



ENVIROPRO

IN ASSOCIATION WITH INKANYEZI YETHU



+27 31 765 2942



+27 86 549 0342



suzelle@enviropro.co.za



P.O. Box 1391, Kloof, 3640



www.enviropro.co.za

OCTOBER 2020

DRAFT BASIC ASSESSMENT REPORT  
PART 2 AMENDMENT FOR THE FIELDS OF GOLD VILLAGE DEVELOPMENT  
(TO BE KNOWN AS THE *INJABULO ESTATE*)  
RAY NKONYENI MUNICIPALITY  
CORDEV MARKETING & CORPORATE DEVELOPMENT (PTY) LTD  
EIA REF NO: DC21/0023/AMEND/2017/2020

**This report was prepared by EnviroPro Environmental Consulting in terms of  
Appendix 1 to GNR 982**

3 (1) (a) details of (i) the EAP who prepared the report; and (ii) the expertise of the EAP. Please see Appendix I for EAP declaration and full Curriculum Vitae;

**Josette Oberholzer (MSc) Pr. Sci. Nat (120414) EAPASA (2019/221)**

Tertiary Education:	BSc (Hons) MSc	BSc (Hons) By thesis in estuarine fish ecology
Work Experience:	2001 – 2002 2003 – 2010 2010 – Present	MSc formed part of EIA for National Ports Authority Senior Manager for KSEMS cc. Present Director of EnviroPro Environmental Consulting (Pty) Ltd

**Iain Jourdan (BSocSci Hons)**

Tertiary Education:	BSocSci (Hons)	Geographical Science
Work Experience:	2006 – 2007 2007 – 2010 2010 – Present	Environmental Manager service for Inhlanhla Civils (Pty) Ltd Senior Manager for KSEMS cc Present Director of EnviroPro Environmental Consulting (Pty) Ltd

**Chevy Smith (BSc Hons)**

Tertiary Education:	BSc (Hons)	Environmental Science (Environmental Management and Geography)
Work Experience:	2008 – 2010 2011 – Present	Lead Consultant for KSEMS cc Manager at Environmental Consulting (Pty) Ltd

**Dustin Bell (BSc Hons) Pr. Sci. Nat (120430)**

Tertiary Education:	BSc (Hons)	Environmental Science ( <i>summa cum laude</i> )
Work Experience:	2011 – 2014 2014 – 2015 2015 – Present	Environmental Consultant for Guy Nicolson Consulting cc Environmental Control Officer for KSEMS cc Environmental Consultant for Environmental Consulting (Pty) Ltd

## Executive Summary

The applicant Cordev Marketing & Corporate Development (Pty) Ltd currently holds an existing Environmental Authorisation (DC21/0023/2011) for the establishment of a retirement estate, the Fields of Gold Village Estate, on Portion 9 of the farm Uplands No. 8567 (Wards 6 and 27) in the Ray Nkonyeni Local Municipality, Ugu District Municipality, KwaZulu-Natal. The validity period for this EA has been extended once (DC21/AMEND/0023/2017).

Several attempts to establish the retirement estate have been unsuccessful due to the current economic climate as well as the location of the site. The demand for retirement units is comparatively low and is no longer considered to be the best use for the site. The applicant has therefore investigated other development options that would have a greater likelihood of success. Market research conducted by DEMACON<sup>1</sup> indicated that the project's location and the socio-economic profile of the immediate area make it ideally suited for a GAP housing development. Therefore, the applicant wishes to apply for a part 2 amendment to change the development from a retirement estate to a GAP housing estate. The development will be therefore be rebranded as the Injabulo Estate. The demand for GAP housing is evident when considering Ray Nkonyeni Local Municipality's regional planning. The proposed amendment is expected to have an overarching positive socio economic in that it will provide affordable housing that will benefit the middle-income bracket of the local community. The Injabulo Estate has therefore been identified as a Catalytic Project as it has the potential grow the local economy and significantly alter the unemployment challenges faced in the area.

No new impacts associated with the proposed amendments have been identified as the development footprint will remain the same as what was originally approved. The only change to the layout will be the conversion from sectional title to full title and a reduction in the number of units from 260 to 256. Although no additional new impacts have been identified, the significance of some of the previously identified impacts will change. These changes will primarily be a function of the operational differences between retirement estates versus GAP housing estates. The negative impact such as increased water demand has been identified. The increased water demand is unavoidable, however all other impacts identified can be successfully addressed through the implementation of the EMPr.

No new impacts are expected to result from the proposed amendments to the layout and changes in the land use. Therefore, provided that all mitigation measures are implemented as recommended, it is the EAP's opinion that the proposed amendments to the previously approved layout may be authorised.

## Table of Contents

<b>Section 1: Scope of Work and Location of Activity .....</b>	<b>6</b>
1.1 Project Title .....	6
1.2 A Description of the Activities to Be Undertaken Including Associated Structures and Infrastructure As per Section 3(d) (ii) .....	6
1.2.1 Construction Methodology .....	7
1.3 Description of Feasible Alternatives as Per Section 3(h)(i) .....	8
1.4 All Listed and Specific Activities to Be Triggered and Being Applied For As Per Section 3(d) (i) ..	10
1.5 Location of Activity as per Section 3 (b)(i)-(iii) .....	10
<b>Section 2: Site Description and Surrounding Land Use as per section 3(h)(iv) and (k) .....</b>	<b>15</b>
2.1 DEFF Screening Report .....	15
2.2 Topography and Physical Characteristics of Site .....	16
2.3 Surface Water and Ground Water .....	16
2.4 Flora and Fauna .....	18
2.5 Agriculture Potential.....	20
2.6 Geotechnical Environment .....	20
2.7 Traffic .....	21
2.8 Heritage and Cultural Aspects .....	22
2.9 Socio Economic Environment.....	24
<b>Section 3: Policy and Legislative Context .....</b>	<b>26</b>
3.1 Identification of All Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks And Instruments As Per Section 3(e) (i) And Compliance Of Proposed Activity With Legislation And Policy 3(e) (ii) .....	26
<b>Section 4: Motivation, Need and Desirability.....</b>	<b>29</b>
4.1 Need and Desirability as Per Section 3(F) .....	29
4.2 Motivation for Preferred Site, Activity and Technology Alternative .....	35
4.2.1 Preferred Site Alternative.....	35
4.2.2 Preferred Layout Alternative .....	35
<b>Section 5: Public Participation .....</b>	<b>36</b>
5.1 Notification of Interested and Affected Parties .....	36
5.2 Registered Interested and Affected Parties.....	37
5.3 Comments .....	37
<b>Section 6: Impact Assessment.....</b>	<b>38</b>
6.1 Methodology to Determine and Rank Significance and Consequences of Impacts Associated With All Alternative as Per Section 3(h) (vi) .....	38
6.2 Layout Alternative .....	39
6.3 Environmental Impact Statement as per section (l).....	44
6.4 Impact Management Objectives and Outcomes for the Development for Inclusion in the EMPr as Per Section 3(m).....	46
6.5 Assumptions, Uncertainties and Gaps in Knowledge Relating To the Assessment and Mitigation Measures Proposed As Per Section 3(o) .....	46
6.6 Period for Which Authorization Is Required, Proposed Monitoring and Auditing and Post Construction Requirements .....	46
6.7 Financial Provisions as Per Section 3(s) .....	46
6.8 EAP Opinion on Whether Or Not to Authorise Activity and Recommendations and Conditions for Authorisation as Per Section 3(n) and (p) .....	46
6.9 Summary of Additional Recommendations To Be included As Part of the Amended Environmental Authorisation: .....	46

## List of Figures

Figure 1: 1:50 000 Map Indicating the Location of The Site.....	11
Figure 2: Aerial Photograph Showing Previously Approved Layout for The Fields of Gold Village Estate.....	12
Figure 3: Aerial Photograph Showing Proposed Layout for The Injabulo Estate.....	13
Figure 4: Aerial Photograph Showing The Environmental Features Of The Site.....	14
Figure 5: Elevation Profile for the Site taken from North to South direction (Source: Google Earth Pro, 2020). .....	16
Figure 6: Aerial Photographs identifying the Changes on the site Between 2011 and 2020 (Source Google Earth) .....	23
Figure 7: (a) View of the existing access to the site with the neighbouring property to the south on the left; (b) View of the existing macadamia trees on site. ....	25
Figure 8: (a) View looking north from the south-western boundary of the site near the access road; (b) The adjacent farming activities taking place east of the site. ....	25
Figure 9: (a) View of the degraded vegetation on site; (b) Overview of the portion of the site which will be left as a conservation area. ....	25
Figure 10: Aerial Photograph Showing the Layout of the Injabulo Estate.....	45

## List of Tables

Table 1: Previously Authorised Listed Activities (2010) and Similar Listed Activities (2017).....	10
Table 2: Location Information.....	10
Table 3: National Screening Tool Specialist Requirements and Comments.....	15
Table 4: Gradient of The Site.....	16
Table 5: Topographical Features and Landforms of The Site.....	16
Table 6: Nkhongweni Sub-Quaternary Catchment T40G-05739.....	17
Table 7: Legislation Table.....	26
Table 8: Need and Desirability as per the 2017 Guideline on Need and Desirability.....	29
Table 9: Scoring of Impacts.....	38
Table 10: Layout Alternative Impacts.....	39

## Appendices

Appendix A: Drawings and Maps.....	48
Appendix B: Specialist Reports.....	49
Appendix C: Noticeboard.....	50
Appendix D: Notification.....	51
Appendix E: Registered I&APs.....	52
Appendix F: Comments and Responses.....	53
Appendix G: Impacts Scoring Matrix.....	54
Appendix H: EAP Declaration.....	55
Appendix I: Environmental Management Programme.....	56

## Section 1: Scope of Work and Location of Activity

Please note all additions to the original draft BAR have been indicated in green text.

### 1.1 Project Title

Part 2 Amendment for the Fields of Gold Village Development (to be known as the Injabulo Estate).

### 1.2 A Description of the Activities to Be Undertaken Including Associated Structures and Infrastructure As per Section 3(d) (ii)

The applicant Cordev Marketing & Corporate Development (Pty) Ltd currently holds an existing Environmental Authorisation (DC21/0023/2011) for the establishment of a retirement estate, the Fields of Gold Village Estate, on Portion 9 of the farm Uplands No. 8567 (Wards 6 and 27) in the Ray Nkonyeni Local Municipality, Ugu District Municipality, KwaZulu-Natal (Figures 1 and 2). The validity period for this EA has been extended once (DC21/AMEND/0023/2017).

The centre point of the site is located at 30°50'17.14"S 30°20'9.41"E. The originally approved layout is provided in Figure 2. This layout comprised 260 homes plus a number of facilities which were specifically identified to suit the requirements for a retirement estate. These included:

- Frail care
- Admin block
- Recreational facilities such as a bowling green and tennis court
- Restaurant and shop
- Club house
- Library;
- Launderette and
- Storage units.

Several attempts to establish the retirement estate have been unsuccessful due to the current economic climate as well as the location of the site. The demand for retirement units is comparatively low and is no longer considered to be the best use for the site. The applicant has therefore investigated other development options that would have a greater likelihood of success. Market research conducted by DEMACON<sup>1</sup>, indicated that the projects' location and the socio-economic profile of the immediate area make it ideally suited for a GAP<sup>2</sup> housing development with prices predominantly in the R300 000 – R600 000 price range. Therefore, the applicant wishes to apply for a part 2 amendment to change the development from a retirement estate to a GAP housing estate. The development will be therefore be rebranded as the Injabulo Estate. The demand for GAP housing is evident when considering Ray Nkonyeni Local Municipality's regional planning. The proposed amendment is expected to have an overarching positive socio economic in that it will provide affordable housing that will benefit the middle-income bracket of the local community. The Injabulo Estate has therefore been identified as a Catalytic Project as it has the potential grow the local economy and significantly alter the unemployment challenges faced in the area.

The proposed amended GAP housing layout plan is, for the most part, the same as the previously authorised retirement village layout, the only difference being the conversion from sectional title to full title. Features such as exclusive use area will no longer be applicable as each plot of land will be privately owned. The proposed new layout will contain 256 sub-economic residential stands/erven and will also include a number of new facilities (Figure 3), namely:

- Medical facility which includes a day clinic and chemist;
- Retail shops and laundrette;
- Pool and gym with associated studio;
- Clubhouse, ablutions and WI-FI enabled library;
- Restaurant;
- Admin block and storage facility;
- Sports facilities; and
- Associated parking areas.

<sup>1</sup> DEMACON (2020) Injabulo Estate Market Study – Appendix B

<sup>2</sup> As per DEMACON (2020) GAP housing can be defined as the creation and promotion by the government of housing opportunities, in partnership with the private sector, for people earning a combined monthly income between R3,501 and R15,000. These are the income earners who earn too much to get a free house from the government and earn too little to get a bank bond. This income band represents those people who earn above R3,501 meaning that they don't qualify for state subsidy and earn below R15,000 which means that they also don't qualify for bank loans.

The total area of the site which will be occupied by these facilities will not be altered from what is already authorised i.e. 13517m<sup>2</sup>, refer to Figure 3 and Appendix A for the layouts depicting these facilities. Please note all facilities mentioned above will be the responsibility of the estate management and such will primarily function to serve the residents of the estate.

As discussed above, the original layout was for 260 units while the proposed new layout allows for a reduction to 256 sub-economic residential stands / erven. It must be clearly stated at the outset that the development boundary remains the same as was previously authorised and therefore the private conservation area included in the approved layout will not be encroached upon. In addition, there will be no changes to the service infrastructure of the site:

- All road and stormwater accommodations will conform to general design parameters as stipulated by the Province of Kwazulu-Natal Department of Transport and the Ray Nkonyeni Local Municipality. Access to the development will be from the South from the provincial road P520. Internal traffic will be distributed through main internal access collectors, which are connected to the main entrance gate. Various secondary distributor roads are connected to these main access collectors<sup>3</sup>.
- All the roads and erven will be drained through a series of pipe and open channel networks. The stormwater will discharge into natural waterways, which will drain to attenuation ponds on site. Midblock stormwater drains and subsoil drains may be provided where necessary<sup>3</sup>. The proposed development area is divided into 3 stormwater catchment areas as indicated in the Stormwater Attenuation Layout Drawing included in the Reviewed Services Report<sup>3</sup>. Runoff calculations were done according to the "Rational Method" to determine the total of water to be retained. It was calculated that 411m<sup>3</sup> needed to be retained overall. All stormwater that needs to be retained will be within the footprint of the built-up area. There will be an attenuation pond in catchment area 2 which will retain 210m<sup>3</sup>. For catchment areas 1 and 3 the excessive stormwater will be retained in trapezoidal channels and will retain 119m<sup>3</sup> and 82m<sup>3</sup> respectively. Stormwater infrastructure has also been indicated on Figure 3.
- The proposed internal road designs are based on anticipated traffic volumes and ground conditions with the main through road and small access roads having reserves of 12m and 10m respectively. The design life of the proposed roads is 20 years on provision that repairs to the surface will be made where necessary in order to maintain skid resistance and impermeability during the design life of the road. Please note the construction corridor associated with road construction will be a maximum of 14m.
- The bulk water supply will be from a reservoir west from the development<sup>3</sup>. An additional reservoir will be constructed, which will be able to store a capacity of at least half a day supply for the proposed development (64kl). A draft service level agreement is in the process of being signed between the applicant and the Ugu District Municipality confirming the sewer connection.<sup>4</sup>
- The internal sewer drainage network will be designed as a gravity and pump system combination, by Civil Designer Sewer module computer programme. Sewer will be managed and collected by means of a gravity system to the pump station from where it will be pumped, and gravity drained to the municipal connection near Margate Airport<sup>3</sup>. As previously authorised, this sewer line is aligned through the conservation area; however, it has been designed so as to avoid all watercourses within the site, as represented in Figures 2 and 3. The average daily flow of sewerage is expected to be 85kl/day.
- A draft service level agreement is in the process of being signed between the applicant and the Ugu District Municipality confirming the sewer connection.<sup>4</sup>
- A 600 kVa electricity supply will be provided by Eskom as confirmed in their letter dated 11 August 2020<sup>5</sup>.

The Department of Economic Development, Tourism and Environmental Affairs (EDTEA) have stated that although the proposed amendment does not trigger any new Listed Activities, the proposed alteration to the site layout is a change in the scope of the originally approved layout. Therefore, this report specifically focuses on these proposed amendments.

### 1.2.1 Construction Methodology

On receipt of the amended Environmental Authorisation, the following construction methodology is anticipated:

- A construction camp will be established within the development footprint.
- Clearing and grubbing of the site will be undertaken by heavy machinery - i.e. a TLB. Bulk earthwork will take place once the site has been prepared. Clearing and grubbing will only take place in areas demarcated for construction.

<sup>3</sup> SMV Civil Engineers (PTY) LTD (2020) Reviewed Services Report (Injabulo Estate) – Appendix B

<sup>4</sup> Ugu District Municipality (2020) Service Agreement – Appendix B

<sup>5</sup> Eskom (2020) Availability of Electricity – Appendix B

- The remainder of the site will be cordoned off to prevent any further clearance of vegetation from occurring.
- The site's services will be constructed, which will include the installation of roads, stormwater, sewer, water and electricity.
- Top structures will be erected as per approved building plans.
- Construction of the Injabulo Estate will take place in accordance with the attached Environmental Management Program (EMPr).
- Once construction is complete, all exposed areas will be rehabilitated according to the conditions of the EMPr.
- A Post Construction audit will take place by an independent Environmental Control Officer to ensure that the site is stable and there are no residual impacts remaining.

### **1.3 Description of Feasible Alternatives as Per Section 3(h)(i)**

“Alternatives” are defined as “different means of meeting the general purpose and requirements of the activity”<sup>6</sup>. Alternatives considered must be feasible and reasonable<sup>7</sup>. The motivation for the proposed amendment is to develop the site to best suit the current economic climate and housing demand; this has also been taken into account when identifying and investigating different alternatives.

---

<sup>6</sup> Environmental Impact Assessment Regulations, 2014 as amended published under Government Notice No. 326 in Gazette No. 40772 of 07 April 2017.

<sup>7</sup> DEA & DP (2010) Guideline on Alternatives, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA & DP).



**Site Alternatives****Alternative 1 (Preferred Alternative)**

The site is currently owned by the applicant and has been specifically purchased with the vision of developing the property for residential housing. The applicant does not own any other properties within the area which could fulfil this vision. In addition, the site has already been authorised for the purpose of developing a residential development and has already gone through an Environmental Authorisation process and has therefore been deemed viable for such a development. Therefore, the propose site it attached to the project this existing authorisation. The site fulfils the general purpose and requirements for the activity and therefore no other feasible or reasonable site alternatives have been assessed in this report

**Layout Alternatives**

Alternatives considered must aim to address key significant impacts of the proposed activity by “maximising benefits and avoiding or minimising the negative impacts”<sup>8</sup>. Two layout alternatives have therefore been assessed in this report and are attached under Appendix A. Figures 2 and 3 overlay both layout alternatives onto an aerial photograph of the site.

**Alternative 1 (Preferred Alternative)**

The preferred alternative is for the Injabulo Estate to be developed in the western and northern portions of the site. The preferred alternative will allow for 256 sub-economic residential stands/erven and will also include the following facilities:

- Medical facility
- Pharmacy
- Mini supermarket
- Hairdresser
- Community hall that can be utilised as an entertainment venue and
- WI-FI enabled library

**Alternative 2**

Alternative 2 would be for the construction of the approved Fields of Gold Village Estate to be developed in the western and northern portions of the site. Alternative 2 will allow for 260 units and will also include the following facilities:

- Frail care
- Admin block
- Recreational facilities such as a bowling green and tennis court
- Restaurant and shop
- Club house
- Library
- Launderette and
- Storage units.

**The No Go Alternative**

The proposed Injabulo Estate will not be constructed and although the applicant will still hold the authorisation for the Fields of Gold Village Estate, current market research has shown that the site is best suited for GAP housing. Therefore, the applicant will more than likely choose not to proceed with the retirement estate; therefore there will be development on the site.

---

<sup>8</sup> DEA & DP (2010) Guideline on Alternatives, EIA Guideline and Information Document Series. Western Cape Department of Environmental Affairs & Development Planning (DEA & DP).

**1.4 All Listed and Specific Activities to Be Triggered and Being Applied For As Per Section 3(d) (i)**

**Table 1:** Previously Authorised Listed Activities (2010) and Similar Listed Activities (2017)

Authorised Activity (18 <sup>th</sup> June 2010)				Similar Listed Activity (4 <sup>th</sup> December 2017 as amended)			
GNR	Activity Number	Activity as per the legislation	Activity as it applies to the proposal	GNR	Activity Number	Activity as per the legislation	Activity as it applies to the proposal
Listing Notice 1; 18 <sup>th</sup> June 2010	23	<i>The transformation of undeveloped, vacant or derelict land to- (ii) residential, retail, commercial, recreational, industrial or institutional use outside urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares</i>	Approximately 10 ha of undeveloped land, previously used for agriculture, will be transformed to a retirement village with associated facilities. At least 20ha of the 32ha property will be used for private conservation area with the remaining 2ha being used for either public open space or exclusive use area.	Listing Notice 1; 4 <sup>th</sup> December 2017 as amended	28	<i>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; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;</i>  <i>Excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</i>	Approximately 10 ha of undeveloped land, previously used for agriculture, will be transformed to a GAP Housing Development with associated facilities. At least 20ha of the 32ha property will be used for private conservation area with the remaining 2ha being used for public open space.

**1.5 Location of Activity as per Section 3 (b)(i)-(iii)**

**Table 2:** Location Information

<b>District Municipality</b>	Ugu District Municipality																					
<b>Local Municipality</b>	Ray Nkonyeni Local Municipality																					
<b>Wards</b>	Ward 6 and 27																					
<b>Area / Town / Village</b>	2.5km northwest of Margate Town (as the crow flies)																					
<b>Co-ordinates:</b>	<b>Latitude</b>								<b>Longitude</b>													
<b>Site Centre point:</b>	30°50'17.14"S								30°20'9.41"E													
<b>Property Description:</b>	Portion 9 of the farm Uplands No. 8567																					
<b>21 Digit Surveyor General no.</b>	N	0	E	T	0	0	0	0	0	0	0	0	0	8	5	6	7	0	0	0	0	9

Figure 1: 1:50 000 Map Indicating the Location of The Site

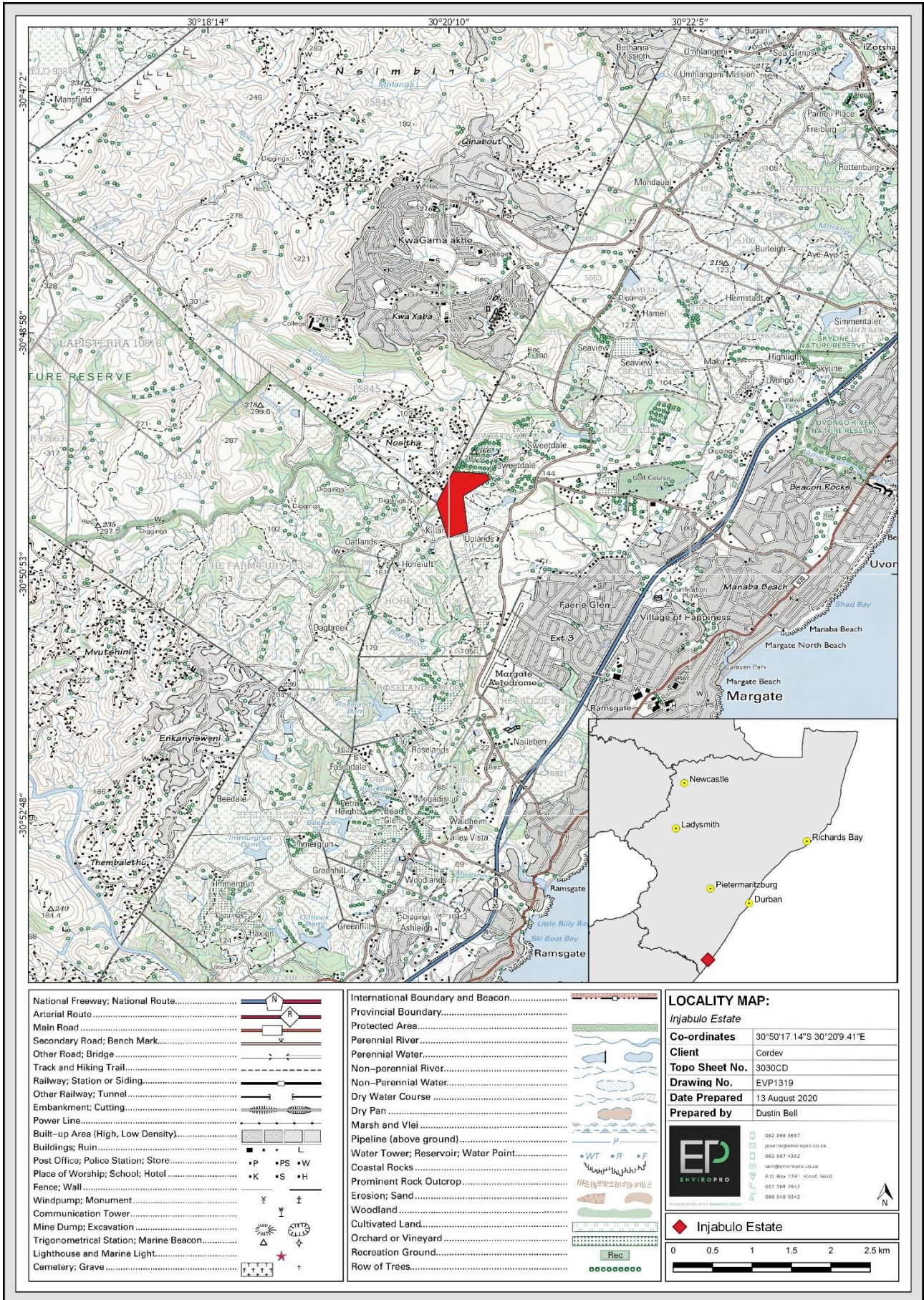


Figure 2: Aerial Photograph Showing Previously Approved Layout for The Fields of Gold Village Estate.

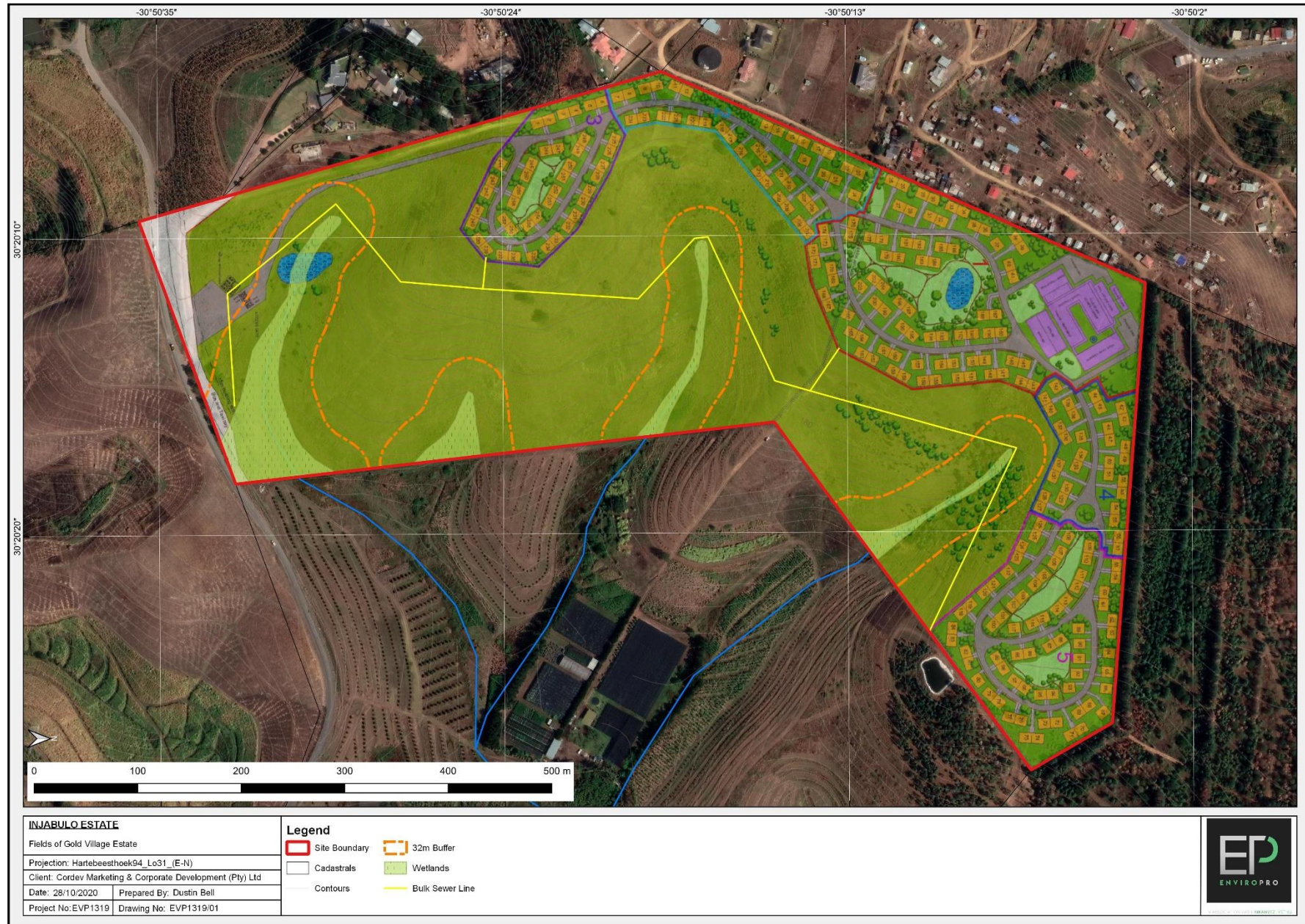
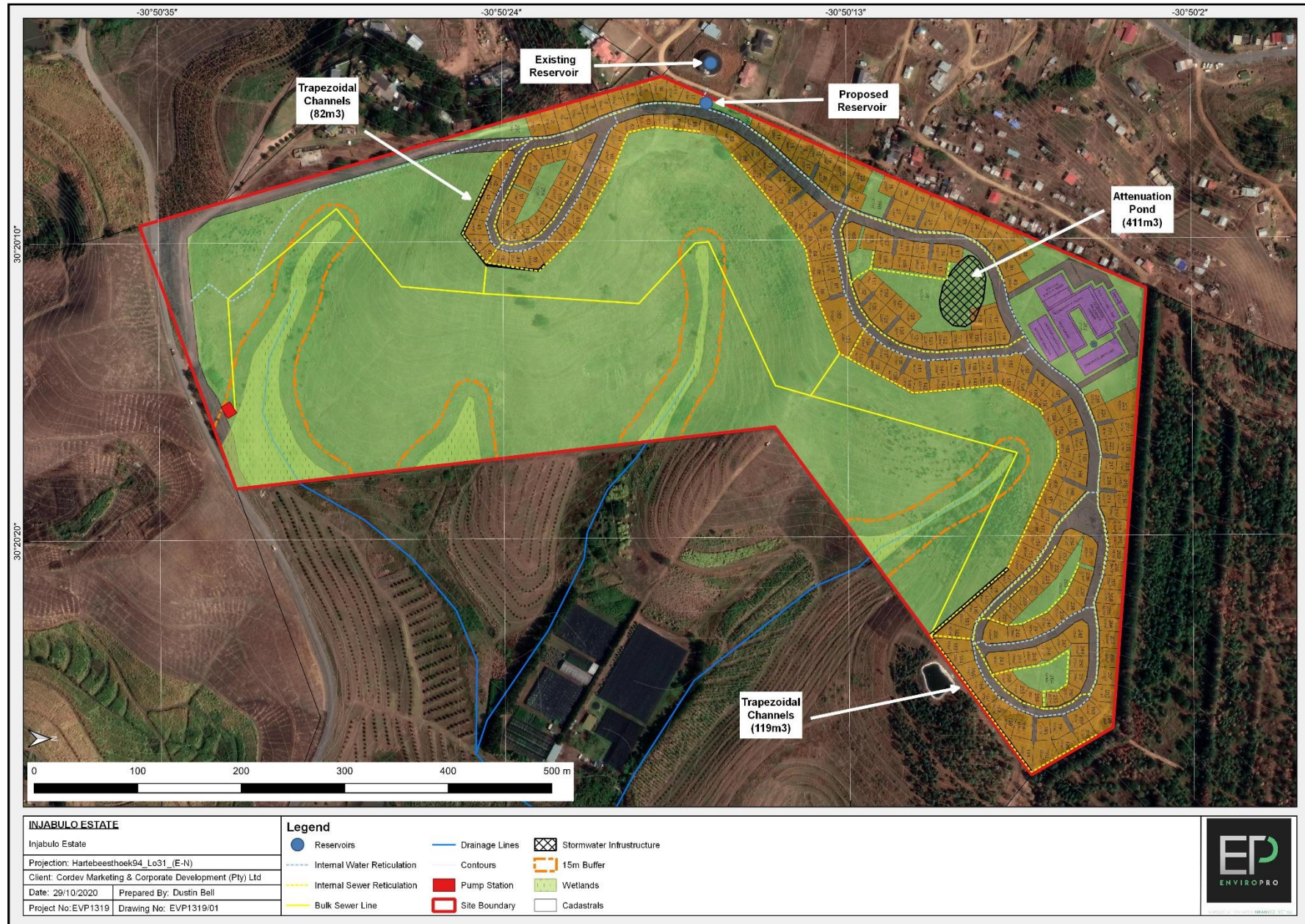
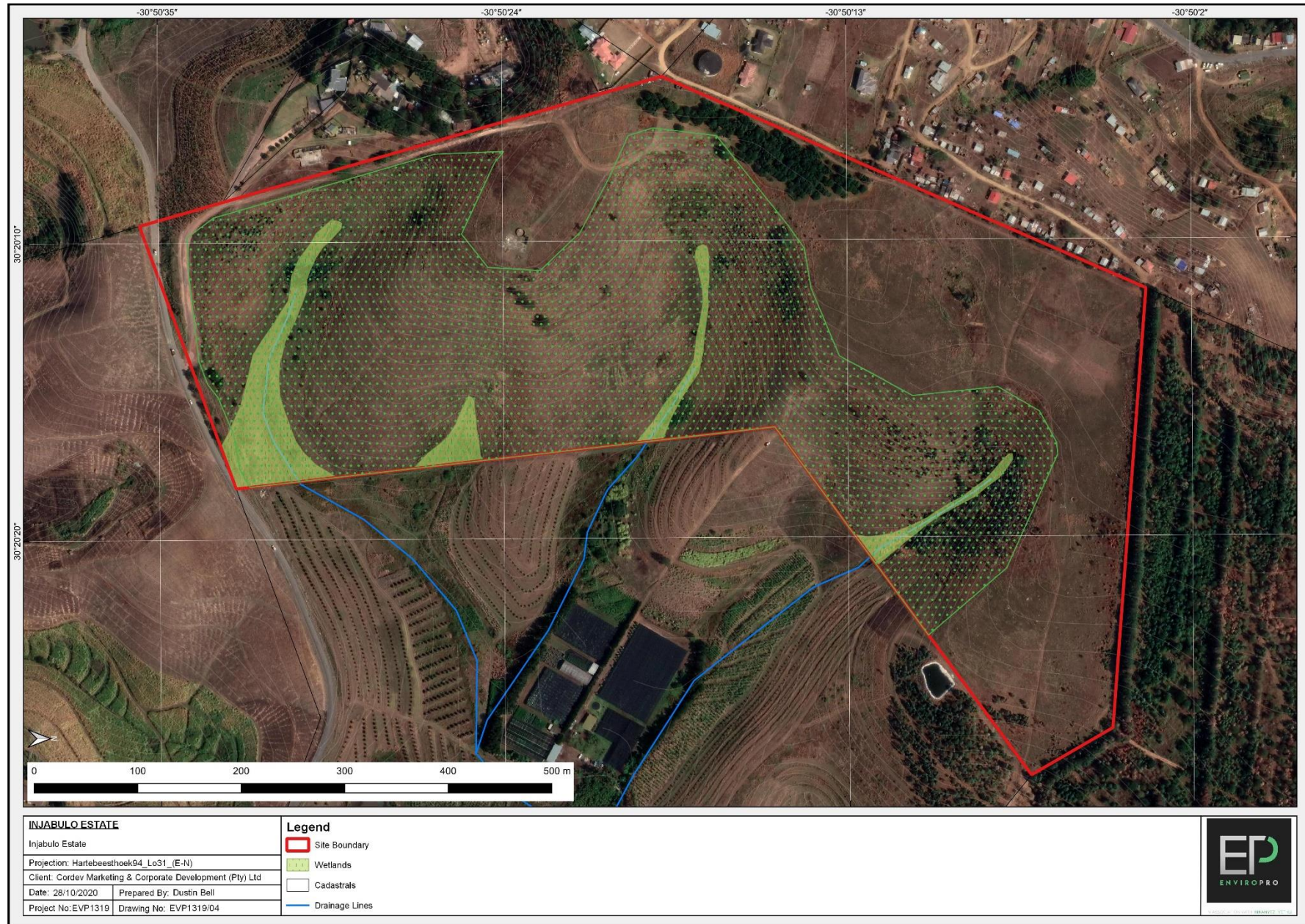


Figure 3: Aerial Photograph Showing Proposed Layout for The Injabulo Estate



**Figure 4: Aerial Photograph Showing The Environmental Features Of The Site**



## Section 2: Site Description and Surrounding Land Use as per section 3(h)(iv) and (k)

### 2.1 DEFF Screening Report

A Screening Report was generated via the DEFF Screening Tool (please refer to Appendix B for the full DEFF report). This details potential specialist reports that may be required based on a desktop level assessment conducted by the screening tool. Table 3 below summarises the screening tool recommendations. It indicates whether they are applicable to the specifics of the project and site and shows the sections of the BAR where these have been addressed. As per the Screening Tool Guidelines, it is the responsibility of the EAP to confirm this list and to motivate in the BAR the reason for not including any of the identified specialist studies by providing photographic evidence of the site situation.

**Table 3:** National Screening Tool Specialist Requirements and Comments

Specialist Assessment	Conducted	Reason
Agricultural Impact Assessment	Yes	As per the requirements stipulated by EDTEA the original Agricultural Impact Assessment has been reviewed. Please refer to <i>Agricultural Potential</i> under Section 2.5.
Landscape/Visual Impact Assessment	No	A landscape/ Visual Impact Assessment was not required in the original EA application. The proposed amendment to the layout will not pose any new visual impacts to what were considered in the original application. However, housing of this nature is not deemed to have a significant visual impact as the buildings will not be more than a signal story. The development is also sited only on the western side of the property with the remainder maintained as a natural area. This will soften the visual aspect of the proposed development. Colors that are sympathetic to the surrounding views will also be used throughout the development.
Archaeological and Cultural Heritage Impact Assessment	Yes	As per the requirements stipulated by EDTEA the original Heritage Assessment has been reviewed. Please refer to <i>Agricultural Potential</i> under Section 2.8
Paleontology Impact Assessment	No	As per the SAHRIS PalaeoSensitivity Map the site falls in a low sensitivity band which states that a paleontological study is not required; however, a protocol for finds is required. This protocol for finds has been included in the EMPr.
Terrestrial Biodiversity Impact Assessment	No	A Terrestrial Biodiversity Impact Assessment was not required in the original EA application as the site is highly degraded from year of agriculture throughout the site. The proposed amendment to the layout will not pose any new biodiversity impacts as the development footprint remains the same. However please refer to <i>Fauna and Flora</i> under Section 2.4 for a desktop assessment.
Aquatic Biodiversity Impact Assessment	No	An Aquatic Biodiversity Impact Assessment was not required in the original EA application as the layout of the site is not within 32m of any watercourses. The proposed amendment to the layout will not pose any new biodiversity impacts as the development footprint remains the same.
Hydrology Assessment	No	A Hydrology Assessment was not required in the original EA application. The proposed amendment to the layout will not pose any new hydrological impacts as the development footprint remains the same.
Socio-Economic Assessment	Yes	As per the requirements stipulated by EDTEA a socio-economic study was required to determine if there is a demand for GAP housing, which forms the basis of the application. Please refer to <i>Socio-Economic Environment</i> under Section 2.9
Plant Species Assessment	No	A Plant Species Assessment was not required in the original EA application. The proposed amendment to the layout will not pose any new impacts to the plant community of the site as the development footprint remains the same.
Animal Species Assessment	No	An Animal Species Assessment was not required in the original EA application. The proposed amendment to the layout will not pose any new impacts to the animal

		community of the site as the development footprint remains the same.
--	--	--

## 2.2 Topography and Physical Characteristics of Site

The following applies to the area surrounding the sites as per the Figures 1-4 above.

The gradient of the site is as follows:

**Table 4:** Gradient of The Site

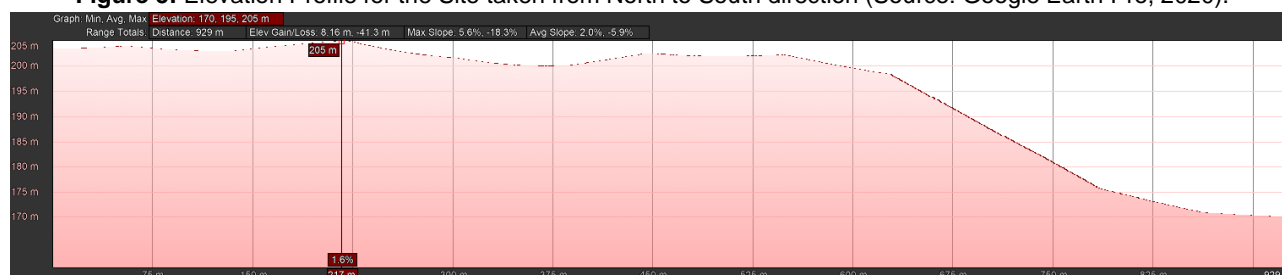
Gradient	Description
Flat	N/A
1:50 – 1:20	N/A
1:20 – 1:15	N/A
1:15 – 1:10	N/A
<b>1:10 – 1:7,5</b>	The development footprint of the site can be described as having a steep slope.
1:7,5 – 1:5	N/A
Steeper than 1:5	N/A

The topographical features and landforms of the site and surrounding area are as follows:

**Table 5:** Topographical Features and Landforms of The Site

Topographical Feature	Description
Ridgeline	N/A
Plateau	N/A
Side slope of hill/mountain	N/A
Closed valley	N/A
Open valley	N/A
Plain	N/A
Undulating plain/low hills	The site is located on an undulating plain/low hill.
Dune	N/A
Sea-front	N/A

**Figure 5:** Elevation Profile for the Site taken from North to South direction (Source: Google Earth Pro, 2020).



## 2.3 Surface Water and Ground Water

The project area is situated in the quaternary catchment T40G, within the Pongola to Mtamvuna Water Management Area (WMA 4). The site is drained by three tributaries of the Nkhongweni River (Figure 4). The Nkhongweni river drains into the ocean at Margate.

The tributaries of the Nkhongweni River all fall within the T40G-05739 reach. Table 6 below presents a summary of the Present Ecological State (PES), Ecological Importance (EI), and Ecological Sensitivity (ES) of the Nkhongweni sub-quaternary catchment T40G-05739 according to DWAF, 2013<sup>9</sup>.

<sup>9</sup> DWA (Department of Water Affairs) 2013. A Desktop Assessment of the Present Ecological State, Ecological Importance and Ecological Sensitivity per Sub Quaternary Reaches for Secondary Catchments in South Africa. Draft. Compiled by RQS-RDM.



**Table 6:** Nkhongweni Sub-Quaternary Catchment T40G-05739

<b>T40G-05739</b>	
Present Ecological Status	Moderately Modified (Class C)
Ecological Importance	High
Ecological Sensitivity	Very High

Four wetlands were delineated by the specialist. These were reported in the Preliminary Geotechnical Assessment and Delineation of Hydromorphic Wetland Areas report compiled by *Groundwork Geotechnical Solutions cc*<sup>10</sup> in 2012. These have been indicated in Figures 2 and 3. These wetlands comprise a mix of three soil series, namely Trevanian, Trevanian Katspruit and Katspruit. A dam-like feature was also identified near the western edge of the site; however, this dam is devoid of any hydromorphic wetland features and was not classified as a watercourse but rather as a watering hole which has been artificially irrigated by previous land owners.

A review of this report was compiled by the *Geosure*<sup>11</sup> in 2020, who have since merged with *Groundwork Geotechnical Solutions cc*. This review concluded that it is highly unlikely that the geotechnical site conditions have changed provided that anthropogenic and land use activities do not differ from those reported on in the previous reports compiled by *Groundwork Geotechnical Solutions cc*. Therefore, as the site's characteristics have not changed since 2012 the findings of the original report remain valid.

*The Biodiversity Company*<sup>12</sup> compiled a wetland assessment for the proposed development. As per the *Groundwork Geotechnical Solutions cc*<sup>10</sup> in 2012 assessment one HGM wetland type, namely an unchanneled valley bottom system, comprising four (4) HGM units were delineated for the assessment. Due to the proximity of these systems to one another, and also the similar site characteristics associated with each system, the systems have been jointly considered for the assessment conducted *The Biodiversity Company*.

The PES for the assessed HGM units is presented in Table 7, while the Ecological Importance & Sensitivity are presented in Table 8.

**Table 7:** Summary of the scores for the wetland PES: HGM 1

Component	PES Rating	Description
<b>Hydrology</b>	C (3.4)	<b>Moderately Modified:</b> The catchment is within a rural setting, surrounded by agricultural activities and housing (to the west). The combination of commercial agriculture and rural development has collectively affected the hydrology of the catchment. The changes to vegetation have contributed to increases the runoff that enters the wetland systems. The increased runoff increases erosion at the high velocity inflow areas but increases sedimentation within the wetland systems further downstream.
<b>Geomorphology</b>	B (1.8)	<b>Largely Natural:</b> Despite the local land uses, the wetlands have largely been avoided. The avoidance of the wetlands has resulted in the systems remaining largely intact.
<b>Vegetation</b>	D (4.7)	<b>Largely Modified:</b> The vegetation cover is a mix of alien vegetation and natural vegetation. Erosion in some places has also impacted on this component. Local agricultural land uses and rural development have contributed to the removal of vegetation, and also the establishment of alien vegetation. Remnants of buildings were recorded in the upper catchment areas, and a soccer field which highlight the extent of human interference in the area.
<b>Overall</b>	C (3.2)	<b>Moderately Modified.</b> A moderate change in ecosystem processes and loss of natural habitats has taken place, but the natural habitat remains predominantly intact.

<sup>10</sup> Groundwork Geotechnical Solutions cc (2006) Preliminary Geotechnical Assessment and Delineation of Hydromorphic Wetland Areas reference GS72/05/A – Appendix B

<sup>11</sup> Geosure (2020) Proposed Fields of Gold Project, West of Margate, KwaZulu Natal (Portion 9 Of Uplands Farm No. 8567, Hibiscus Coast Municipality): Amendments to Development Application: Geotechnical Comment – Appendix B

<sup>12</sup> The Biodiversity Company (2020) Wetland Assessment for the proposed Injabulo Estate – Appendix B

**Table 8:** The EIS assessment results for the project area

Wetland Importance and Sensitivity	HGM 1
Ecological Importance & Sensitivity	2.7

Both the originally approved layout and the proposed new layout have been specifically designed to avoid all drainage features and, as such, there will be no net loss of any wetlands on site. From an impacts perspective, *The Biodiversity Company*<sup>12</sup> has assessed the impact that the proposed development will have on these wetlands. From the assessment it is apparent that avoidance of the wetland areas has contributed to the overall low level of risk. Despite the wetlands being avoided, a number of pre-mitigation moderate risks were identified for the proposed development. As per the specialist it is envisaged that the implementation of the mitigation measures (post-mitigation) will achieve an overall low level of risk for the development.

Please note the greatest risk to the downstream wetland and drainage lines would be the uncontrolled release of stormwater from the site into these drainage features. The stormwater attenuation system will be designed by the engineer to release flow at near natural flow volumes and velocities, thereby mitigating this potential impact.

A conservative wetland management buffer zone of 15m has been recommended for the construction and operation phases. The buffer zone will not be applicable for areas of the project that traverse wetland areas; however, for all secondary activities such as lay down yards, storage areas and camp sites, the buffer zone must be implemented.

## 2.4 Flora and Fauna

### Flora:

- **Ecosystem Type<sup>13</sup>**  
Margate Pondoland-Ugu Sourveld (KZN10)
  - **Protection**  
Critically Endangered
  - **Geographical Location**  
Margate (3030CD) and Port Shepstone (3030CB). Ecosystem delineated primarily by the vegetation boundaries of the predominant vegetation type found within the ecosystem, namely the Pondoland-Ugu Sandstone Coastal Sourveld.
  - **Description**  
Key biodiversity features include three millipede species including *Centrobolus anulatus*, *Doratogonus infragilis*, *Doratogonus montanus*; seven plant species for example *Eugenia simii*, *Huernia hystrix parvula*, *Kniphofia rooperi*, *Phylica natalensis*, *Watsonia confusa*, and *Watsonia inclinata*; two reptile species including *Bradypodion angustiarum* and *Bradypodion melanocephalum*; and four vegetation types including KwaZulu-Natal Coastal Forest, Pondoland Scarp Forest, Pondoland-Ugu Sandstone Coastal Sourveld and KwaZulu-Natal Coastal Belt.
- **Vegetation Type 1<sup>14</sup>**  
Pondoland-Ugu Sandstone Coastal Sourveld (CB4)
  - **Distribution**  
Eastern Cape and KwaZulu-Natal Provinces: Elevated coastal sandstone plateaus from Port St Johns on the Pondoland coast (Eastern Cape) to the vicinity of Port Shepstone (Ugu District, KwaZulu-Natal), incl. the sourveld of the wellknown Oribi Gorge. Altitude ranges from about 0–600 m.
  - **Vegetation & Landscape Features**  
Coastal peneplains and partly undulating hills with flat table-lands and very steep slopes of river gorges. These sites support natural, species-rich grassland punctuated with scattered low shrubs or small trees (sometimes with bush clumps, especially in small gullies). Rocky outcrops and krantzies are common and dramatic sea-cliffs occur. Proteaceous trees (*Protea*, *Faurea*) can be locally common where conditions allow. Although less important here, the geoxylic suffrutex growth form (so typical of CB2 Maputaland Wooded Grassland), is also represented in this sourveld.

<sup>13</sup> South African National Biodiversity Institute & Department of Environmental Affairs and Tourism (2009) Threatened Ecosystems in South Africa: Descriptions and Maps

<sup>14</sup> Mucina, L. & Rutherford, M.C. (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute, Pretoria.

- **Geology & Soils**  
This unit is strictly delimited by its geology - it is built of hard, white, coarse-grained, siliceous quartz arenites (sandstones) of the Msikaba Formation of the Devonian Period (Thomas et al. 1992) giving rise to shallow, nutrient-poor (highly leached), skeletal, acidic sandy soils. Almost 80% of the area is classified as Fa land type, followed by Aa land type (10%).
- **Conservation**  
Vulnerable (one of the top six vegetation units with the highest level of overall vulnerability in South Africa). Target 25%. Only about 7% statutorily conserved in the Mkambati Wildlife Reserve & Marine Sanctuary, and Umtamvuna, Mbumbazi and Oribi Gorge Nature Reserves. About 29% transformed for cultivation and plantations or by urban sprawl. In the Eastern Cape the land use is mostly subsistence farming. Erosion is very low and low.
- **Vegetation Type 2**  
KwaZulu-Natal Coastal Belt Grassland (CB3)
  - **Distribution**  
KwaZulu-Natal Province: Long and, in places, broad coastal strip along the KwaZulu-Natal coast, from near Mtunzini in the north, via Durban to Margate and just short of Port Edward in the south. Altitude ranges from about 20–450 m.
  - **Vegetation & Landscape Features**  
Highly dissected undulating coastal plains which presumably used to be covered to a great extent with various types of subtropical coastal forest. Some primary grassland dominated by *Themeda triandra* still occurs in hilly, high-rainfall areas where pressure from natural fire and grazing regimes prevailed. At present the KwaZulu-Natal Coastal Belt is affected by an intricate mosaic of very extensive sugarcane fields, timber plantations and coastal holiday resorts, with interspersed secondary *Aristida* grasslands, thickets and patches of coastal thornveld.
  - **Geology & Soils**  
Ordovician Natal Group sandstone, Dwyka tillite, Ecca shale and Mapumulo gneiss (Mokolian) dominate the landscapes of the KwaZulu-Natal Coastal Belt. Weathering of old dunes has produced the red sand, called the Berea Red Sand, in places. The soils supported by the above-mentioned rocks are shallow over hard sandstones and deeper over younger, softer rocks. Fa land type dominates the area, while Ab land type is only of minor importance.
  - **Conservation**  
Endangered. Target 25%. Only very small part statutorily conserved in Ngoye, Mbumbazi and Vernon Crookes Nature Reserves. About 50% transformed for cultivation, by urban sprawl and for road-building. Aliens include *Chromolaena odorata*, *Lantana camara*, *Melia azedarach* and *Solanum mauritianum*. Erosion is low and moderate.
- **Vegetation on Site**  
The site does not reflect the desktop information as it is in a degraded state from past agricultural activities. Crops which have previously been cultivated on the site include, dryland sugarcane (approx. 20ha), dryland macadamias (approx. 2 ha) and instant lawn (approx. 4.8 ha). The existing vegetation on site thus mostly includes grass species which have re-established since the removal of the commercial crops. However as already authorised only 10 ha of undeveloped land, previously used for agriculture, will be developed, while 20ha of the 32ha property will be used for private conservation area with the remaining 2ha being used for public open space. The proposed amendments will not result in any expansion of the previously authorised footprint; therefore, no new flora impacts are anticipated

**Fauna<sup>15</sup>:**

The proposed amendments will not result in any expansion of the previously authorised footprint; therefore, no new fauna impacts are anticipated, however desktop information has been provided below:

- As with any open space in a rural area, the site likely provides some refuge for small mammals and invertebrates.
- The Mbumbazi Nature reserve is located approximately 400m to the west of the site, therefore the reserve's integrated management plan was reviewed to obtain a possible species list for the site.
- **Invertebrates:** No red data species are noted within the reserve, however, the KZN endemic Gooseberry pinwheel snail (*Trachycystis conisalea*) has been noted to occur there. It is expected that should this species occur on site; sufficient open space areas will be retained to allow their continued use of the area.

<sup>15</sup> Mbumbazi Nature reserve Integrated Management Plan 2009-2013; EKZMW

- **Herpetofauna:** Five species of frogs/toads are listed as occurring in the Reserve. No Red Data species are listed although the KZN endemic Natal moss frog (*Anhydrophryne hewitti*) occurs in the Nature Reserve. Given that the wetlands will be maintained and buffered on the site, suitable habitat will be retained on site should these frogs occur there.  
Eleven species of reptiles are listed as occurring in the Reserve; 7 lizards and 4 snakes. No Red Data species are listed. It is expected that should these species occur on site; sufficient open space areas will be retained on site to allow their continued use of the area.
- **Avifauna:** the EKZMW database indicates several important bird species that may be present in the area and therefore the reserve, however the habitats and areas required to support each of these species is not noted to be present on site as each species requires very specific habitat types. There will however still be sufficient open space areas including wetland areas to support foraging and breeding by bird species that may occur in the area.
- **Mammals:** the species list for the reserve notes the likely occurrence of Tree hyrax (*Dendrohyrax arboreus arboreus*) but as this species requires well-developed woodland, forest or thickets, it is unlikely that they will occur on the site. It is likely that the site may provide refuge and some forage for other small mammals such as duiker, mongoose, various rodents, cane rats etc. It should also be noted that there is rural housing in the near vicinity and therefore any open spaces are likely used for hunting which will have an impact on any mammals on site.

## 2.5 Agriculture Potential

As per the Agricultural Potential report compiled by *Mottram and Associates cc*<sup>16</sup> in 2012, the commercial agricultural potential of the farm is deemed to be low, especially when compared to other areas nearby. The major limiting factors to sustain commercial agriculture on this farm are the availability of a cost-effective water supply and its location.

The climate is suitable for the production of subtropical fruits and vegetables provided rainfall is supplemented with irrigation. The majority of the farm is situated on top of a hill exposed to the elements, especially wind; therefore, wind breaks would have to be established for subtropical fruit production and growth houses. The water resources are limited. A Municipal water connection is situated on the western boundary but it is unknown whether it is available for agriculture. However, the supply of water in KZN and especially within the Ugu district is limited and should it be available it would not be cost effective for commercial agriculture.

A review of this report was compiled by the *Mottram and Associates cc*<sup>17</sup> in 2020. It concluded that, considering all the cropping and land use options, the development of a GAP housing development would be more beneficial to the area in that it would:

- Significantly improve the socio-economic situation of the residents and the local community nearby, and, in time, that of the other communities
- Bring technology to a greater number of people – training of produce marketing and processing, market gardeners, maintenance personnel, etc.
- Create sustainable entrepreneurship employment to a larger group of people
- Indirectly improve trade in nearby shopping areas

Therefore, the specialist has stated that it is more important to improve the socio-economic situation of the local community rather than to try to make a viable entity survive on a somewhat unproductive area of land.

## 2.6 Geotechnical Environment

As per the Preliminary Geotechnical Assessment and Delineation of Hydromorphic Wetland Areas report compiled by *Groundwork Geotechnical Solutions cc*<sup>10</sup> in 2012, sandstone bedrock of the Natal Group and derived erodible colluvial silty sands predominate to variable depths throughout the site. Shallow hard bedrock including numerous points of outcrop characterise the highlands and adjoining steep slopes exhibiting potentially unstable features, where development controls are recommended to promote geotechnically satisfactory development. However, no pre-existing slope instability has been encountered. Residual sandy clays and intermittent groundwater seepage activity associated with areas of deeper weathering of the sandstone are anticipated in the vicinity of the heads and bottoms to the major valleys and a topographical saddle feature near the north-western site boundary.

A review of this report was compiled by *Geosure*<sup>11</sup> in 2020. This review concluded that stable development of the site is still anticipated to be geotechnically feasible, provided the proposed development proceeds in accordance with the recommended guidelines and precautions documented in the geotechnical report.

<sup>16</sup> Mottram and Associates cc (2011) Assessment of the Agricultural Potential of Portion 9 of the Farm Uplands – Appendix B

<sup>17</sup> Mottram and Associates cc (2020) Agricultural Potential of Portion 9 of the Farm Uplands – Appendix B

The key recommendations made by the specialist include:

- Founding solutions should address the shallow nature of the bedrock, variable slope grades, differential founding materials, areas of intermittent groundwater seepage activity, and architectural designs.
- All sewage treatment should be piped into either package plants or conservancy tanks. The use of an on-site sewer disposal system comprising septic tanks and soakaways is not recommended.
- Effective stormwater management is critical, to ensure low maintenance of the slopes in terms the susceptibility of the erodible soils prevalent to potential damage resulting from uncontrolled surface runoff.

Both the originally approved layout and the proposed new layout have taken the same approach to address these recommendations:

- A detailed geotechnical investigation will take place throughout the development footprint to ensure the correct founding solution is selected. This will form part of the detailed design phase of the development.
- There will be no form of sewer disposal or handling on site. All sewage will be pumped into the municipal waterborne sewer network.
- The stormwater attenuation system will be designed by the engineer to release flow at near natural flow volumes and velocities, thereby mitigating any potential impacts.

## 2.7 Traffic

*Sebego Maloka and Viljoen (SMV) Civil Engineers (Pty) Ltd* were appointed to review the original *Traffic Impact Assessment (TIA) Report*<sup>18</sup> from 2011 in light of the proposed new layout changes. The 2020 reviewed report<sup>19</sup> concluded that:

- The Injabulo Estate will generate a theoretical 228 additional trips during the peak hours. This is a 60 trip decrease in additional trips from the 288 additional trips from the original Traffic Impact Assessment Report.
- The proposed P520/ Injabulo Estate entrance intersection will operate at a Level of Service (LOS B) during peak hours. Thus, when compared to the 2011 TIA there will be no change in the entrance Level of Service.
- The P520/P200 T-junction is not congested during peak hours and will operate at an acceptable Level of Service (LOS B) during morning peak and (LOS C) in the afternoon peak. It is not necessary for any upgrade or changes to this T-junction. There is also no change in the Level of Service in the P520/P200 T-junction when compared with the 2011 TIA.

Therefore, as concluded in the reviewed TIA, due to the nature of the operations of the Injabulo Estate, there are no mentionable differences between the 2020 TIA for the Injabulo Estate and the 2011 TIA in terms of the Level of Service at the two major intersections.

---

<sup>18</sup> Sebego Maloka and Viljoen (SMV) Civil Engineers (Pty) Ltd (2011) Uplands Housing Development TIS Report – Appendix B

<sup>19</sup> Sebego Maloka and Viljoen (SMV) Civil Engineers (Pty) Ltd (2020) Njabulo Housing Development – Reviewed Traffic Impact Study – Appendix B

## **2.8 Heritage and Cultural Aspects**

No heritage resources of significance were noted within the property boundary. The heritage specialist indicated in the *Heritage Impact Assessment – Review Letter*<sup>20</sup> in 2011 that the homestead on site is comprised of modern structures which hold no conservation value and such no further heritage resource mitigation is necessary for the development.

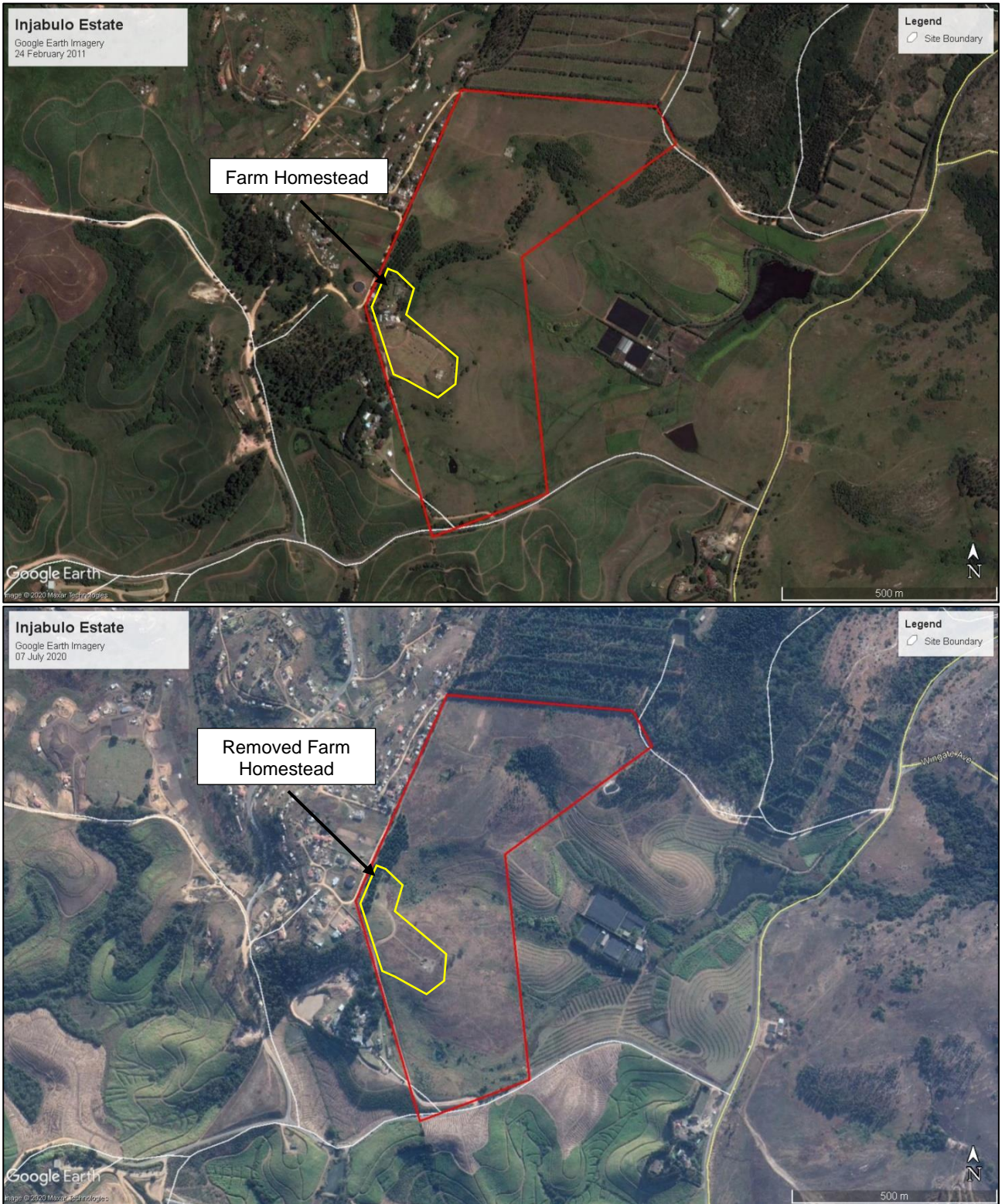
Since the time of the 2011 review there has been no change to the property apart from the removal of the old farm homestead and, as such, the original heritage specialist findings are still valid. Please refer to Figure 5.

Construction workers will be cautioned to operate with care on the site and should any unidentified archaeologically or culturally sensitive aspects be discovered on site, construction activities are to stop immediately, the issue assessed and the authorities (AMAFA) notified if need be.

---

<sup>20</sup> eThembeni Cultural Heritage (2011) Heritage Impact Assessment – Review Letter – Appendix B

Figure 6: Aerial Photographs identifying the Changes on the site Between 2011 and 2020 (Source Google Earth)



## 2.9 Socio Economic Environment

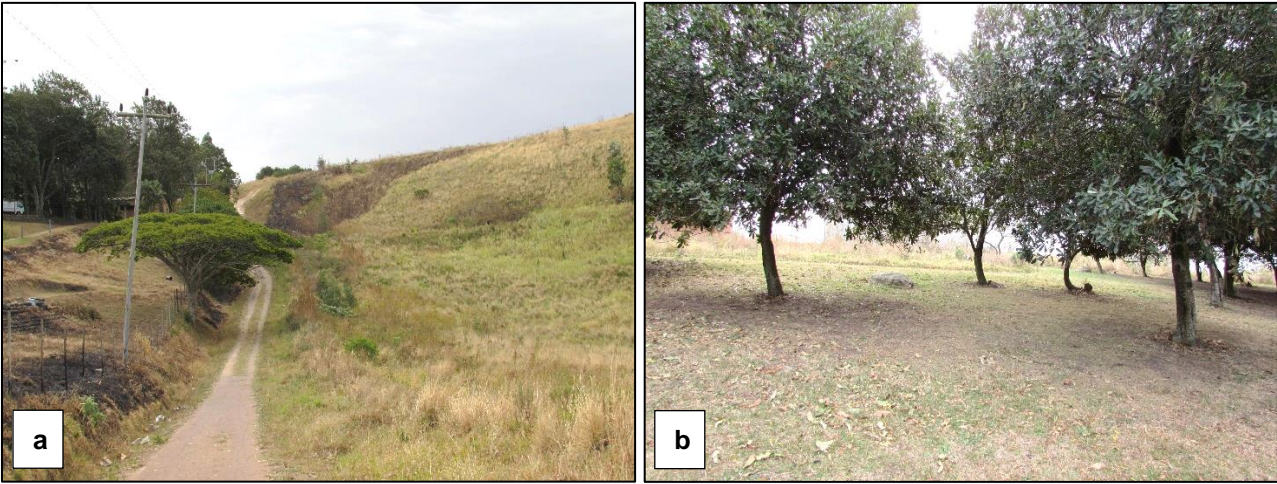
As this amendment application is primarily driven by socio-economic reasoning, a market study was commissioned to determine if indeed there is a demand for GAP housing at this particular site. In 2020 *DEMACON*<sup>1</sup> were commissioned to perform market and socio-economic research pertaining to the proposed Injabulo Estate. A summary of the local demographic and location attributes has been provided below:

- The site is located within a primary market area (30-minute drive time) of approximately 207 778 people / 67 401 households and 3.1 people per household.
- The primary market area for the project is based on a 30-minute drive time isochrone by virtue of project locality. The support base will largely originate from the area west of the N2.
- The proposed development is situated on the Portion 9 of Uplands Farm no 8567 in Margate, Ray Nkonyeni Municipality (Hibiscus Coast), Ugu District. The site lies west of Margate and east of Nositha Area.
- The proposed site scored locational ratings between 70% and 80%+ which indicates that most important fundamentals for a successful residential / retirement development are in place. The site is situated on the edge of the traditional area Nositha.
- Located in a predominantly high-income consumer market.

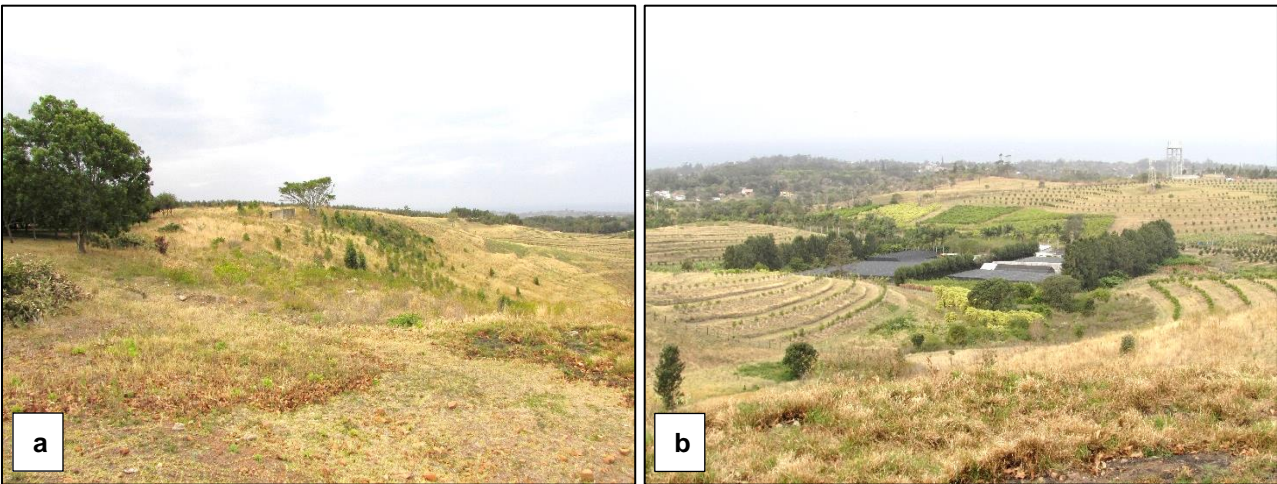
Considering the project locality and socio-economic profile of the immediately surrounding area, the market data suggested that the proposed Injabulo Estate is ideally positioned as a GAP housing development with prices predominantly in the R300 000 – R600 000 price range, with only a limited number of housing products in the price bracket above, but not exceeding R850 000. The demand for retirement units as part of the development is comparatively low and is not considered to be the best use for the site.

The figures below provide photographs of the site taken on the 18<sup>th</sup> August 2020.

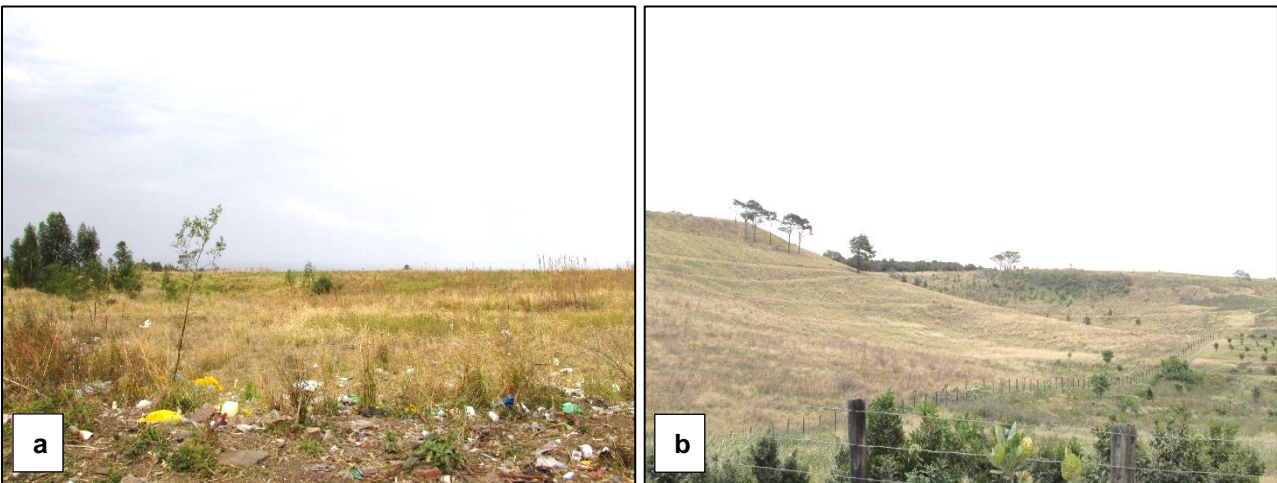




**Figure 7:** (a) View of the existing access to the site with the neighbouring property to the south on the left; (b) View of the existing macadamia trees on site.



**Figure 8:** (a) View looking north from the south-western boundary of the site near the access road; (b) The adjacent farming activities taking place east of the site.



**Figure 9:** (a) View of the degraded vegetation on site; (b) Overview of the portion of the site which will be left as a conservation area.

### Section 3: Policy and Legislative Context

#### 3.1 Identification of All Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks And Instruments As Per Section 3(e) (i) And Compliance Of Proposed Activity With Legislation And Policy 3(e) (ii)

**Table 9:** Legislation Table

Legislation	Compliance of Activity
The Constitution of South Africa (No. 108 of 1996)	The Constitution cannot manage environmental resources as a standalone piece of legislation; hence additional legislation has been promulgated in order to manage the various spheres of both the social and natural environment. Each promulgated Act and associated Regulations is designed to focus on various industries or components of the environment to ensure that the objectives of the Constitution are effectively implemented and upheld on an ongoing basis throughout the country. In terms of Section 24, the constitution gives every person the right to an environment that is not harmful to their health and wellbeing.
National Environmental Management Act (Act 107 of 1998)	<p>The National Environmental Management Act (Act 107 of 1998) (NEMA) is South Africa's overarching environmental legislation. It includes a set of principles that govern environmental management and against which all Environmental Management Programmes (EMPr) and actions are measured. These principles include and relate to sustainable development, protection of the natural environment, waste minimisation, public consultation, the right to an environment that is not harmful to one's health or wellbeing, and a general duty of care.</p> <p>The Environmental Impact Assessment (EIA) Regulations, 2014: GNR.982, R.983, and R.985 under Section 24 of the NEMA define the activities that require Environmental Authorisation and the processes to be followed to assess environmental impacts and obtain Environmental Authorisation.</p> <p>This amendment to the existing Environmental Authorisation is required as applicant is proposing to amend the authorised layout; therefore, this application is in line with the requirements of NEMA.</p>
National Water Act (Act 36 of 1998)	<p>NWA states that a person may only use water if the water use is authorised by a license under NWA or if the responsible authority has dispensed with a license requirement if it is satisfied that the purpose of the NWA will be met by the granting of a license, permit or other authorisation under any other law.</p> <p>This amendment application has been submitted to DWS for comments regarding their requirements. All comments received have been included in Appendix G.</p>
National Environmental Management: Waste Act (Act 59 of 2008)	<p>To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement, and to provide for matters connected therewith. Section 19 allows the Minister to publish a list of activities, which require a Waste Management License. The most recent list is published in Government Gazette 37083 Notice No. 921 dated 29 November 2013.</p> <p>This amendment application to the existing Environmental Authorisation does not trigger a Listed Waste Management Activity.</p>
National Environmental Management: Air Quality Act (Act 39 of 2004)	To reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.

	This amendment application to the existing Environmental Authorisation will not impact on local and regional air quality.
National Environmental Management: Protected Areas Act (Act 57 of 2003)	<p>The National Environmental Management: Protected Areas Act intends to provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes, for the establishment of a national register of all national, provincial and local protected areas, for the management of those areas in accordance with national norms and standards, for intergovernmental co-operation and public consultation in matters concerning protected areas, and for matters in connection therewith.</p> <p>This amendment application to the existing Environmental Authorisation will not have an impact on any protected areas.</p>
National Environmental Management: Integrated Coastal Management Act (Act 24 of 2008)	<p>The National Environmental Management: Integrated Coastal Management Act aims to establish a system of integrated coastal and estuarine management in the Republic, including norms, standards and policies, in order to promote the conservation of the coastal environment, and maintain the natural attributes of coastal landscapes and seascapes, and to ensure that development and the use of natural resources within the coastal zone is socially and economically justifiable and ecologically sustainable, to define rights and duties in relation to coastal areas, to determine the responsibilities of organs of state in relation to coastal areas, to prohibit incineration at sea, to control dumping at sea, pollution in the coastal zone, inappropriate development of the coastal environment and other adverse effects on the coastal environment, to give effect to South Africa's international obligations in relation to coastal matters and to provide for matters connected therewith.</p> <p>This amendment application to the existing Environmental Authorisation will not have an impact on any coastal areas.</p>
National Forest Act (Act 84 of 1998)	<p>To reform the law on forests as the government recognises that everyone has the constitutional right to have the environment protected for the benefit of present and future generations. Natural forests and woodlands form an important part of that environment and need to be conserved and developed according to the principles of sustainable management. Plantation forests play an important role in the economy, have an impact on the environment and need to be managed appropriately. The State's role in forestry needs to change; and the economic, social and environmental benefits of forests have been distributed unfairly in the past.</p> <p>This amendment application to the existing Environmental Authorisation will not have an impact on any forest areas.</p>
Environmental Conservation Act (Act 43 of 1996)	This Act makes provisions for the application of general environmental principles for the protection of ecological processes, promotion of sustainable development and the protection of the environment. This Act has mostly been repealed by NEMA.
National Environmental Management: Biodiversity Act (Act 10 of 2004)	<p>The National Environmental Management: Biodiversity Act intends, to provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998, the protection of species and ecosystems that warrant national protection, the sustainable use of indigenous biological resources, the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources, the establishment and functions of a South African National Biodiversity Institute and for matters connected therewith.</p> <p>This amendment application to the existing Environmental Authorisation will not result in any new biodiversity impact.</p>
National Heritage Resources Act (Act 25 of 1999)  KwaZulu-Natal Heritage Act (Act 4 of 2008)	<p>The National Heritage Act (No. 25 of 1999) aims to promote good management of the national estate in order to preserve the country's unique heritage for current and future generations. The KwaZulu-Natal Heritage Act (Act No. 4 of 2008) provides for the conservation and preservation of the physical and intangible heritage resources of the KwaZulu-Natal province.</p> <p>No significant archaeological artefacts will be disturbed during this project; therefore; no permits will be required from the provincial heritage authority, AMAFA.</p>
Mineral & Petroleum Resources Development (Act 28 of 2002)	To provide for the sustainable development of the nation's mineral and petroleum resources which includes activities carried out for the winning of any mineral on, in or under the earth (i.e. the use of borrow pits).

	This amendment application to the existing Environmental Authorisation will not result in need to apply for a mining permit as all material will be obtained from licensed sources.
Occupational Health and Safety Act (Act 181 of 1993)	<p>These regulations provide for the health and safety of persons at work, including aspects which are hazardous to health and safety. In terms of major hazardous installation, the regulations shall apply to employers, self-employed persons and users, who have on their premises, either permanently or temporarily, a major hazard installation or a quantity of a substance which may pose a risk that could affect the health and safety of employees and the public.</p> <p>During both the construction phase of this development all the requirements of Occupational Health and Safety Act 1993 will need to be adhered to.</p>
Hazardous Substances Act (Act No. 15 of 1973)	<p>This Act aims to provide for the control of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products, to provide for the division of such substances or products into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products and to provide for matters connected therewith.</p> <p>A Spill Contingency Plan will be compiled for managing spills during the construction of the proposed Development.</p>
National Building Regulations and Building Standards Act (Act 103 of 1977)	This Act aims to provide for the promotion of uniformity in the law relating to the erection of buildings in the areas of jurisdiction of local authorities and for the prescribing of building standards.
Guideline on Need and Desirability (2017)	Guideline considered determining the need and desirability of proposed development.
<b>Municipal Planning Framework</b>	
Ray Nkonyeni Local Municipality Integrated Draft Development Plan 2020/2021.	<p>Section 1.7: Investment Opportunities (Catalytic Projects):</p> <p><i>'To achieve its long-term vision, the municipality is aligned to the National Development Plan 2030 and Local Government policy outcome 9 which states that there should be locally driven public employment programmes. The municipality has catalytic projects which have potential to significantly alter the unemployment challenge faced by the area and grow the economy of the municipality.'</i></p> <p>The demand for GAP housing is evident as the Injabulo Estate has been identified as a Catalytic Project as per the IDP document and therefore this amendment falls in line with the Ray Nkonyeni Local Municipality's goals to improve the local economy and increase the provision of housing</p>
Ugu District Municipality Integrated Draft Development Plan 2019/2020.	<p>Section 5.1.1: Desired Spatial Outcomes:</p> <p><i>'By 2035 Ugu District will be a spatially, socially and economically transformed living environment its economy and natural resources accessible to all its people through targeted actions to provide better living, social and economic opportunities.'</i></p> <p><i>The vision commits the District to champion economic and social transformation within its key sectors; this includes the delivery of new opportunities closer to major economic centres (e.g. GAP Housing) The attainment of this vision requires the municipality to facilitate the development of a spatial system that promotes social, economic, financial, institutional and environmental sustainability.'</i></p> <p>Therefore, the demand for GAP housing is evident and the amendment falls in line with the Ugu District Municipality's goals to promote social, economic, financial, institutional and environmental sustainability.</p>

## Section 4: Motivation, Need and Desirability

### 4.1 Need and Desirability as Per Section 3(F)

The following table has been prepared as per the 2017 Integrated Environmental Management Guideline: Guideline on Need and Desirability compiled by the Department of Environmental Affairs.

**Table 10:** Need and Desirability as per the 2017 Guideline on Need and Desirability

<b>“Securing ecological sustainable development and use of natural resources”</b>	
<p><i>How will this development (and its separate elements/aspects) impact on the ecological integrity of the area?</i></p>	<p>The proposed new amendments to the existing Environmental Authorisation include the conversion from sectional title to full title. Full title ownership includes the building and the land it is built on while sectional title describes separate ownership of units within a development. The original authorised layout was for 260 units with associated exclusive use areas while the proposed new layout is for 256 sub-economic residential stands/erven. Please note the development boundary remains the same.</p> <p>Therefore, as the development footprint will remain the same and the number of units are slightly reduced there have been no new impacts identified from what was included in the original BAR.</p>
<p><i>How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity?</i></p> <p><i>What measures were explored to firstly avoid these negative impacts and, where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts?</i></p> <p><i>What measures were explored to enhance positive impacts?</i></p>	<p>The development footprint will remain the same and the number of units have been slightly reduced and, as such, the proposed amendment will neither enhance or result in a loss or protection of biological diversity. The private conservation area included in the original layout will remain as is and will not be encroached on through the implementation of the proposed new layout.</p> <p>The currently approved layout has been used as an alternative layout in this assessment; however no new impacts have been identified and, as such, there have been no measures explored to avoid any negative impacts. Please note all previously identified mitigation measures will still be implemented.</p> <p>There will be no changes to either the development footprint or private conservation area and such impacts will remain the same. Therefore, there have been no new additional measures identified to enhance any positive ecosystem impacts.</p>
<p><i>How will this development pollute and/or degrade the biophysical environment?</i></p> <p><i>What measures were explored to firstly avoid these impacts and, where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts?</i></p> <p><i>What measures were explored to enhance positive impacts?</i></p>	<p>The risks associated with the development's potential to pollute and/or degrade the biophysical environment will remain unchanged as the proposed amendments only relate to the layout configuration within the approved development footprint. In addition, the site will still be utilised for residential purposes albeit at a slightly lower density.</p> <p>The currently approved layout has been used as an alternative layout in this assessment; however no new impacts have been identified and such there have been no measures explored to avoid any negative impacts. Please note all previously identified mitigation measures will still be implemented.</p> <p>There will be no changes to either the development footprint or private conservation area and such impacts will remain the same. Therefore, there have been no new additional measures identified to enhance any positive ecosystem impacts.</p>
<p><i>What waste will be generated by this development?</i></p> <p><i>What measures were explored to firstly avoid waste and, where waste could not be avoided altogether, what</i></p>	<p>There will be no changes in the type of waste as a result of the proposed new amendments. Only general waste will be generated.</p>

<p><i>measures were explored to minimise, reuse and/or recycle the waste?</i></p> <p><i>What measures have been explored to safely treat and/or dispose of unavoidable waste?</i></p>	<p>The site will mostly comprise freehold properties; therefore, there is little control over each house waste management activity. Recycling will only take place if such as service is provided by the municipality.</p> <p>The reuse and recycling of waste will be encouraged at all additional service-related facilities on site</p> <p>All waste on site will be collected by the municipal waste service. If necessary, service-related facilities will be required to contract private waste removal companies. All waste will be disposed of at the Oatlands Municipal Waste Site.</p>
<p><i>How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage?</i></p> <p><i>What measures were explored to firstly avoid these impacts and, where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts?</i></p> <p><i>What measures were explored to enhance positive impacts?</i></p>	<p>There are no new negative or positive impacts on any cultural heritage sites associated with the proposed amendments.</p> <p>The proposed amendments do not offer any opportunity to enhance cultural diversity but they do not negatively impact it in any way.</p>
<p><i>How will this development use and/or impact non-renewable natural resources?</i></p> <p><i>What measures were explored to ensure responsible and equitable use of the resources?</i></p> <p><i>How have the consequences of the depletion of the non-renewable natural resources been considered?</i></p> <p><i>What measures were explored to firstly avoid these impacts and, where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts?</i></p> <p><i>What measures were explored to enhance positive impacts?</i></p>	<p>There are no new negative or positive impacts on any non-renewable natural resources associated with the proposed amendments.</p>
<p><i>How will this development use and/or impact renewable natural resources and the ecosystem of which they are part?</i></p> <p><i>Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds?</i></p> <p><i>What measures were explored to firstly avoid the use of resources or, if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts?</i></p> <ul style="list-style-type: none"> <li>• <i>Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. dematerialised growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life)</i></li> <li>• <i>Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more</i></li> </ul>	<p>The proposed amendments will not negatively or positively impact any renewable natural resources on site. A draft service level agreement is in the process of being signed between the applicant and the Ugu District Municipality confirming the sewer and water connection. There is therefore sufficient capacity available to service this development</p>

<p><i>important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources this the proposed development alternative)?</i></p> <ul style="list-style-type: none"> <li>• <i>Do the proposed location, type and scale of development promote a reduced dependency on resources?</i></li> </ul>	
<p><i>How was a risk-averse and cautious approach applied in terms of ecological impacts?</i></p> <ul style="list-style-type: none"> <li>• <i>What are the limits of current knowledge? (note: the gaps, uncertainties and assumptions must be clearly stated)</i></li> <li>• <i>What is the level of risk associated with the limits of current knowledge?</i></li> <li>• <i>Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?</i></li> </ul>	<p>The proposed new amendments to the existing Environmental Authorisation include the conversion from sectional title to full title. Full title ownership includes the building and the land it is built on while sectional title describes separate ownership of units within a development. The original layout included 260 units with associated exclusive use areas while the proposed new layout includes 256 sub-economic residential stands/erven. Please note: the development boundary remains the same.</p> <p>The development footprint will remain the same and with the number of units being slightly reduced there have been no new impacts identified from what was included in the original BAR. Therefore, by nature a risk-averse approach was adopted by default.</p> <p>There are very few if any gaps in knowledge.</p>
<p><i>How will the ecological impacts resulting from this development impact on people’s environmental right in terms following</i></p> <ul style="list-style-type: none"> <li>• <i>Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but, if avoidance is not possible, to minimise, manage and remedy negative impacts?</i></li> <li>• <i>Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?</i></li> </ul>	<p>The proposed amendments will not negatively impact people’s environmental right; however, they will positively contribute to the surrounding community by providing affordable housing.</p>
<p><i>Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development’s ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)</i></p>	<p>The property is privately owned and the applicant already has Environmental Authorisation to develop the site and, as such, the local community do not rely on this property for any purpose. The proposed amendments will have no new ecological impact; however, they will have a positive impact on the community by providing affordable housing.</p>
<p><i>Based on all of the above, how will this development positively or negatively impact ecological integrity objectives/targets/considerations of the area?</i></p>	<p>The proposed amendments should have no new significant negative impact on ecological integrity based on the understanding that the applicant will construct and operated the estate as per the conditions of the EMPr.</p>
<p><i>Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the “best practicable environmental option” in terms of ecological considerations.</i></p>	<p>Due to the nature of the proposed amendments, no other feasible site alternatives could be considered. Please refer to Sections 1.3 and 4.2. In terms of layout alternatives, both alternatives will have the same negative and positive impacts and the election of the layout alternative is a function of the socio-economic demand.</p>
<p><i>Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and existing and other planned developments in the area.</i></p>	<p>Due to the nature of the proposed amendments, there are no new positive and negative ecological/biophysical cumulative impacts.</p>
<b>“Promoting justifiable economic and social development”</b>	
<p><i>What is the socio-economic context of the area based on, amongst other considerations, the following considerations:</i></p> <ul style="list-style-type: none"> <li>• <i>The IDP (and its sector plans’ vision, objectives, strategies, indicators and targets)</i></li> </ul>	<p>A summary of the local demographics and location attributes has been provided below<sup>1</sup>:</p> <ul style="list-style-type: none"> <li>- The site is located within a primary market area (30-minute drive time) of approximately 207 778 people / 67 401 households and 3.1 people per household.</li> </ul>

<p><i>and any other strategic plans, frameworks of policies applicable to the area?</i></p> <ul style="list-style-type: none"> <li>• <i>Spatial priorities and desired spatial patterns (e.g. need for integrated or segregated communities, need to upgrade informal settlements, need for densification, etc.)?</i></li> <li>• <i>Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.)? and</i></li> <li>• <i>Municipal Economic Development Strategy (“LED Strategy”)?</i></li> </ul>	<ul style="list-style-type: none"> <li>- The primary market area for the project is based on a 30-minute drive time isochrone by virtue of project locality. The support base will largely originate from the area west of the N2.</li> <li>- The proposed development is situated on the Portion 9 of Uplands Farm no 8567 in Margate, Ray Nkonyeni Municipality (Hibiscus Coast), Ugu District. The site lies west of Margate and east of Nositha Area.</li> <li>- The proposed site scored locational ratings between 70% and 80%+ which indicates that most important fundamentals for a successful residential/retirement development are in place. The site is situated on the edge of the traditional area Nositha.</li> <li>- Located in a predominantly high-income consumer market.</li> </ul>
<p><i>Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area?</i></p>	<p>As the proposed amendments have been driven by the demand for GAP housing the only new identified socio-economic impacts are associated with the provision of affordable housing in the Ray Nkonyeni local Municipality for people who earn too much to get a free house from the government and earn too little to get a bank bond.</p>
<p><i>How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?</i></p>	<p>The proposed amendments will aid in the provision of affordable housing in the Ray Nkonyeni local Municipality. These amendments would specifically address housing concerns for the lower to middle income earners who would normally find it difficult to buy a house. Therefore, these amendments would specifically address the social needs of the community.</p>
<p><i>Will the development result in inequitable (intra- and inter-generational) impact distribution, in the short- and long-term?</i></p>	<p>As the proposed amendments will aid in the provision of private housing, it will benefit the current target demographic i.e. middle-income earners. These proposed amendments at the same time will not negatively impact either the low- or high-income demographic.</p>
<p><i>Will the impact be socially and economically sustainable in the short- and long-term?</i></p>	<p>Yes, the proposed amendments will be socially and economically sustainable as there have not been any significant negative socio-economic impacts identified. The proposed amendments will have a positive long-term social impact within the Ray Nkonyeni local Municipality.</p>
<p><i>In terms of location, describe how the placement of the proposed development will:</i></p> <ul style="list-style-type: none"> <li>• <i>result in the creation of residential and employment opportunities in close proximity to or integrated with each other</i></li> <li>• <i>reduce the need for transport of people and goods</i></li> <li>• <i>result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport?)</i></li> <li>• <i>compliment other uses in the area</i></li> <li>• <i>be in line with the planning for the area</i></li> <li>• <i>for urban related development, make use of underutilised land available within the urban edge</i></li> <li>• <i>optimise the use of existing resources and infrastructure</i></li> <li>• <i>opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement)</i></li> <li>• <i>discourage "urban sprawl" and contribute to compaction/densification</i> <ul style="list-style-type: none"> <li>▪ <i>contribute to the correction of the historically distorted spatial patterns of</i></li> </ul> </li> </ul>	<p>A location assessment was conducted by DEMACON<sup>1</sup> using the DEMACON Site Evaluation Models ©. These DEMACON models are pragmatic and are based on the assignment of values to various location factors. Firstly, the site is evaluated on a ten-point scale, with ten being the highest. Secondly, weights are attached to these factors, in order of importance. The site rating scored between 70% and 80%, indicating that the most important fundamentals for a successful residential development are in place.</p> <p>Section 1.7: Investment Opportunities (Catalytic Projects) of the Ray Nkonyeni Local Municipality Draft IDP 2020/2021 states that:  <i>‘To achieve its long-term vision, the municipality is aligned to the National Development Plan 2030 and Local Government policy outcome 9 which states that there should be locally driven public employment programmes. The municipality has catalytic projects which have potential to significantly alter the unemployment challenge faced by the area and grow the economy of the municipality.’</i></p> <p>The demand for GAP housing is evident as the Injabulo Estate has been identified as a Catalytic Project as per the IDP document and therefore this amendment falls in line with the Ray Nkonyeni Local Municipality’s goals to improve the local economy and increase the provision of housing which subsequently will aid in job creation.</p>



<p>settlements and to the optimum use of existing infrastructure in excess of current needs</p> <ul style="list-style-type: none"> <li>▪ encourage environmentally sustainable land development practices and processes</li> <li>▪ take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.)</li> <li>▪ the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential)</li> <li>▪ impact the sense of history, sense of place and heritage of the area and the socio-cultural and</li> <li>▪ cultural-historic characteristics and sensitivities of the area, and</li> <li>▪ in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement</li> </ul>	
<p><i>How were a risk-averse and cautious approach applied in terms of socio-economic impacts?</i></p> <ul style="list-style-type: none"> <li>• <i>What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?</i></li> <li>• <i>What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge?</i></li> <li>• <i>Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?</i></li> </ul>	<p>As the proposed amendments are for the provision of GAP housing, there are no negative socio-economic risks associated with the proposed amendments. Therefore, a risk-averse and cautious approach was not required.</p>
<p><i>How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following:</i></p> <ul style="list-style-type: none"> <li>• <i>Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts but, if avoidance is not possible, to minimise, manage and remedy negative impacts?</i></li> <li>• <i>Positive impacts. What measures were taken to enhance positive impacts?</i></li> </ul>	<p>The proposed amendments will not negatively impact people's environmental rights. However, the proposed housing will have a positive impact, being provision of housing for the GAP market.</p>
<p><i>Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)</i></p>	<p>The property is privately owned and the applicant already has Environmental Authorisation to develop the site and, as such, the local community do not rely on this property for any purpose. The proposed amendments will have no new negative socio-economic impacts; however, they will have a positive impact on the community by providing affordable housing.</p>
<p><i>What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?</i></p>	<p>The alternative of continuing with the authorised layout was considered. However as recommended in the Market Study, the demand for retirement units as part of the development is comparatively low and is not considered to be the highest and best use for the site and, as such, GAP housing has been considered the preferred alternative.</p>
<p><i>What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries) and is the development located appropriately?</i></p>	<p>There have been no impacts associated with the proposed amendments which will adversely impact vulnerable and/or disadvantaged persons.</p>

<p><i>Considering the need for social equity and justice, do the alternatives identified allow the “best practicable environmental option” to be selected, or is there a need for other alternatives to be considered?</i></p>	<p>Yes, the best practicable environmental option is selected.</p>
<p><i>What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?</i></p>	<p>The proposed amendments will not impact anyone’s access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing. It will, in fact, improve affordable housing in the area.</p>
<p><i>What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development’s life cycle?</i></p>	<p>The EMPr includes conditions which have been developed to manage operational impacts. Upon receipt of the EA the EMPr will become legally binding. Therefore, the applicant will be bound to the conditions of the EMPr throughout the life cycle of the estate.</p>
<p><i>What measures were taken to:</i></p> <ul style="list-style-type: none"> <li>• <i>ensure the participation of all interested and affected parties?</i></li> <li>• <i>provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation?</i></li> <li>• <i>ensure participation by vulnerable and disadvantaged persons?</i></li> <li>• <i>promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means?</i></li> <li>• <i>ensure openness and transparency, and access to information in terms of the process?</i></li> <li>• <i>ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition was given to all forms of knowledge, including traditional and ordinary knowledge?</i></li> <li>• <i>ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein would be promoted?</i></li> </ul>	<p>Please refer to Section 5 describing the public participation carried out for the project. Appendices C – G provide proof of the public participation process.</p>
<p><i>Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low-, middle- and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area).</i></p>	<p>The proposed amendments are specifically directed to the middle-income market (GAP) and, as such, the provision of affordable housing will not benefit the low- and high-income market. This provision of GAP housing has been identified by government as a concern and is actively encouraging the private sector to partner with government to stimulate GAP housing developments.</p>
<p><i>What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?</i></p>	<p>During construction and operation, a full health, safety and environmental induction will be conducted with all employees. This induction brings to the attention of the employees all potential human health hazards and environmental dangers associated with the workings of the site. Inductions also indicate that all employees have a right to work in a clean and safe environment. During operation, there is unlikely to be any work that is harmful to human health or the environment.</p>
<p><i>Describe how the development will impact job creation in terms of, amongst other aspects:</i></p> <ul style="list-style-type: none"> <li>• <i>the number of temporary versus permanent jobs that will be created</i></li> <li>• <i>whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area?)</i></li> <li>• <i>the distance from where labourers will have to travel</i></li> </ul>	<p>The proposed amendments will result in additional temporary jobs during construction and permanent jobs during operation. However, these will not be in addition to what would already be provided if the applicant were to proceed with the authorised layout.</p>

<ul style="list-style-type: none"> <li>the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits) and</li> <li>the opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).</li> </ul>	
<p>What measures were taken to ensure:</p> <ul style="list-style-type: none"> <li>that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment?</li> <li>that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?</li> </ul>	There is currently no need for inter-governmental co-ordination associated with the project, which falls solely within the Ray Nkonyeni Local Municipality. The Basic Assessment Report will be circulated to all authorities and organs of state for comments and these comments included in the Appendix G. Should there be any conflict of interest, these will be resolved; however, since the development will have a positive socio-economic impact, conflict of interest is unlikely.
<p>What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?</p>	The proposed amendments are to take place on privately owned land and will therefore not negatively impact on people's common heritage with respect to the environment.
<p>Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?</p>	All of the mitigations proposed by the EAP and specialists are realistic and practical.
<p>What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?</p>	The EMPr will designate responsibility for all conditions. This document will be legally binding and as such any non-compliances with the conditions of the EMPr will effectively be breaking the law for this reason, the applicant must prioritise these items.
<p>Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations.</p>	Please refer to Section 4.2 below for a motivation for the preferred site, activity and technology alternative.
<p>Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area.</p>	Due to the nature of the proposed amendments, there are no new positive or negative socio-economic cumulative impacts.

## 4.2 Motivation for Preferred Site, Activity and Technology Alternative

### 4.2.1 Preferred Site Alternative

#### Alternative 1 (Preferred Alternative)

The site is currently owned by the applicant and has been specifically purchased with the vision of developing the property for residential housing. The applicant does not own any other properties within the area which could fulfil this vision. In addition, the site has already been authorised for the purpose of developing a residential development and has already gone through an Environmental Authorisation process and has therefore been deemed viable for such a development. Therefore, the propose site it attached to the project this existing authorisation. The site fulfils the general purpose and requirements for the activity and therefore no other feasible or reasonable site alternatives have been assessed in this report.

### 4.2.2 Preferred Layout Alternative

#### Alternative 1 (Preferred Alternative)

Several attempts to establish the retirement estate have been unsuccessful primarily due to the current economic climate and the location of the site. The applicant has therefore investigated other options that are more likely to be successful. Market research conducted by DEMACON<sup>1</sup> showed that the location and socio-economic profile of the immediate area makes the site ideally suited for GAP housing development. The demand for retirement units is comparatively low and is not considered to be the best use for the site.

The demand for GAP housing is evident when considering Ray Nkonyeni Local Municipality's regional planning. Therefore the Injabulo Estate has been identified as a Catalytic Project as it has the potential to significantly grow the local economy and address unemployment challenges faced in the area.

The proposed amended GAP housing layout plan is, for the most part, the same as the previously authorised retirement village plan i.e. with the same developmental footprint and boundaries - the only difference will be

the conversion from sectional title to full title. Features such as the exclusive use area will no longer be applicable as each plot of land will be privately owned. The proposed new layout will be for 256 sub-economic residential stands / erven as compared to the 260 units allowed for in the previously authorised layout. Therefore, there are no new negative impacts associated with the Preferred Alternative which have not been previously identified as part of Alternative 1, however the rating for some of the impacts has changed due to the differences between the operational footprint of a GAP housing project versus a retirement village.

## Section 5: Public Participation

### 5.1 Notification of Interested and Affected Parties

- 1) *Fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of:*
  - i. *the site where the activity to which the application or proposed application relates is or is to be undertaken and*
  - ii. *any alternative site*

Four noticeboards (isiZulu and English) were placed in and around the site on the 7<sup>th</sup> August 2020. The noticeboards detailed the applicant's proposed plan to amend the existing Environmental Authorisation, subject to a basic assessment. See Appendix C – Proof of Placement of Notice Board.

- 2) *Giving written notice, in any of the manners provided for in section 47D of the Act, to:*
  - i. *the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken*
  - ii. *the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area*
  - iii. *the municipality which has jurisdiction in the area*
  - iv. *any organ of state having jurisdiction in respect of any aspect of the activity, and*
  - v. *any other party as required by the competent authority*

The following steps were followed during the public participation process:

- An advertisement was placed within the same newspaper originally used - i.e. the South Coast Herald - on the 7<sup>th</sup> August 2020.
- The applicant is the landowner; therefore, landowner consent is not required.
- The Ward Councillors were notified electronically through e-mail. A response from the Ward Councillors was obtained.
- Ingonyama Trust Board and the local traditional council were notified electronically on the 11<sup>th</sup> August 2020 and a draft report has been dropped off at the traditional council office.
- The neighbouring farms will be notified electronically through email on the 11<sup>th</sup> August 2020.
- All original private I&APs will be notified electronically by email and/or WINSMS on the 11<sup>th</sup> and 18<sup>th</sup> August 2020.
- All government departments and authorities were notified electronically through email on the 11<sup>th</sup> August 2020.
- All relevant authorities and IA&PS have been provided with copies of this BAR.

See Appendix D – Proof of Notification.

- i. *owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*

E-mail notifications were sent out to all I&APs on the 11<sup>th</sup> August 2020. See Appendix D – Proof of Notification.

- 3) *Placing an advertisement in:*
  - i. *one local newspaper; or*
  - ii. *any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;*
- 4) *Placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii)*

An English and IsiZulu advertisement was placed in the South Coast Herald on the 7<sup>th</sup> August 2020 detailing the proposed project, Basic Assessment requirements and to provide contact details of EnviroPro should anyone wish to register as an I&AP. See Appendix E – Proof of Advert Placement.

## 5.2 Registered Interested and Affected Parties

42. *A proponent or applicant must ensure the opening and maintenance of a register of interested and affected parties and submit such a register to the competent authority, which register must contain the names, contact details and addresses of:*
- (a) all persons who, as a consequence of the public participation process conducted in respect of that application, have submitted written comments or attended meetings with the proponent, applicant or EAP*
  - (b) all persons who have requested the proponent or applicant, in writing, for their names to be placed on the register and*
  - (c) all organs of state which have jurisdiction in respect of the activity to which the application relates.*

The contact details of all I&APs who have registered have been provided in the Registered I&AP list in Appendix F.

## 5.3 Comments

Comments of interested and affected parties to be recorded in reports and plans.

- 1) The applicant must ensure that the comments of interested and affected parties are recorded in reports and plans and that such written comments, including responses to such comments and records of meetings, are attached to the reports and plans that are submitted to the competent authority in terms of these Regulations.*
- 2) Where a person desires but is unable to access written comments as contemplated in subregulation (1) due to-*
  - i. a lack of skills to read or write*
  - ii. disability or*
  - iii. any other disadvantage*
  - iv. reasonable alternative methods of recording comments must be provided for.*

All comments received from I&APs have been recorded in the comments and response table. The original comments have been provided together with the C&R table. This report has been provided to the Ray Nkonyeni Local Municipality and Ugu District Municipality for comment. See Appendix G – Comments and Response table and Comments Received.

## Section 6: Impact Assessment

### 6.1 Methodology to Determine and Rank Significance and Consequences of Impacts Associated With All Alternative as Per Section 3(h) (vi)

Impacts are assessed qualitatively and quantitatively, looking at the duration / frequency of the activity and likely impacts associated with that activity during both construction and operation. If the activity happens frequently, the risk of the associated impact occurring is much higher than if the activity happens less frequently. The geographical extent of the impact is assessed - i.e. will the impact be restricted to the point of occurrence or will it have a local or regional effect. Impacts are also reviewed looking at severity levels and consequences should the impact occur - i.e. will the severity be low, medium or high and then probability of the impact occurring is taken into account.

Whether or not the impact can be mitigated and the extent to which it can be avoided, managed, mitigated, or reversed is assessed - i.e. the probability of occurrence after mitigation has been applied. This also takes into account likelihood of human error based on construction and operational auditing experience - i.e. even though spills can be completely mitigated and prevented, there is always a small chance that spills will still occur (residual risk). Based on all of these factors, the impact is then rated to determine its significance -for example, an impact can have a regional effect with severe environmental implications; however the probability of it occurring is very low, and the implementation of the proposed mitigation measures means that the ultimate rating is medium or low.

Please see below a description of the scoring. The full impact scoring tables detailing how the significance rating was calculated can be found in Appendix H.

**Table 11:** Scoring of Impacts

Scoring of Impacts	
Duration / Frequency of activity likely to cause impact	0 = No impact 1 = short term / once off 2 = medium term / during operation 3 = long term / permanent
Geographical Extent	0 = No impact 1 = point of impact / restricted to site 2 = local / surrounding area 3 = regional
Severity (level of damage caused) if impact were to occur	0 = No impact 1 = minor 3 = medium 5 = major
Probability of impact without mitigation	1 - 5 = low. 6 -10 = medium. 11 -14 = high.
Significance before application of Mitigation Measures	A score of between 1 and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.
Will activity cause irreplaceable loss of resources?	10 = Yes 0 = No
Mitigation measures	0 = No impact - 5 = can be fully mitigated - 3 = can be partially mitigated -1 = unable to be mitigated
Probability of impact after mitigation	0 = No impact 1 = Low 2 = Medium 3 = High
Significance after application of Mitigation Measures	A score of between 1 and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.

## 6.2 Layout Alternative

The following impacts table has been compiled using impacts assessed as part of the approved Environmental Authorisation. The original impacts table has been amended to comply with the standard EnviroPro Risk Assessment approach. Please note no additional impacts were identified; however, the significance of a few impacts has changed due to the proposed amended land use. Where there has been a change in the significance due to the proposed amendments (Preferred Alternative) the reasoning and significance has been indicated *red italics*. *Red italics* have also been utilised where additional mitigation measures have been proposed.

**Table 12:** Layout Alternative Impacts

No.	Nature and Consequences of impact	Sig. rating of impacts <sup>21</sup> :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Sig. rating of impacts after mitigation:
<b>Impacts that may result from the planning and design phase</b>				
<b>Site alternatives</b>				
	<i>There is no site alternative because the proposed property belongs to the applicant. In addition, the site has already been authorised for the purpose of developing a residential development and, as such, the site has already gone through an Environmental Authorisation process and has been declared viable for such a development.</i>			
<b>Process, technology, layout or other alternatives</b>				
<b>Direct</b>				
1.	Destruction of vegetation and wetlands	8 (Medium)	<ul style="list-style-type: none"> <li>Site development outside wetland buffer areas and only on non-sensitive vegetation.</li> <li>Create a conservation area on remainder of property</li> </ul>	4 (Low)
2.	Steep slopes minimise development areas	6 (Medium)	<ul style="list-style-type: none"> <li>Only develop on slopes flatter than 1:4</li> </ul>	2 (Low)
<b>Indirect</b>				
3.	Visual view of development from neighbours	7 (Medium)	<ul style="list-style-type: none"> <li>The development is sited only on the western side of the property with the remainder maintained as a natural area. This will soften the visual aspect of the proposed development.</li> <li>Use colours that are sympathetic to the surrounding views</li> </ul>	5 (Low)
4.	Heritage	No Impact	<ul style="list-style-type: none"> <li>No heritage resources to be taken into account</li> </ul>	No Impact
5.	Reduced agricultural potential	No Impact	<ul style="list-style-type: none"> <li>No mitigation required because the property's soils have low potential</li> </ul>	No Impact
6.	<i>Social impact on community</i> <i>The demand for retirement units as part of the development is comparatively low and is not considered to be the best use for the site.</i>	0 (Positive)	<ul style="list-style-type: none"> <li><i>The development to meet the demand for old age type facilities</i></li> <li><i>The proposed amendments are specifically directed to the middle-income market (GAP) and, as such, the provision of affordable housing will have a positive impact on the local community.</i></li> </ul>	0 (Positive)
<b>Cumulative</b>				
7.	<i>Traffic – increased traffic on linking roads</i> <i>The proposed amendments will generate a theoretical 228 additional trips during the peak hours. This is a 60 trip decrease in additional trips from the authorised layout. However, there are no mentionable differences between the two alternatives in terms of the Level of Service at the intersections that it would operate at.</i>	7 (Medium)	<ul style="list-style-type: none"> <li><i>Type of development will not contribute to “rush hour” traffic</i></li> <li><i>The site access must be constructed in the position as indicated in the traffic report in Appendix G8 Appendix B</i></li> <li><i>The Type B1 access must be designed as indicated in the traffic report in Appendix G8 with required tapers and shoulder.</i></li> </ul> <i>The following mitigation measures have been identified in the reviewed TIA<sup>19</sup>:</i> <ul style="list-style-type: none"> <li><i>A Type B1 intersection at the entrance must be constructed</i></li> </ul>	3 (Low)

<sup>21</sup> See Appendix H for more details.

			<ul style="list-style-type: none"> <li>• Cutting embankments to the west of the proposed entrance must be undertaken to provide at least 150m sight distance</li> <li>• The surface of the P520 must be widened with a one-meter surfaced shoulder both sides of the road for at least 60 meters from the access intersection.</li> </ul>	
<b>Impacts that may result from the construction phase</b>				
<b>Site alternatives</b>				
	<i>There is no site alternative because the proposed property belongs to the applicant. In addition, the site has already been authorised for the purpose of developing a residential development and, as such, the site has already gone through an Environmental Authorisation process as has been declared viable for such a development.</i>			
<b>Process, technology, layout or other alternatives</b>				
<b>Direct</b>				
8.	Destruction of vegetation and wetlands	8 (Medium)	<ul style="list-style-type: none"> <li>• Demarcation of construction and site camp areas will reduce negative impacts</li> <li>• No construction activity and/or construction-related activity may be undertaken outside the construction footprint. All sensitive ecosystems must be clearly demarcated and regarded as a 'no-go' area - i.e. construction staff must not be permitted access to these areas.</li> <li>• Areas to be developed must be specifically demarcated during the construction phase, preventing movement of workers into sensitive surrounding environments. Only the demarcated areas must be impacted upon.</li> <li>• All wetland areas and buffer zones must be demarcated as sensitive areas, and no construction activity, laydown yards, camps or dumping of construction material are to be permitted within these areas;</li> <li>• The footprint area of the sewer pipeline must be kept a minimum. The footprint area must be clearly demarcated to avoid unnecessary disturbances to adjacent areas;</li> <li>• All construction activities must be upslope of the pipeline (away from the wetlands);</li> <li>• The first 300 mm of soil must be stockpiled separate from the soil excavated deeper than 300 mm. These can be stockpiled on either side of the trench;</li> <li>• The proposed pipeline system must be divided up into 100 m intervals. Each interval's soil must be stockpiled and filled back up (in the correct order) to avoid long periods of stockpiling.</li> </ul>	4 (Low)
9.	Stormwater and soil erosion	8 (Medium)	<ul style="list-style-type: none"> <li>• Reduce concentration of stormwater</li> <li>• Temporary stormwater protection measures must be established before construction activities commence.</li> <li>• Any sign of erosion on site must be immediately rectified to prevent any significant wash away of soil into the adjacent grassland area.</li> <li>• The Contractor must regularly check and clean material from behind erosion barriers.</li> <li>• Any exposed earth must be rehabilitated promptly by planting suitable vegetation (vigorous indigenous grasses) to protect the exposed soil;</li> </ul>	4 (Low)
10.	Groundwater contamination	9 (Medium)	<ul style="list-style-type: none"> <li>• Ensure proper filtering of stormwater before entering natural water courses</li> </ul>	5 (Low)



			<ul style="list-style-type: none"> <li>• All temporary toilet facilities on site utilised by the construction personnel must be checked on a daily basis and emptied on a weekly basis by the contractor.</li> <li>• All temporary toilets must be situated out of the 1: 100-year floodline of a watercourse or outside 100 metres from the riparian zone, whichever is greatest distance.</li> <li>• A registered waste removal contractor must remove sewage waste from site or sewage waste must be disposed of at a permitted Waste Water Treatment Site.</li> <li>• Safe disposal slips for the disposal of effluent waste must be obtained and kept on site as proof of safe disposal.</li> <li>• The contractors used for the construction must have spill kits available prior to construction to ensure that any fuel, oil or hazardous substance spills are cleaned-up and discarded correctly.</li> <li>• All machinery and equipment should be inspected regularly for faults and possible leaks, these should be serviced off-site;</li> </ul>	
11.	Dust	6 (Medium)	<ul style="list-style-type: none"> <li>• Minimise stockpile areas</li> <li>• Cover or wet stockpile any exposed areas as appropriate</li> <li>• Vegetate exposed areas as soon as practically feasible</li> <li>• Adopt a phased approach to clearing areas for roads and/or services</li> <li>• Vehicle speed limits must be reduced to 40km/hr to reduce the amount of dust raised along the gravel roads around site.</li> <li>• The applicant must comply with the National Dust Regulations (Government Notice R827, 2013) with regards to dust levels produced on site.</li> </ul>	5 (Low)
12.	Storage of fuel	8 (Medium)	<ul style="list-style-type: none"> <li>• Storage areas to be contained within a bund.</li> <li>• All servicing to be done with a proper tray to prevent spilling on the ground.</li> <li>• The contractors used for the construction must have spill kits available prior to construction to ensure that any fuel, oil or hazardous substance spills are cleaned-up and discarded correctly</li> </ul>	4 (Low)
13.	Noise	6 (Medium)	<ul style="list-style-type: none"> <li>• Limit construction hours between 7:00 and 18:00.</li> <li>• No work over weekends</li> <li>• Standard mufflers must be fitted to all vehicles</li> </ul>	5 (Low)
<b>Indirect</b>				
14.	Visual view of construction	7 (Medium)	<ul style="list-style-type: none"> <li>• No impact provided</li> <li>• This impact is unavoidable; however, construction will be only temporary and all housekeeping matters will be managed as per the conditions of the EMPr.</li> </ul>	6 (Low)
15.	Social impact on community	0 (Positive)	<ul style="list-style-type: none"> <li>• Use local people as first choice for temporary and permanent jobs</li> </ul>	0 (Positive)
<b>Cumulative</b>				
16.	Traffic – increased traffic on linking roads	6 (Medium)	<ul style="list-style-type: none"> <li>• Provide safety flags at access onto road P520</li> </ul>	5 (Low)
<b>Impacts that may result from the operational phase</b>				
<b>Site alternatives</b>				

<p><i>There is no site alternative because the proposed property belongs to the applicant. In addition, the site has already been authorised for the purpose of developing a residential development and, as such, the site has already gone through an Environmental Authorisation process and has been declared viable for such a development.</i></p>				
<p><b>Process, technology, layout or other alternatives</b></p>				
<p><b>Direct</b></p>				
17.	Destruction of vegetation and wetlands	10 (Medium)	<ul style="list-style-type: none"> <li>Provide paths and educational information to protect the vegetation and wetlands in the conservancy area. Rehabilitate disturbed wetland and vegetation areas by removing all alien vegetation.</li> </ul>	5 (Low)
18.	<p><i>Water usage</i>  <i>As per the updated Engineering services Report the Annual Daily Demand for potable waste has increased by 5Kl/day from 222Kl/day to 257Kl/day</i></p>	<p>8 (Medium)                      9 (Medium)</p>	<ul style="list-style-type: none"> <li>Use volume reducing equipment such as showers and toilets to reduce water demand.</li> <li>Plant local vegetation species to reduce irrigation requirement.</li> <li><i>The increased water demand is unavoidable as it needs to meet regulated requirements.</i></li> </ul>	<p>4 (Low)                      5 (Low)</p>
19.	Electricity usage	8 (Medium)	<ul style="list-style-type: none"> <li>Use energy saving bulbs and solar heating wherever practically feasible.</li> </ul>	4 (Low)
20.	Sewage volume	8 (Medium)	<ul style="list-style-type: none"> <li>A reduced water demand combined with volume reducing showers and toilets will decrease the volume of sewage effluent to be treated by the Municipality.</li> </ul>	4 (Low)
21.	<p><i>Stormwater and soil erosion</i>  <i>There will be less control of the activities within full title units when compared to sectional title units as activities within sectional title schemes are closely regulated by the Sectional Titles Schemes Management Act. Full title will still have to abide by the Home Owners Rules however these are less regulated. Therefore, there may be a slight increase in the generation of stormwater due to activities within each unit be less controlled. However, the stormwater discharged would still remain at the same rate due to the attenuation system throughout the site.</i></p> <p><i>This increase has a potential to negatively increase the environmental impacts associated with the development.</i></p>	<p>8 (Medium)                      8 (Medium)</p>	<ul style="list-style-type: none"> <li>Reduce concentration of stormwater.</li> <li><i>The stormwater attenuation system must be designed to release flow at near natural flow volumes and velocities.</i></li> <li><i>Stormwater must be diverted through an attenuation process, before discharging it in a controlled manner into the downstream natural drainage systems.</i></li> <li><i>Appropriate erosion control measures must be constructed at the various stormwater discharge points located throughout the site to limit erosion on the receiving environment - e.g. at headwalls and culverts.</i></li> </ul>	<p>4 (Low)                      4 (Low)</p>
22.	Groundwater contamination	8 (Medium)	<ul style="list-style-type: none"> <li>Ensure proper filtering of stormwater before entering natural water courses.</li> </ul>	3 (Low)
23.	Dust	7 (Medium)	<ul style="list-style-type: none"> <li>Cover or wet exposed areas as appropriate.</li> <li>Vegetate exposed areas as soon as practically feasible.</li> </ul>	2 (Low)
24.	<p><i>Storage and use of fuel</i>  <i>There will be no storage of fuel on site.</i></p>	No Impact	<ul style="list-style-type: none"> <li>Storage areas to be contained within a bund.</li> <li>All servicing to be done with a proper tray to prevent spilling on the ground.</li> </ul>	No Impact
25.	Noise	6 (Medium)	<ul style="list-style-type: none"> <li>Limit construction hours between 7:00 and 18:00</li> <li>No work over weekends</li> <li>Standard mufflers must be fitted to all vehicles</li> <li><i>The only land uses on site will be residential housing and service such as the, Medical facility; Pharmacy; Mini supermarket; Hairdresser; Community hall; and WI-FI enabled library. These activities will not create excessive</i></li> </ul>	2 (Low)

			<i>noise on site. Service-related activities will also only be operational within normal working hours.</i>	
<b>Indirect</b>				
26.	<i>Social impact on community The demand for retirement units as part of the development is comparatively low and is not considered to be the highest and best use for the site.</i>	0 (Positive)	<ul style="list-style-type: none"> <li>• Use local people for all jobs as far as practically feasible</li> <li>• <i>The proposed amendments are specifically directed to the middle-income market (GAP) and, as such, the provision of affordable housing will have a positive impact on the local community.</i></li> </ul>	0 (Positive)
27.	Odours from Landfill Site	9 (Medium)	<ul style="list-style-type: none"> <li>• No mitigation possible because of possible odours from outside the property</li> </ul>	9 (Medium)
<b>Cumulative</b>				
28.	<i>Increased demand on resources such as water and electricity As per the updated Engineering services Report the Annual Daily Demand for potable waste has increased by 5Kl/day from 222Kl/day to 257Kl/day</i>	9 (Medium) 10 (Medium)	<ul style="list-style-type: none"> <li>• Water and electricity demand reducing principles must be considered (e.g. low flow taps/showers and energy reducing light bulbs) to decrease the demand on resources to be provided by the Municipality</li> <li>• <i>The increased water demand is unavoidable as it needs to meet regulated requirements.</i></li> </ul>	6 (Medium) 7 (Medium)
29.	Increased load on the sewage effluent treatment works	9 (Medium)	<ul style="list-style-type: none"> <li>• A reduced demand on water usage will also decrease the volume of sewage to be treated at the treatment works</li> </ul>	6 (Medium)
<b>Impacts that may result from the decommissioning or closure phase</b>				
	There is no decommissioning phase			

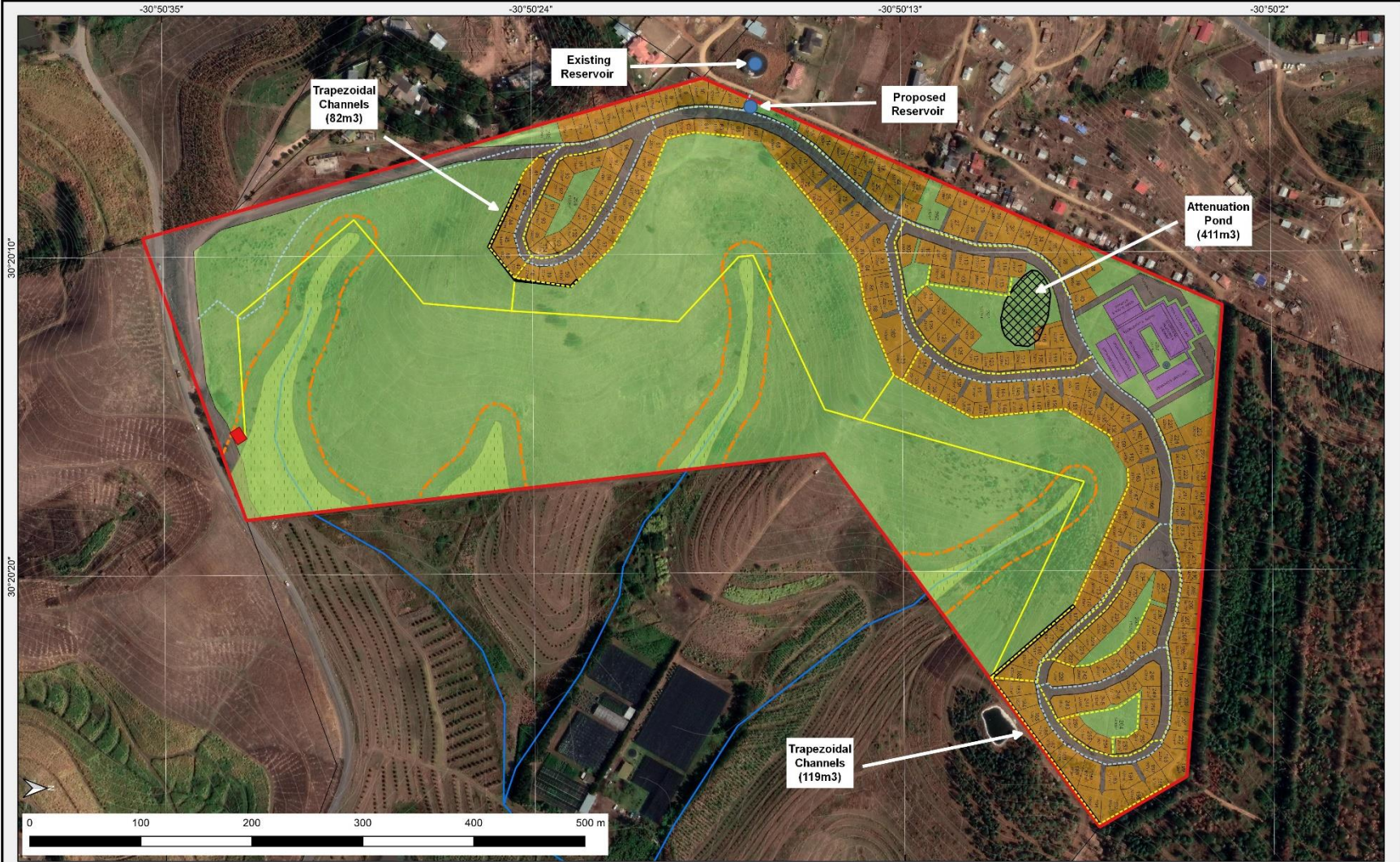
### **6.3 Environmental Impact Statement as per section (I)**

No new impacts associated with the proposed amendments to the existing Environmental Authorisation have been identified as the previously approved development footprint will remain as is. The only change to the layout is the conversion from sectional title to full title whereby the number of units will be reduced from 260 to 256. However, although there have been no additional impacts identified, the significance of a few impacts has changed. These changes are primarily a function of the operational differences between retirement estates and GAP housing estates. The negative impact such as increased water demand has been identified. The increased water demand is unavoidable, however all other impacts identified can be successfully addressed through the implementation of the EMPr. There is an anticipated overarching positive socio-economic impact associated with the provision of affordable housing that will benefit the middle-income bracket of the local community.

Generic good practise construction mitigation measures have been provided in the EMPr, which must be adhered to by the Contractor. Compliance with the EMPr must be audited by an independent Environmental Control Officer (ECO). The proposed amended layout as depicted in Figure 9 below is not expected to result in any new additional impacts when compared with the originally approved layout.

Therefore, provided the mitigation measures and recommendations in this report are adhered to, it is the EAP's opinion that the proposed amendments to the approved layout may be authorised.

Figure 10: Aerial Photograph Showing the Layout of the Injabulo Estate.



INJABULO ESTATE	
Injabulo Estate	
Projection: Hartebeesthoek94_Lo31_(E-N)	
Client: Cordev Marketing & Corporate Development (Pty) Ltd	
Date: 29/10/2020	Prepared By: Dustin Bell
Project No: EVP1319	Drawing No: EVP1319/01

Legend			
	Reservoirs		Drainage Lines
	Internal Water Reticulation		Pump Station
	Internal Sewer Reticulation		Site Boundary
	Bulk Sewer Line		Stormwater Infrastructure
	15m Buffer		Wetlands
	Contours		Cadastrals



#### **6.4 Impact Management Objectives and Outcomes for the Development for Inclusion in the EMPr as Per Section 3(m)**

The following objectives and outcomes must be considered for this project:

- Objectives:
  - For there to be no lasting negative impacts on the environment once construction is complete.
  - To practice responsible construction, 'best practice' with regards to housekeeping on site during construction (outlined within the EMPr) and enforce the polluter pays principle. The applicant / contractor must be responsible for their actions on site during construction and the rehabilitation of the site post construction.
- Outcomes:
  - To promote sustainable development. Create infrastructure and an environment that is healthy and sustainable for future generations.

#### **6.5 Assumptions, Uncertainties and Gaps in Knowledge Relating To the Assessment and Mitigation Measures Proposed As Per Section 3(o)**

The information in this report has been extracted from the various specialist reports attached under Appendix B. The assessment is also based on the assumption that the input received from the engineers and applicant is accurate.

#### **6.6 Period for Which Authorization Is Required, Proposed Monitoring and Auditing and Post Construction Requirements**

The amendment to the existing Environmental Authorisation is required for the construction of the Injabulo Estate within the next 5 years. Considering the current economic climate, it is recommended that the authorisation be valid for a period of ten years, within which time construction would need to commence.

Given the nature of this project, it is recommended that **monthly** ECO audits be carried out for the duration of the construction phase of this project. One post construction audit should be conducted once construction is complete.

The EMPr details the post construction, rehabilitation, and closure objectives which will be monitored by the ECO and compliance authorities.

#### **6.7 Financial Provisions as Per Section 3(s)**

The contractor is responsible for and must ensure that the site has been rehabilitated in full before leaving the site. No upfront financial provision is required for this project.

#### **6.8 EAP Opinion on Whether Or Not to Authorise Activity and Recommendations and Conditions for Authorisation as Per Section 3(n) and (p)**

With respect to the layout alternatives, it is recommended that preferred layout alternative 1 be authorised and the existing Environmental Authorisation be amended. The significance of the impacts associated with the proposed amendment are considered to be 'low'.

#### **6.9 Summary of Additional Recommendations To Be included As Part of the Amended Environmental Authorisation:**

##### **Traffic**

- A Type B1 intersection at the entrance must be constructed.
- Cutting embankments to the west of the proposed entrance must be undertaken to provide at least 150m sight distance.
- The surface of the P520 must be widened with a one-meter surfaced shoulder both sides of the road for at least 60 meters from the access intersection.

##### **Stormwater management and protection of the watercourse**

- The stormwater attenuation system must be designed to release flow at near natural flow volumes and velocities.
- Stormwater must be diverted through an attenuation process, before discharging it in a controlled manner into the downstream natural drainage systems.
- Appropriate erosion control measures must be constructed at the various stormwater discharge points located throughout the site to limit erosion on the receiving environment - e.g. at headwalls and culverts.

**Specific conditions**

- The amended layouts construction footprint must not be altered from the approved layouts construction footprint

**Appendix A: Drawings and Maps**



## Appendix B: Specialist Reports

No.	Prepared By	Authors	Professional Registrations	Title of Report	Date of Report
1	NA	NA	NA	Environmental Authorisation	April 2017
2	NA	NA	NA	DEFF Screening Tool Report	June 2020
3	DEMACON	Dr Hein du toit		Injabulo Estate Market Study	August 2012
4	SMV Civil Engineers (Pty) Ltd	Riaan Bredenkamp	Pr Tech Eng	Reviewed Services Report (Injabulo Estate)	April 2020
5	Ugu District Municipality	Dr. J Van der Walt	Pr.Tech.Eng. MBA. PhD	Service Agreement	June 2020
6	Eskom	Jules Kun		Availability of Electricity	August 2020
7	Groundwork Geotechnical Solutions cc	Francis Smith	Pr. Sci. Nat.	Geotechnical/Wetland Report	March 2012
8	Geosure	Francis Smith	Pr. Sci. Nat.	Geotechnical/Wetland Report Review	April 2020
9	Mottram and Associates cc	Dr Roy Mottram	Pr. Sci. Nat.	Agricultural Potential of Portion 9 of the Farm Uplands	April 2020
10	SMV Civil Engineers (Pty) Ltd	Riaan Bredenkamp	Pr Tech Eng	Njabulo Housing Development – Reviewed Traffic Impact Study	April 2020
11	eThembeni Cultural Heritage	Len van Schalkwyk		Heritage Impact Assessment – Review Letter	August 2011
12	NA	NA	NA	Injabulo Estate Brochure	2020
13	NA	NA	NA	DoT Approval of Access	September 2020
14	The Biodiversity Company	Andrew Husted	Pr. Sci. Nat.	Wetland Assessment for the proposed Injabulo Estate	October 2020

**Appendix C: Noticeboard**

**Appendix D: Notification**

<b>Notification Register</b>
<b>Proof of Notification</b>
<b>BID</b>
<b>Ward Councillor Response</b>
<b>I&amp;AP Registration</b>

**Appendix E: Registered I&APs**

**Appendix F: Comments and Responses**

**Appendix G: Impacts Scoring Matrix**

**Appendix H: EAP Declaration**

**Appendix I: Environmental Management Programme**