erosion
GN R.327 activity 17:	<p>Development – (v) if no development setback exists, within a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever is the greater;</p> <p>In respect of – (e) infrastructure or structures with a development footprint of 50 square meters or more</p>	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation <p>The construction of the proposed development within 100 meters from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil compaction • Flow and water quality of hydrological linkages entering the system.
GN R.327 activity 19:	<p>The infilling or depositing of any material of more than 10m³ into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m³ from – (iii) the littoral active zone, an estuary or a distance of 100 meters or more inland of the high-water mark of the sea or estuary, whichever distance is the greater</p>	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation <p>The construction of the proposed development within 100 meters</p>

		<p>from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil Compaction • Flow and water quality of hydrological linkages entering the system.
GN R.327 activity 19A:	<p>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from –</p> <p>(ii) the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater</p>	<p>The impacts associated with this listed activity is few as a result of the construction of George Rex road and the Premier hotel informant of Erf 12403. The clearing and construction of culverts will only result in positive Environmental impacts.</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Reduce risk of flooding • Salt water intrusion into wetland • Wetland Rehabilitation <p>The construction of the proposed development within 100 meters from the high water mark of the Estuary:</p> <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Increased hard surfaces = increased amount of storm water • Sedimentation of the Knysna Estuary • Pollution entering the Knysna Estuary • Soil Compaction • Flow and water quality of hydrological linkages entering the system.
GN R.327 activity 27:	<p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation.</p>	<p>The proposed 40% development on Erf 12403 will result in the following:</p> <p>Positive Environmental Impacts:</p> <ul style="list-style-type: none"> • Alien Control Plan

		<ul style="list-style-type: none"> • Rehabilitation of Wetland (60% of site) <p>Negative Environmental Impacts:</p> <ul style="list-style-type: none"> • Loss of indigenous vegetation • Loss of ecological corridor
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Impacts that may result from the planning, design and construction phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the planning, design and construction phase.

The Environmental Impacts associated with the access road connecting Howard Street through the wetland to the sports complex has been proposed as part of the traffic plan for the planning phase.

This access to Howard Street is specifically necessary to accommodate the residential traffic (general residential development). The egress on Howard Street is also required to serve as emergency egress during disasters or during sporting events that attract high levels of traffic.

Potential impacts on Geographical and Physical aspects:	
Nature of impact:	<p>The proposed design specifications of the road are presented by Niewoudt and Kie (2018) are shown in figure 8. The road is approximately 180 m long in the open wetland (excluding the length next to the sports complex), the road reserve is 12m wide, and the actual road surface is 6 m wide. The identified impacts are:</p> <ol style="list-style-type: none"> 1. Reduction in habitat connectivity 2. Reduction in in hydrological connectivity 3. Loss of terrestrial habitat and portion of wetland ecosystems
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	<ol style="list-style-type: none"> 1. Wild life collisions on the road 2. Erosion within the wetland
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	<p>It is proposed to install 3 large box culverts at three crossings within the road crossing the wetland to assist with the hydrological connectivity. This will also assist with habitat connectivity. To prevent wild life collisions on the road it is proposed to setup a speed limit of 20km per hour, speed bumps and signage on the road. To prevent erosion within the wetland it is proposed to installing a stilling basin at either end of the culverts to</p>

	<p>reduce the effects of channelling and erosion within the wetland.</p> <ul style="list-style-type: none"> Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	Destruction of the natural environment, however a wetland rehabilitation plan is in place to improve the already degraded wetland to a better condition.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Potential impact on biological aspects:	
Nature of impact:	<p>The construction of the road through the wetland will result in the following impacts:</p> <ol style="list-style-type: none"> Loss and disturbance of fauna and flora species Compaction of soil
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Increased flooding
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	<p>The compaction of soil will be 3600m² for the construction of the road. It is proposed to save the first 100 cm of topsoil to be reused in rehabilitation phase. Alien Vegetation should also be removed and indigenous vegetation needs to be established within the existing wetland.</p> <ul style="list-style-type: none"> Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	Destruction of the natural environment, however a wetland rehabilitation plan is in place to improve the already degraded wetland to a better condition.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium

The Environmental Impacts associated with the access road connecting Howard Street through the wetland to the sports complex has been proposed as part of the traffic plan for the construction phase.

This access to Howard Street is specifically necessary to accommodate the residential traffic (general residential development). The egress on Howard Street is also required to serve as emergency egress during disasters or during sporting events that attract high levels of traffic.

Potential impacts on Geographical and Physical aspects:	
Nature of impact:	Wetland degradation through pollution from construction activities.
Extent and duration of impact:	During the construction phase
Probability of occurrence:	High
Degree to which the impact can be mitigated:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Pollution from fuels, oils, hydraulic fluids into the wetland will change the water quality within the wetland which will negatively impact on the wetland ecology. This impact will effect biodiversity through the loss of vegetation and wetland fauna that are sensitive to changes in the wetland water quality.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>A method statement for construction needs to be submitted and approved by the Eco according to the EMPr. The contractor to make him/herself familiar with the EMPr.</p> <ul style="list-style-type: none"> • No refuelling or servicing of any machinery allowed within the wetland area. • The storage of fuel and other hazardous substances within a container well set away from the wetland. • No storage of machinery or construction related equipment within the wetland area will be permitted. • All equipment and machinery to be serviced and be free of any oil or fuel leaks, this should be checked on a daily basis. • Should a spill occur it should be cleaned up immediately. Any contaminated soil from the construction site must be removed and rehabilitated immediately. • All hazardous waste should be stored correctly in construction camp and be removed to a licensed hazardous waste site. • Rehabilitation with removing alien vegetation and reintroduction of indigenous vegetation should commence immediately after the construction of the road. No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and

	<ul style="list-style-type: none"> • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

The Environmental Impacts associated with the access road connecting Howard Street through the wetland to the sports complex has been proposed as part of the traffic plan for the operational phase.

This access to Howard Street is specifically necessary to accommodate the residential traffic (general residential development). The egress on Howard Street is also required to serve as emergency egress during disasters or during sporting events that attract high levels of traffic.

The following environmental impacts has been identified during the operational phase:

3. Solid waste pollution through litter
4. Soil erosion caused by storm water runoff from road surfaces
5. Vehicles using the road resulting in pollution

Potential impacts on Geographical and Physical aspects:	
Nature of impact:	Solid waste Pollution
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	High
Degree to which the impact may cause irreplaceable loss of resources:	Medium to low
Cumulative impact prior to mitigation:	Loss of fauna and flora
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Staff should be appointed to clean up any litter within the site including the wetland. Signs on road warning people if they litter they could be liable to a fine will also assist. Rubbish bins to be placed in strategic places and be emptied on a regular basis.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impacts on Geographical and Physical aspects:	
Nature of impact:	Soil erosion resulting from storm water runoff from road surfaces.
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be mitigated:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Sedimentation within the wetland which results in a serious risk to the health and functioning of wetlands.
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>Unstable banks needs to be stabilised using gabion baskets/coarse rock to slow down the water velocity</p> <ul style="list-style-type: none"> • Any erosion gullies/channels leading downslope from road surfaces should be filled and stabilized immediately. • Re-vegetate all disturbed surfaces with suitable indigenous species to stabilise soils. • Culverts below the road surface should adequately convey water through to downstream areas without resulting in scouring of receiving wetlands • Storm water drainage systems should be designed to encourage infiltration through porous materials, and mechanisms to reduce flow rate and scouring of downstream wetland soils needs to be encouraged. The SUDS (Sustainable Urban Drainage System) proposed for this development is such a mechanism, which should be implemented.
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impacts on Geographical and Physical aspects:	
Nature of impact:	Vehicles using the road resulting in pollution
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	Medium
Degree to which the impact can be mitigated:	Medium
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Pollution of the wetland will result in poor water quality that will impact on sensitive fauna and flora within the wetland
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	
Proposed mitigation:	Pollution prevention infrastructure to be installed where necessary to control pollutants entering storm water. Spills noted to be cleared immediately
Cumulative impact post mitigation:	None

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
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Potential impacts on geographical and physical aspects:	
Nature of impact:	Soil compaction as a result of the construction of: <ul style="list-style-type: none"> • 2 x “General Residential Zone” portions; • 5 x “Business Zone” portions; • 1 x “Business Zone” with consent use for a ‘Place of Entertainment’ portion; • 4 x “Private Open Space” portions; • 2 x “Special Zone” portions;
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	As a result of the construction this impact cannot be mitigated or reversed.
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources anticipated
Cumulative impact prior to mitigation:	Water runoff
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Re-direct water of hardened structures into rain water tanks and natural vegetation
Cumulative impact post mitigation:	No impact is expected after mitigation measures are set in place to redirect water runoff
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	
Nature of impact:	Loss of vegetation as a result of: <ul style="list-style-type: none"> ➤ 2 x “General Residential Zone” portions;

	<ul style="list-style-type: none"> ➤ 5 x “Business Zone” portions; ➤ 1 x “Business Zone” with consent use for a ‘Place of Entertainment’ portion; ➤ 4 x “Private Open Space” portions; ➤ 2 x “Special Zone” portions;
Extent and duration of impact:	Throughout the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	No loss of natural resources are expected
Cumulative impact prior to mitigation:	Loss of ecological corridors
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>1. It is imperative that impacts on the continuity of ecological processes and corridors be taken into consideration irrespective of the type of land use proposed or envisaged in the region as a whole.</p> <p>2. Two sites, Site “J” and Site “K”, are proposed as private open spaces. Site “J” contains the wetland area and this site will be a wetland conservation area. This area will be used to ensure ecological corridor connectivity. The two open spaces will be developed as an open space system that will be protected and conserved in perpetuity and be accessible to the public.</p> <p>3. A onsite nursery needs to be established and a plant rescue needs to be carried out prior to any construction activities occurring on site.</p>
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation measures are implemented.
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Potential impact on biological aspects:	
Nature of impact:	Impact on the wetland and drainage canals

Extent and duration of impact:	During construction phase
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Pollution of wetland may lead to pollution of the Knysna Estuary
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	<p>The two sites, Site “J” and Site “K” needs to be demarcated as a “No-Go” area and fenced off. No person may be allowed to enter this area during the construction phase. All construction water used on site, needs to be stored in sediment ponds, to prevent polluted water entering the system.</p> <ul style="list-style-type: none"> • No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and • An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. • Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; • The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Cumulative impact post mitigation:	Pollution of the Knysna Estuary

Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
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Potential impacts on socio-economic aspects:	
Nature of impact:	Creation of permanent employment opportunities
Extent and duration of impact:	Throughout the construction and operational phase of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	N/A
Degree to which the impact may cause irreplaceable loss of resources:	N/A
Cumulative impact prior to mitigation:	N/A
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A
Degree to which the impact can be mitigated:	N/A
Proposed mitigation:	N/A
Cumulative impact post mitigation:	N/A
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	N/A

Potential visual impacts:	
Nature of impact:	Visual impacts relating to construction activities
Extent and duration of impact:	14.12ha during the construction period, this is excluding the 5.29ha which will be rehabilitated and rezoned as private open space.
Probability of occurrence:	High
Degree to which the impact can be reversed:	High

Degree to which the impact may cause irreplaceable loss of resources:	None
Cumulative impact prior to mitigation:	None
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	High
Proposed mitigation:	The entire site needs to be fenced off to prevent entrance from public and to screen off construction
Cumulative impact post mitigation:	None
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

(b) Impacts that may result from the operational phase (briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the operational phase.

Potential impacts on the geographical and physical aspects:	
Nature of impact:	Storm Water drainage
Extent and duration of impact:	Throughout the project life cycle
Probability of occurrence:	Medium
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	Low
Cumulative impact prior to mitigation:	Pollution of the Knysna Estuary
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be mitigated:	High
Proposed mitigation:	Concentration of street and surface runoff is to be limited by diverting runoff to suitable open areas at regular

intervals/spacing. This will facilitate the recharging of the aquifer through surface percolation.

To prevent erosion and siltation during and after construction use will be made of silt traps, silt screens, at suitable locations.

Rainwater harvesting of runoff from roofs will form a substantial part of the planned water resources for the project. This water will not be collected in rainwater tanks, but rather will be directed to a lined surface water dam located within the open space portions allocated within the wetlands. This pond can be developed in such a way that it looks natural and part of the environment. It will also form a surface water for bird and aquatic life and therefore contribute to the environmental benefit of the project.

- Overgrown storm water channels on site are to be rehabilitated.
- Surface runoff from hardened areas, such as roads and parking areas is to be diverted and discharged onto the surface of the open space areas/wetlands. In doing this one is able to promote natural treatment of pollutants in the water through environmental contact time and exposure to UV. In addition to this it will have the added benefits of promoting attenuation and recharge of ground water resources.
- Surface water that does not percolate into the ground water system but that continues to travel across the surface of the wetlands will ultimately discharge into the existing rehabilitated surface channel around the perimeter of the site and leave the site via further formal drainage infrastructure.
- Upgrades to the existing offsite storm water infrastructure will further ensure better management of peak runoff and prevent or minimize the current localized flooding experienced in the immediate vicinity of the site.
- Erosion and siltation during and after construction will be achieved by the use of silt traps and silt screens, at suitable locations along energy dissipaters at storm water outlets.

The above was taken from the Civil Engineering report.

- Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils;
- The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas; No dumping construction material on site may take place. All waste generated on site during construction must

	<p>be adequately managed. Separation and recycling of different waste materials should be supported; and</p> <ul style="list-style-type: none"> An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site.
Cumulative impact post mitigation:	No foreseen cumulative impacts are foreseen after post mitigation
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

Potential impact biological aspects:	
Nature of impact:	Disturbance of the wetland on site.
Extent and duration of impact:	During the lifespan of the project
Probability of occurrence:	High
Degree to which the impact can be reversed:	High
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be mitigated:	Medium
Proposed mitigation:	A management plan needs to be written in order to protect the wetland. The wetland and open space area will need to be protected and conserved in perpetuity. This portion of the property will be accessible to the general public; placing signs around the wetland will assist in educating the public in conserving this natural resource. An education facility will

be created in order to function as a research facility and education centre.

Recommendations during the operational phase as per the Water Use License:

- All storm water outlets should be monitored regularly to ensure that no preferential flow paths from which may lead to erosion of wetland habitat.
- Existing offsite storm water infrastructure must be upgraded to ensure better management of peak runoff and prevent or minimize the current localised flooding experienced in the immediate vicinity.
- Access points and routes into the wetland should be carefully planned to minimize excessive traffic through and disturbance to wetland.
- Any activities requiring vehicular access (e.g. removal of berms and clearing of felled alien invasive trees) should ideally be undertaken during the dry season to minimize disturbance to the wetland.
- Openings in the existing storm water drainage channel should be made in locations with abundant alien vegetation, causing minimal disturbance to indigenous plants.
- Cleared vegetation must be removed from site and dumped at a municipal waste site.
- Mowing of wetland vegetation must be ceased.
- Retain a network of mown paths from which to access areas of regenerating vegetation as well as established vegetation to control alien plants; and
- The wetland should be monitored annually to ensure that a trajectory towards and improved PES is achieved. Monitoring must be done according to the monitoring plan in the George Rex Wetland Rehabilitation Plan.
- The developer must ensure that their wetland rehabilitation plan/program for bigger area incorporate work with other property owners and the municipality to improve the status of wetlands and rivers in town. This is in line with the DWS no net loss principle for wetlands and rivers in the town. This is in line with the DWS no net loss principle for wetlands and to manage the resources at Recommended Ecological Category of at least a C.
- The mitigation and rehabilitation measures proposed in the July 2019 Technical Report, aquatic

	rehabilitation plan and previously suggested should be carried out. E.g enlarging the culvert underneath George Rex drive to improve water exchange with the estuary etc.
Cumulative impact post mitigation:	No cumulative impacts are foreseen after mitigation
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	Low

It needs to be noted that the Development of a road for access to Howard Street over a wetland will impact greatly on the proposed rehabilitation of the wetland. The Department of Water Affairs did approve the construction of an access road over the wetland.

No-Go Alternative Impact Summary

The site will remain as is derelict. As per NEM:BA alien vegetation removal will be on going. As per the letter received from Knysna Municipality the mowing of reeds will continue as it poses a fire risk (refer to page below). Wetland rehabilitation will not occur. Access to the site will be prohibited to try and ensure no informal settlement or vagrants occupy the site.



Collab Ref: 222926
File Ref:
B Oosthuisen

2012-01-31

Jazz Spirit 130 (Pty) Ltd
PO Box 479
KNYSNA
6570

Sir

ERF 12403: c/o GEORGE REX & HOWARD STREET

The abovementioned property, in its present condition, is extremely overgrown with trees, bushes and weeds and therefore not in compliance with the provisions of the Fire Brigade Services Act- Act no. 99 of 1987 and regulation regarding re-growth of bushes on premises.

You are therefore requested to have this property cleared within **twenty-one days** from date of this notice. All waste material to be removed from the property as no burning of waste material is allowed within the Municipal area.

Before cleaning vegetation contact **Brian Oosthuisen** at 044 302 8911 or firedept@knysna.co.za. Special permission needs to be obtained from the relevant authorities before certain indigenous plants are cleared from erf 12403.

Your co-operation in this regard will be highly appreciated.

Yours faithfully


L WARING
MUNICIPAL MANAGER
/BO

Please address all correspondence to the Municipal Manager and quote the above reference
P O Box 21 • Knysna • 6570 • Tel: 044 302 6300 • Fax: 044 302 6333 • E-mail: knysna@knysna.gov.za

IMPACT SUMMARY - Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community.

Alternatives	Environment	Advantages	Disadvantages	Mitigation Measure
<p>Preferred Alternative – 40% of site to be developed and 60% to be conserved and rehabilitated</p> <p>Impacts associated with the proposed development</p>	<ul style="list-style-type: none"> ➤ 40% Loss of terrestrial habitat and a portion of wetland ecosystems. ➤ Reduction in habitat connectivity ➤ Loss of terrestrial habitat ➤ Soil Compaction ➤ Increased hard surfaces = increased amount of storm water ➤ Sedimentation of the Knysna Estuary & Wetland ➤ Pollution entering the Knysna Estuary & wetland ➤ Soil compaction ➤ Flow and water quality of hydrological linkages entering the system. 	<ul style="list-style-type: none"> ➤ 60% of the site will be rehabilitated and conserved. ➤ Improve the wetland to a C ➤ Due to rehabilitation of a degraded wetland, it is envisioned that the water quality will improve possibly attracting more fauna and flora to the area ➤ Alien eradication on a large scale and re-introduction of indigenous wetland vegetation. ➤ Culvert sizes will be increased reducing risk of flooding ➤ Salt water intrusion into wetland ➤ A green buffer strip will be created between the development and the wetland. 	<ul style="list-style-type: none"> ➤ Loss and disturbance of fauna and flora species during construction. ➤ Erosion within the wetland as a result of storm water run off. ➤ Soil erosion from storm water runoff during operational phase ➤ Loss of vegetation and wetland fauna that are sensitive to changes ➤ Pollution of the Knysna Estuary 	<ul style="list-style-type: none"> ➤ Installing 3 large box culverts at three crossing of the proposed new road will assist with hydrological connectivity. ➤ Installing a stilling basin at either end of the culverts to reduce the effects of channelling and erosion ➤ Indigenous vegetation rescue plan prior to construction to be relocated and established within the existing wetland where works won't be carried out. ➤ Save the first 100 cm of topsoil within the construction area of the wetland to be reused in the rehabilitation phase. ➤ Use the SUDS system as described in the storm water management plan. ➤ No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different

				<p>waste materials should be supported; and</p> <ul style="list-style-type: none"> ➤ An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site. ➤ Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils; ➤ The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
Clearing and construction of culverts	<ul style="list-style-type: none"> ➤ Flooding of George Rex Road and the proposed site 	<ul style="list-style-type: none"> ➤ Reduce risk of flooding ➤ Possible salt water intrusion into wetland ➤ Wetland rehabilitation 	<ul style="list-style-type: none"> ➤ No disadvantages 	<ul style="list-style-type: none"> ➤ No mitigation measures required as this is a positive impact

<p>Construction within 100 meter of the high water mark</p>	<ul style="list-style-type: none"> ➤ Flooding of George Rex road and the proposed site 	<ul style="list-style-type: none"> ➤ Impacts of this listed activity are few as the George Rex drive and Premier Hotel is already constructed in front of the property before you reach the high water mark of the Estuary ➤ Reduce risk of flooding ➤ Possible salt water intrusion into wetland ➤ Wetland rehabilitation ➤ Re-directing storm water will enhance the wetland 	<ul style="list-style-type: none"> ➤ Increased hard surfaces = Increased amount of storm water ➤ Sedimentation of the Knysna Estuary ➤ Pollution entering the Knysna Estuary ➤ Soil compaction ➤ Flow and water quality of hydrological linkages entering the system 	<ul style="list-style-type: none"> ➤ Opening and enlarging culverts and storm water channels, off site ➤ Storm water from the development to be re-directed to the private open space portions ➤ Construction of a lined surface dam ➤ Applying the SUDS principle as discussed in the storm water management plan. ➤ Adhering to Water Use Licence Operational recommendations
	<ul style="list-style-type: none"> ➤ Loss of Vegetation 	<ul style="list-style-type: none"> ➤ Vegetated buffer strip, setback from the wetland ➤ Removal of alien vegetation ➤ Rehabilitation of wetland ➤ Private open space as green buffer refer to SDP 	<ul style="list-style-type: none"> ➤ Loss of indigenous vegetation 	<ul style="list-style-type: none"> ➤ The proposal allows for the rehabilitation of the wetland, removal of alien species and a vegetated buffer between the wetland and the proposed development. ➤ 60% of the site will be conserved and rehabilitated.
	<ul style="list-style-type: none"> ➤ Pollution of Salt marshes and the wetland 	<ul style="list-style-type: none"> ➤ Rehabilitation of the wetland from a degraded state and introduction of indigenous wetland vegetation 	<ul style="list-style-type: none"> ➤ No negative impacts as the wetland will be rehabilitated to a better state 	<ul style="list-style-type: none"> ➤ Wetland rehabilitation plan ➤ Alien removal plan ➤ Applying the SUDS principle as discussed in the storm water management plan.
<p>Alternative 1 – 40% of site to be developed 60% of site to be conserved and rehabilitated.</p> <p>Impacts associated with the access road connecting Howard street through the wetland to the sports complex</p>	<ul style="list-style-type: none"> ➤ 40% Loss of terrestrial habitat and a portion of wetland ecosystems. ➤ Reduction in habitat connectivity ➤ Loss of terrestrial habitat and a portion of wetland ecosystem. ➤ Loss of Hydrological connectivity. ➤ Embankment Erosion 	<ul style="list-style-type: none"> ➤ 60% of the site will be rehabilitated and conserved. ➤ Due to rehabilitation of a degraded wetland, it is envisioned that the water quality will improve possibly attracting more fauna and flora to the area ➤ Alien eradication on a large scale and re-introduction of indigenous wetland vegetation 	<ul style="list-style-type: none"> ➤ Loss and disturbance of fauna and flora species during construction. ➤ Erosion within the wetland ➤ Soil erosion from storm water runoff during operational phase ➤ Wildlife collision on road during operational phase ➤ Loss of vegetation and wetland fauna that are sensitive to changes 	<ul style="list-style-type: none"> ➤ Installing 3 large box culverts at three crossing of the proposed new road will assist with hydrological connectivity. ➤ Installing a stilling basin at either end of the culverts to reduce the effects of channelling and erosion ➤ Speed Limit of only 20km/hr ➤ Indigenous vegetation rescue plan prior to

				<p>construction to be relocated and established within the existing wetland where works won't be carried out.</p> <ul style="list-style-type: none"> ➤ Save the first 100 cm of topsoil with in the construction area of the wetland to be reused in the rehabilitation phase.
	<ul style="list-style-type: none"> ➤ Pollution of wetland which may result in the system degrading even further. 	<ul style="list-style-type: none"> ➤ There are no advantages 	<ul style="list-style-type: none"> ➤ Wetland pollution and degradation during construction activities. ➤ Solid waste and vehicle pollution during operational phase 	<ul style="list-style-type: none"> ➤ Methods statements for construction needs to be submitted to ECO according to the EMPr to reduce this impact. ➤ Staff to be appointed to clean up any solid waste litter especially after a sporting event. ➤ Placement of rubbish bins, that are emptied regularly and covered with a lid ➤ Pollution prevention infrastructure to be installed where necessary to control pollution entering through storm water into the wetland.
	<ul style="list-style-type: none"> ➤ Soil compaction within the wetland 	<ul style="list-style-type: none"> ➤ There are no advantages 	<ul style="list-style-type: none"> ➤ The compaction of soil will be \pm 3600 m²for the construction of the road 	<ul style="list-style-type: none"> ➤ Stripping the first 100cm of top soil from the construction site for re-use during the rehabilitation phase will preserve the seed bank
Clearing and construction of culverts	<ul style="list-style-type: none"> ➤ Flooding of George Rex Road and the proposed site 	<ul style="list-style-type: none"> ➤ Reduce risk of flooding ➤ Possible salt water intrusion into wetland ➤ Wetland rehabilitation 	<ul style="list-style-type: none"> ➤ No disadvantages 	<ul style="list-style-type: none"> ➤ No mitigation measures required as this is a positive impact
Construction within 100 meter of the high water mark	<ul style="list-style-type: none"> ➤ Flooding of George Rex road and the proposed site 	<ul style="list-style-type: none"> ➤ Impacts of this listed activity are few as the George Rex drive and Premier Hotel is already constructed in front of the 	<ul style="list-style-type: none"> ➤ Increased hard surfaces = Increased amount of storm water ➤ Sedimentation of the Knysna Estuary 	<ul style="list-style-type: none"> ➤ Opening and enlarging culverts and storm water channels, off site

		<ul style="list-style-type: none"> property before you reach the high water mark of the Estuary ➤ Reduce risk of flooding ➤ Possible salt water intrusion into wetland ➤ Wetland rehabilitation ➤ Re-directing storm water will enhance the wetland 	<ul style="list-style-type: none"> ➤ Pollution entering the Knysna Estuary ➤ Soil compaction ➤ Flow and water quality of hydrological linkages entering the system 	<ul style="list-style-type: none"> ➤ Storm water from the development to be re-directed to the private open space portions ➤ Construction of a lined surface dam
	➤ Loss of Vegetation	<ul style="list-style-type: none"> ➤ Vegetated buffer strip, setback from the wetland ➤ Removal of alien vegetation ➤ Rehabilitation of wetland ➤ Private open space as green buffer refer to SDP 	➤ Loss of indigenous vegetation	➤ The proposal allows for the rehabilitation of the wetland, removal of alien species and a vegetated buffer between the wetland and the proposed development.
	➤ Pollution of Salt marshes and the wetland	➤ Rehabilitation of the wetland from a degraded state and introduction of indigenous wetland vegetation	➤ No negative impacts as the wetland will be rehabilitated to a better state	<ul style="list-style-type: none"> ➤ Wetland rehabilitation plan ➤ Alien removal plan
	Community	Advantages	Disadvantages	
Preferred Alternative 1 – 40% of site to be developed 60% of site to be conserved and rehabilitated.	Knysna	<ul style="list-style-type: none"> ➤ Job Creation. ➤ Tourist attraction. ➤ Sports Centre including a swimming pool ➤ Rehabilitation of degraded wetland including a board walk and bird hide ➤ Reduced risk of flooding within George Rex Drive ➤ Increased tourist accommodation and permanent accommodation requirements 	<ul style="list-style-type: none"> ➤ Noise during construction phase ➤ Noise during operational Phase ➤ Increased traffic during sporting events 	<ul style="list-style-type: none"> ➤ Construction allowed only allowed during weekdays and office hours ➤ Most sporting event are hosted during the day ➤ A circle proposed in George Rex Drive to alleviate traffic flow. ➤ Access via Howard street for accommodation units and to act as an emergency exit
Alternative 2 – 60% of site to be developed and 40% to be conserved and rehabilitated.	Knysna	<ul style="list-style-type: none"> ➤ Job Creation. ➤ Rehabilitation of degraded wetland ➤ Reduced risk of flooding within George Rex Drive 	<ul style="list-style-type: none"> ➤ Noise during construction phase ➤ Noise during operational Phase ➤ Increased traffic during sporting events 	<ul style="list-style-type: none"> ➤ Construction allowed only allowed during weekdays and office hours ➤ Most sporting event are hosted during the day

		<ul style="list-style-type: none"> ➤ Increased tourist accommodation and permanent accommodation requirements 		<ul style="list-style-type: none"> ➤ A circle proposed in George Rex Drive to alleviate traffic flow. Access via Howard street for accommodation units and to act as an emergency exit
<p>No- Go Alternative The site will remain as is, except for alien clearing as per NEM:BA</p>	Knysna	<ul style="list-style-type: none"> ➤ Alien Clearing as per the requirements of NEM:BA 	<ul style="list-style-type: none"> ➤ Loss of Job creation ➤ Possible tourist and sport facility won't be developed ➤ The wetland will not be rehabilitated and degradation is set to continue as a result of the WWTW ➤ Flooding in George Rex drive will continue as the infrastructure located outside erf 12403 will not be upgraded. 	<p>No mitigation measures</p>

Section I

1. Conclusion and Recommendations

Erf 12043, Knysna is within the urban edge and as per the Knysna SDF this site has been earmarked for development. The site has been through various development proposals. The preferred alternative is the end results through years of research and specialist consultations. The preferred alternative has been amended accordingly to ensure the least impact on the receiving environment.

Eco Route Environmental Consultancy as the appointed **independent** Environmental Consultants is of the opinion that the information contained in this Draft Basic Assessment Report read in conjunction with the specialist reports is sufficient to allow the competent authority to make a decision regarding the application may it be negative or positive decision.

As the independent EAP on this application, it is my personal opinion that the Preferred Alternative will have the least impact on the receiving environment and be authorised in terms of the NEMA EIA regulations, subject to the conditions contained in this report.

2. Recommended Mitigation and conditions of Authorisation

- The Preferred Alternative of 40% development is recommended, the foot print is placed on a already disturbed area. DWA does also not support more than 40% of the property being developed, in order to protect the wetland on site.
- The site foot print should be filled to a minimum of 2,26MSAI and floor levels to be raised to 3 MSL as prescribed in the Knysna Building regulations to prevent flooding.
- The storm water infrastructure outside the site needs to be upgraded in order to reduce flooding within the area.
- A green buffer should be incorporated between the development and the rehabilitated wetland.
- The wetland rehabilitation plan should be adhered too in order to rehabilitate a degraded wetland to a better condition.
- The rehabilitation to be monitored for a 2 year period after construction with quarterly reports submitted to SANParks and DEA.
- Alien species removal should be ongoing regardless an Environmental Authorisation being issued.
- Alien vegetation to removed and controlled during the lifespan of the project.
- Traffic concerns needs to be addressed during the town planning application which will follow the EIA process as Knysna Municipality is responsible for the road. Several suggestions has been made in order to ensure that an already over utilised system gets improved to alleviate traffic congestions and concerns. (N2 traffic turning onto the George Rex drive).
- Backwash from the swimming pool to be re-used on site, without negatively impacting on the wetland/ estuary.
- SANParks, DEA , DEA&DP, Cape Nature and Knysna Municipality to approve the final SDP within the EMPr before commencement once town planning approval has been obtained.
- If the Environmental Authorisation is granted the EA should be valid for a period of 10 years before it lapses.

Rehabilitation recommendations made in the Aquatic Rehabilitation Plan include:

- The blocked outlet point between Erf 12403 and the estuary should be re-opened in an effort to improve the connectivity of the site with the estuary.
- Removal of alien vegetation.
- Cease mowing the wetland vegetation.
- Removal and infill material within the selected areas to bring the water table back in line with the original soil level.
- Replanting of selected wetland species.
- Promotion of diffuse flows through closure of the excavated canals and berms.
- Incorporate walkways and recreational/educational areas, including owl boxes
- Embrace an adaptive management approach to rehabilitation of the site.
- The Present Ecological State of the wetland must be monitored on an annual basis once the development begins and rehabilitation efforts have been initiated. The same method used by DWAF (2008) and Rountree and Scherman (2017) should be used to maintain consistency, and ensure that the Recommended Ecological Category of C, Moderately Modified is attained. The method used by both studies was the Vegetation Alteration module in the Wetland Index of Habitat Integrity (DWAF, 2007).
- Only indigenous plants should be used for landscaping of the property.

Recommendations made in the Water Use Licence include:

Recommendations during the construction phase:

- Any exposed earth must be rehabilitated by planting suitable vegetation to protect the exposed soils;
- The footprint area of the construction should be kept to a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;
- The scenario 3b of the approved wetland reserve (60% wetland and 40% development) that will meet the Recommended Ecological Category must be adhered to in order to reduce and minimize the impacts so as to protect the ecological integrity of the water resources.
- Installations of culverts under George Rex Drive must avoid disturbance of wetland vegetation as far as possible. Culverts should ideally be installed during the dry season.
- No dumping construction material on site may take place. All waste generated on site during construction must be adequately managed. Separation and recycling of different waste materials should be supported; and
- An emergency spill response procedure must be formulated and staff is to be trained in spill response. All necessary equipment for dealing with spills of fuels/chemicals must be available at the site. Spills must be cleaned up immediately and contaminated soil/ material disposed of appropriately at a registered site.

Recommendations during the operational phase:

- All storm water outlets should be monitored regularly to ensure that no preferential flow paths from which may lead to erosion of wetland habitat.
- Existing offsite storm water infrastructure must be upgraded to ensure better management of peak runoff and prevent or minimize the current localised flooding experienced in the immediate vicinity.
- Access points and routes into the wetland should be carefully planned to minimize excessive traffic through and disturbance to wetland.
- Any activities requiring vehicular access (e.g. removal of berms and clearing of felled alien invasive trees) should ideally be undertaken during the dry season to minimize disturbance to the wetland.

- Openings in the existing storm water drainage channel should be made in locations with abundant alien vegetation, causing minimal disturbance to indigenous plants.
- Cleared vegetation must be removed from site and dumped at a municipal waste site.
- Mowing of wetland vegetation must be ceased.
- Retain a network of mown paths from which to access areas of regenerating vegetation as well as established vegetation to control alien plants; and
- The wetland should be monitored annually to ensure that a trajectory towards and improved PES is achieved. Monitoring must be done according to the monitoring plan in the George Rex Wetland Rehabilitation Plan.
- The developer must ensure that their wetland rehabilitation plan/program for bigger area incorporate work with other property owners and the municipality to improve the status of wetlands and rivers in town. This is in line with the DWS no net loss principle for wetlands and rivers in the town. This is in line with the DWS no net loss principle for wetlands and to manage the resources at Recommended Ecological Category of at least a C.
- The mitigation and rehabilitation measures proposed in the July 2019 Technical Report, aquatic rehabilitation plan and previously suggested should be carried out. E.g enlarging the culvert underneath George Rex drive to improve water exchange with the estuary etc.