#### Reference:



## **s24G Assessment Report**

for the tourism establishment on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

	Submitted to:		
15 May 2023	KZN Department of Economic Development, Tourism and Environmen (EDTEA): Environmental Management	tal A	ffairs
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for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local

#### **Municipality**

## **DOCUMENT DESCRIPTION**

#### INDEMNITY AND

#### CONDITIONS

#### **RELATING TO THIS**

#### REPORT

The findings, results, observations, conclusions and recommendations given in this report are based on the author's best scientific and professional knowledge as well as available information. The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken and ZUNCKEL ECOLOGICAL & ENVIRONMENTAL

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#### Client:

Anganna Investments 177 (Pty) Ltd

#### Submitted to:

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#### **Project Name:**

S24G Assessment Report for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

#### **Authority Reference:**

<u>XXX</u>

#### Date:

15 May 2023

#### Location:

Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

#### Compiled by:

Karen Zunckel

KL unch

Signature

#### **Reviewed by:**

Kevan Zunckel, EAPASA 1483

Signature

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for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

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## for the Tourism Development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

### 1 INTRODUCTION

Zunckel Ecological + Environmental Services has been appointed by Anganna Investments 177 (Pty) Ltd. to facilitate the process of investigating, evaluating and assessing the impact of the unlawful activities developed on the Farm Fagazaan No. 17599, and applying for environmental authorisation.

This is the first time the Client has been issued with a compliance notice in respect of a contravention of section 24F(1) of the Act and/or section 20(b) of the National Environmental Management Waste Act. It is our belief that the Client did not intentionally contravene the environmental legislation, but that any contravention was an oversight on their behalf.

Because of its location within a listed geographical area (*viz.* outside urban areas within 5 kilometres from any terrestrial protected area identified in terms of the NEMPAA, i.e. Michaelhouse Nature Reserve and Blue Crane Nature Reserve); and also includes areas identified as being sensitive in terms of the uMgungundlovu District Municipality Environmental Management Framework (EMF) and being within a terrestrial critical biodiversity area, the development triggers the following three activities from GNR 324 ("Listing Notice 3"), dated 7 April 2017:

- 6. The development of resorts, lodges, hotels, tourism or hospitality facilities that sleeps 15 people or more.
- 14. The development of (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs (b) within a development setback (*viz.* the wooden deck and bridge, and the new septic tank at the main house fall within the 15 m riparian buffer.
- 23. The expansion of (ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more, where such expansion occurs (b) in front of a development setback adopted in the prescribed manner (viz. the expansion of Unit 4 and the portion of the entertainment area that falls within the 15m riparian buffer amounts to 150m<sup>2</sup> and is an expansion to the main house and therefore this activity is triggered).

EDTEA also expressed concern that the cleared areas caused by construction activities in the vicinity of the slopes above the dam and the bank adjacent to Unit 4 adjoining the watercourse, exceeds the legislated threshold of 1 hectare or more. However, the regulations are specific in that it is the clearing of <u>indigenous</u> vegetation that would trigger Item 27 of GNR 327 ("Listing Notice 1", dated 7 April 2017). These areas are kikuyu pastures, landscaped gardens or old lands, so this activity is not triggered. However, urgent remedial action in the form of planting kikuyu runners on bare areas and stabilising steep banks with geojute was taken in November 2022, to prevent erosion and to take full advantage of the summer growing season following our recommendations (see photos in Section 13.4).

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

It is the Client's wish to continue with the development, hence their willingness to lodge this 24G Application to EDTEA's MEC to rectify their actions. The Applicant does not wish to remove Unit 4, the wooden deck, bridge or the sewerage system below the main house, and it is their intention to motivate why they should stay in the following report. No further construction activities have been or will be undertaken until such time as a decision on the Application has been taken.

Anganna Investments 177 (Pty) Ltd. also commits to abide by the Environmental Management Programme Report (EMPr). The EMPr prescribes environmental best practice and will be used as a frame of reference for this assessment and audits, if and when environmental authorisation is granted.

### 2 ASSESSMENT DETAILS

#### 2.1 The Environmental Assessment Practitioner

The Environmental Assessment Practitioners (EAPs) responsible for undertaking the assessment and compiling this report are Mrs and Mr. Zunckel, partners in Zunckel Ecological + Environmental Services. Together they have 64 years of experience as ecologists and environmental scientists. They are affiliated with the South African Chapter of the International Association of Impact Assessments (IAIAsa) and registered as an EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA) (Reg. No. 1483).

### 2.2 NAMES AND EXPERTISE OF THE SPECIALIST

Harold Gaze, of Occutech, is a specialist occupational hygiene consultant, occupational health and safety specialist, and major hazard installer. He conducts Risk Assessments and undertook the Environmental Noise Assessment for this project. His CV and Specialist Declaration are included in ANNEX B: SIGNED DECLARATIONS OF INTEREST BY EAP AND SPECIALISTS AND SPECIALIST CVs and his full report is included in ANNEX Q: Occutech Environmental Noise Specialist Study

## 3 DESCRIPTION OF THE PROPOSED ACTIVITY

#### 3.1 LOCALITY OF THE PROPOSED ACTIVITY

The application site consists of Portion 10 of the Farm Fagazaan No.17599, which is 14,8651 Ha in extent and owned by Anganna Investments 177 (Pty) Ltd. (Title Deed No. T30795/2016). The site is located along the P144 Curry's Post Road, approximately midway between the R103 and the N3 National Road. The property is situated in the central portion of the Midlands Meander only 3.2km west of Michaelhouse private secondary school, 13km south-west of Nottingham Road and 26km north of Howick. The property is along a tourism route where a number of tourism developments have been established for a number of years (see Locality Map below). The coordinates of the property are as follows: 29°22'35.56"SS and 30°4'33.81"E.

S24G ASSESSIVENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uV ngeni Local Municipality

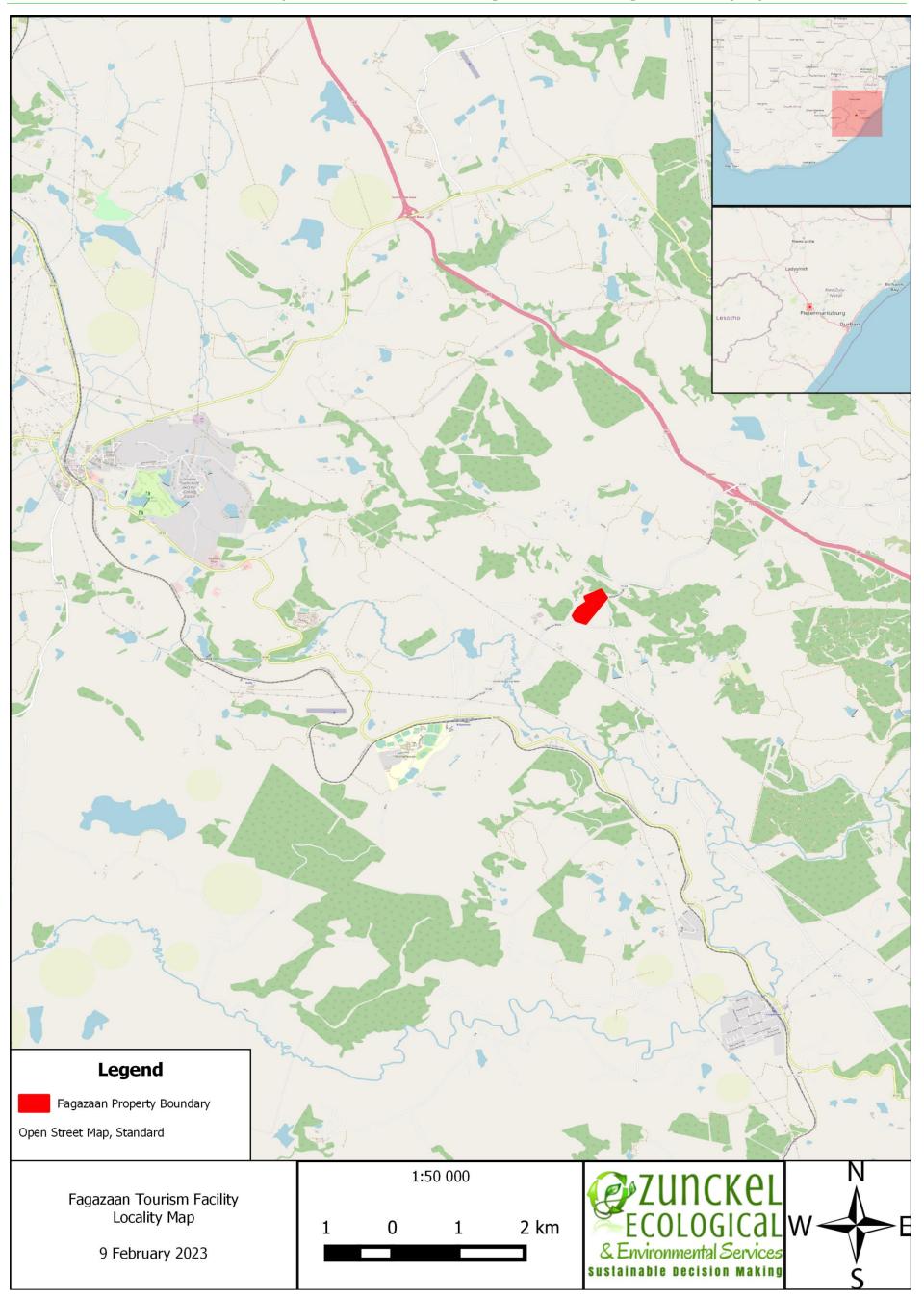
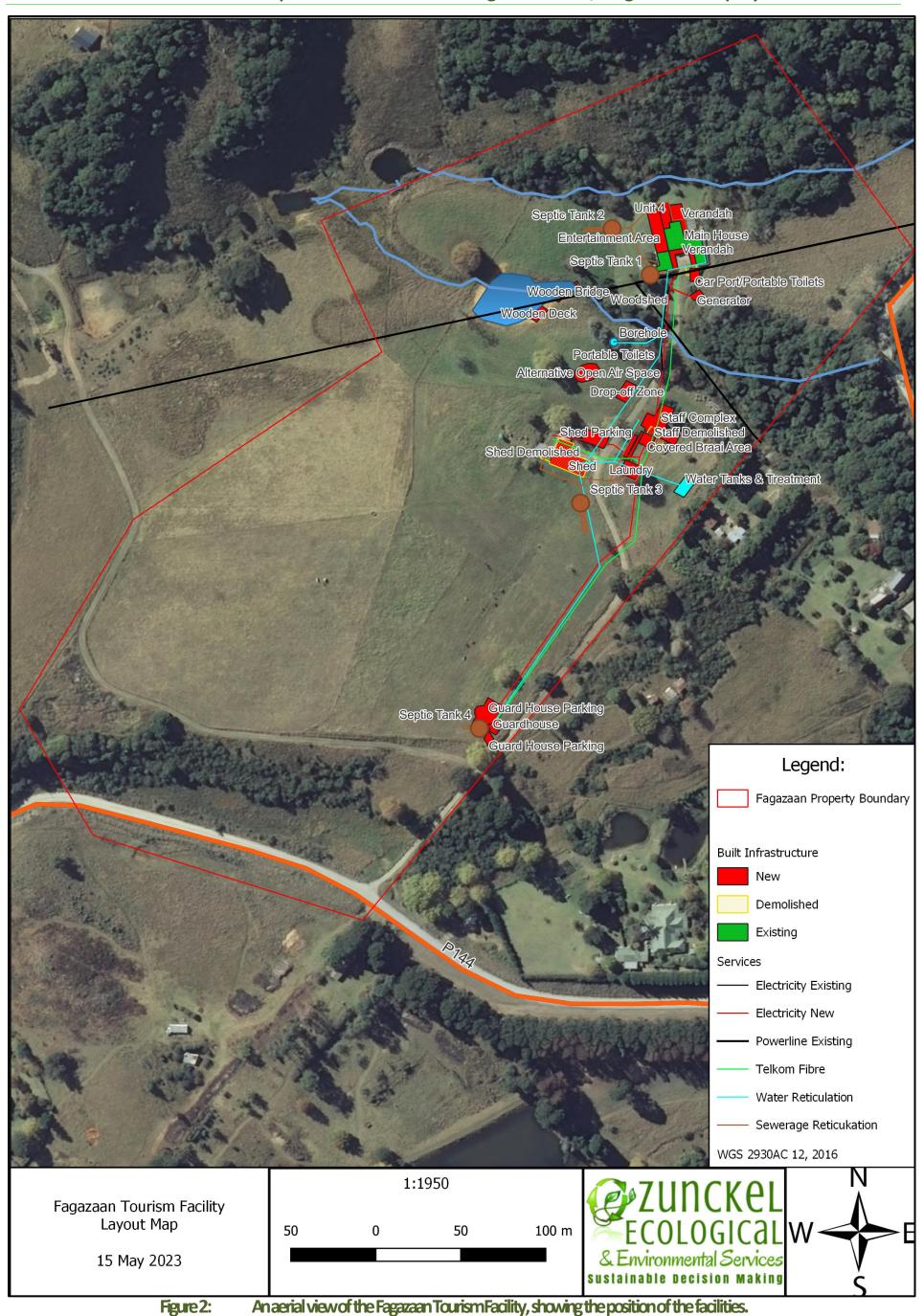


Figure 1: The locality of the proposed developments relative to topographical cadastral features.





S24G ASSESSIVENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uV/ngeni Local Municipality







#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

The property currently accommodates a substantial amount of existing farm infrastructure clustered around the central portion of the property. The southern boundary of the property is formed by the P144 Road, while the agricultural land to the west, east and north of the site comprises small-holdings all similar in size to the application site.

#### 3.2 DESCRIPTION OF PROPOSED DEVELOPMENTS

Troposed Occupancy Rates (Original and Revise					
Unite		Bed Count			
	Onits	Original	New		
1	Main Bedroom	2	2		
1	2 <sup>nd</sup> Bedroom	1	2		
2	Main Bedroom	1	2		
2	2 <sup>nd</sup> Bedroom	1	2		
2	Main Bedroom	Not to be used for	2		
5	2 <sup>nd</sup> Bedroom	B&B (Caretaker unit)	2		
4	Main Bedroom	Now Build for Owner	2		
	2 <sup>nd</sup> Bedroom	New Build for Owner	2		
	Main Bedroom	2	2		
	2 <sup>nd</sup> Bedroom	1	2		
1	Main Bedroom	2	2		
	2 <sup>nd</sup> Bedroom	1	2		
2	Main Bedroom	2	2		
2	2 <sup>nd</sup> Bedroom	1	2		
1	Staff room	Not to be used for	3		
2	Staff room		3		
3	Staff room		2		
TOTAL PROPOSED BEDS (INCL. STAFF) 36					
	1 2 3 4 5 1 1 2 1 2 3	UnitsUnits1Main Bedroom2 <sup>nd</sup> Bedroom2 <sup>nd</sup> Bedroom2Main Bedroom32 <sup>nd</sup> Bedroom4Main Bedroom2 <sup>nd</sup> Bedroom2 <sup>nd</sup> Bedroom5Main Bedroom2 <sup>nd</sup> Bedroom2 <sup>nd</sup> Bedroom12 <sup>nd</sup> Bedroom2Main Bedroom22 <sup>nd</sup> Bedroom22 <sup>nd</sup> Bedroom22 <sup>nd</sup> Bedroom3Staff room3Staff room	Bed CountBed CountOriginalMain Bedroom22 <sup>nd</sup> Bedroom12Main Bedroom12 <sup>nd</sup> Bedroom13Main BedroomNot to be used for B&B (Caretaker unit)4Main BedroomNew Build for Owner 2 <sup>nd</sup> Bedroom5Main Bedroom22 <sup>nd</sup> Bedroom210Main Bedroom22 <sup>nd</sup> Bedroom14Main Bedroom22 <sup>nd</sup> Bedroom11Main Bedroom22Main Bedroom22Main Bedroom11Staff room13Staff roomNot to be used for B&B (Staff Rooms)		

#### Table 1: Proposed Occupancy Rates (Original and Revised)

Portion 10 of the Farm Fagazaan No.17599 consists primarily as an agricultural small-holding with mostly open grazing and a small portion of Eastern Mistbelt Forests to the north of the watercourse north of the main The residential house. component consisting of main farm dwelling and outbuildings occupies a large portion of the central part of the property. It is unlikely that the small-scale agricultural use of the property will continue but it will be managed to enhance its natural features and ecological contribution to the conservancy. There is the possibly of mowing

for the sale of hay annually in autumn. The conversion of some the existing infrastructure and construction of addition buildings in support of a tourism establishment is in compliance with the strategic planning contained in the Municipal Spatial Development Framework.

The SPLUMA approval was for 14 guests, but the Applicant wishes to take this opportunity to apply for an Amendment and increase the numbers so that the establishment will be able to accommodate up to 36 guests at full occupancy. Given the normal occupancy rate of approximately 30%, the facility will accommodate approximately 10.8 guests for the majority of the year and <u>a maximum number of 200 guests during special events</u> hosted at the property. Unit 3's kitchen is to function as an industrial kitchen for functions. Room 3 (2 beds) in the Staff Complex can alternate as a guest/chef room, as the need arises. All other staff will be accommodated off-site, either at the other property, or at Zenzani Village where the Applicant has entered a 10-year lease and renovated some houses, each of which accommodates 4 staff members.

An **Alternative Open Air Space** is an area where wedding vows can be made with views down the valley. The bride and groom can stand on the wooden deck overlooking the dam. Guest seating will

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

be on the flat mowed area indicated in the layout, screened with hedge plants to buffer sound to the south.

A pick-up / drop-off zone will be similar to the guard house parking, i.e. grass block/gravel.

All of the below **buildings** are nearing completion, unless stated otherwise, physical sizes of which are given in Table 2:

- The conversion and extension of the main dwelling to accommodate five separate suites, each accommodating a kitchen, bathroom, lounge and 2 bedrooms. The main dwelling has been extended from approximately 582,00m<sup>2</sup> to a total of 954,69m<sup>2</sup>. In addition, Unit 4, which was originally to be for the owner's use, but is now factored into the guest numbers; as well as a new entertainment area at the main house of approximately 134,57m<sup>2</sup> for outdoor recreation and functions. There were 2 existing septic tanks by the main house which were inspected and deemed damaged and unusable. One to the SW of Unit 3 will be rehabilitated. A new septic tank and soakaway system was constructed below the main house with a volume of 8.25m<sup>3</sup>. The walkways and braai area, yet to be constructed, is 108,00m<sup>2</sup>.
- The roof structure of the entertainment area will be covered with glazing and some roof sheeting. Below the roof covering acoustic blinds/drapes will be installed which will provide acoustic insulation and block UV solar heat gain in the space. The blinds/drapes which are being proposed block 100% of sound reverberation. We are also in discussions with the manufacturer who will look at the mitigating effects of the blinds in relation to the acoustics and noise pollution for the space. The elevations will receive timber louvers at high level. Each bay of the structure will be fitted with acoustic blinds in the same material as the acoustic binds for the roof. These will assist with the noise issues and also provide relief against the elements (sun, wind and rain). The floor of the entertainment area will receive a tiled floor finish on top of the current concrete slab. The effect of all of these materials will make the entertainment area like a permanent marquee with a solid glass and sheeted roof. The acoustic blinds have a 10 year guarantee and only require cleaning with water and a dry cloth so no chemicals will be used and therefore there is no risk of polluting the environment.
- The rebuild of old farm sheds for two guest suites each accommodating a kitchen, bathroom, lounge and 2 bedrooms (extended from 312,00m<sup>2</sup> to 433,45m<sup>2</sup>).
- The demolition of existing staff buildings and redevelopment of a staff complex and associated septic tank and soakaway (from 91m<sup>2</sup> to 303,25m<sup>2</sup>).
- The extension of the new staff complex to accommodate a laundry (102,17m<sup>2</sup> in extent).
- A wooden deck overlooking the dam and wooden bridge connecting the deck to the main house over the watercourse of 83,24m<sup>2</sup> combined area, have also been built. The pathway to the deck is 325,08m<sup>2</sup>.
- A new Guard House at the entrance to the property or 74,28m<sup>2</sup> with overflow grasscrete paved parking area for 12 vehicles of 458.50m<sup>2</sup>.

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

Building Type	Original Size (m <sup>2</sup> )	New Size (m <sup>2</sup> )	Size Increase (m <sup>2</sup> )	Size Increase
Main House	582,00	954,69	372,69	(m <sup>2</sup> )
Main House – Unit 4 & Entertainment Area	0,00	134,57	134,57	(111)
Septic Tank & Soakaway (volume 8.25m <sup>3</sup> )	14,00	15,00	1,00	
Shed	312,00	433,45	121,45	
Laundry	0,00	102,17	102,17	
Staff Quarters	91,00	303,25	212,25	1 993,23
Wooden deck & bridge	0,00	83,24	83,24	1 555,25
Pathway to Deck	0,00	325,08	325,08	
Walkways & Braai Area	0,00	108,00	108,00	
Guard House	0,00	74,28	74,28	
Grasscrete Paved Parking Area for 12 cars	0,00	458,50	458,50	

#### Table 2: Physical spatial size of the activity as well as associated infrastructure (footprints):

Area that has been transformed / cleared to allow for the activity:

Area Measured Cleared area during Construction (m <sup>2</sup> )		Area Description	
Shed	46,6	Clearance of Embankment	464,60
Staff and Landry	48,0	Embankment	
Main House	98,0	Levelling of ground for construction	
Pathway to deck	67,0	Construction vehicle access	
Services & Servitude	205,0	Rehabilitated surface over services	

Total area (sum of the footprint area and transformed area)

2 457,83

**ROADS**: The road used to access the site is an existing B2 type 'twee-spoor' farm road and already provides access to all facilities. This internal driveway will align exactly on the existing driveway which will be constructed to an all-weather standard. The internal road will be upgraded to an all-weather gravel track less than 4m wide. The existing access point onto the P144 which has been used for many years as the formal farm access and will continue to be used to serve the development.

**SEWERAGE**: Fellows Dube and Associates are the Structural and Civil Engineers on this project and recommended septic tanks and soakaways at the Main house, Shed, Laundry, Staff Quarters and Guardhouse which are located separately under the lawned areas below each building constructed to National Building Regulation Standards (see ANNEX P: CIVIL ENGINEERS' SEWERAGE REPORT for details and diagrams).

The main house will accommodate 20 persons and is served by a combination of 2 septic tanks. The existing septic tank (tank 1) to the southwest of the main house is to be repaired and rehabilitated and will cater for 5 persons. The new septic tank (tank 2) to the main house has the capacity to accommodate 15 persons. The combined system is designed to accommodate the 20 person usage for the main house. In addition, kitchen facilities will be provided with grease traps to retain any oils and grease.

The Laundry, Shed and Staff Quarters all share a single septic tank (tank 3) which is located to the south of the Shed building adjacent to the existing access road/track. The three buildings have been

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

designed to accommodate 25 persons. Septic Tank 3 has been designed with a capacity to accommodate these 25 persons.

The Guard House is located on the left-hand side of the existing access road/track as you enter the property. The guard house accommodates a single ablution and kitchenette. The septic tank and soak away serving the guardhouse has been designed to accommodate 10 persons and located to the east of the building.

Portable toilets (x10) will be provided at the main house and alternative open air space for function guests. All other toilets will be locked during functions to ensure that WWTSs are not overloaded during functions, with the exception of Unit 3 which will be for disabled function guests. The space for the portable loos at the main house will share the gravel/grass block covered parking area. These will be provided by a reputable company who will remove them after functions and dispose of the waste at permitted WWTWs.

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

**ELECTRICITY**: ESKOM currently supplies the property with a power supply. The internal electricity reticulation is to be used to serve the proposed tourism facility. Energy efficient low energy lighting, wood burning fireplaces in the bedrooms and gas for cooking will be implemented to reduce reliance on the ESKOM grid.

**SOLID WASTE** will be domestic, with removal done weekly by a private waste removal contractor to the Municipal waste disposal site. Separation of recyclables will be done at source and taken to a Recycling Facility. Temporary storage will be in a caged, roofed and bunded area.

**WATER**: The proposed tourism facility will be provided with potable water from the existing borehole (KZN180725). Water is pumped to a holding reservoir above the laundry and is then purified in a large storage tank and reticulated to the development. The storage tanks currently consist of a 30 000 litre capacity tank which will be increased if required. It is estimated that at full occupancy, the development will require 10,000lt per day at the Blue Book for Engineering Standards of 350lt per guest. The reservoir can also be used to provide water for firefighting if necessary.

Each building will need hoses and fire extinguishers for firefighting purposes and these are to be maintained by a specialist company. In addition each staff member is to be trained in fire-fighting. A fire-break is to be maintained around the property and around the existing buildings.

**STORMWATER**: The proposed development represents fairly minor conversions to the existing buildings. The existing storm water management system in place for the existing buildings will continue to accommodate storm water flows, with the addition of attenuation measures before the outfalls. All drainage requirements from roads are currently managed by grassed drains, and mitre drains which dissipate runoff into the areas adjacent to the roads.

### 3.3 LISTED ACTIVITIES

In their letter dated 4 January 2020, EDTEA listed the activities in Table 3 as having being unlawfully commenced with in terms of the EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998, as amended on or after 8 December 2014. Their Notice of Intention to issue a Compliance Notice (5 October 2022) and their subsequent Compliance Notice (issued 30 January 2023) further reiterated that the Applicant had contravened the provisions of section 24(f) of the NEMA by undertaking said listed activities without obtaining prior Environmental Authorisation. Table 3 provides EDTEA's comment on the activities as well as the EAP's response. It is our belief that only two of the five activities require Environmental Authorisation.

Table 3: Listed ad	ctivities EDTEA identified as being contrav	ened in the Fagazaan Tourism Development
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Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) (as amended)		1. Notwithstanding any other Act, no person may- (a) commence an activity listed or specified in terms of section 24(2)(a) or (b) unless the competent authority or the Minister or Minerals and Energy, as the case may be, has granted an environmental authorisation for the activity.	There are no records to show that an Environmental Authorisation has been issued by this Department for the [below-mentioned] activities on Portion 10 of Farm Fagazaan No. 17599, uMngeni Municipality.	It is our belief that only Item 48 of GNR 327 ("Listing Notice 1"), and Item 6 of GNR 324 ("Listing Notice 3") are triggered, hence this s24G Application for Environmental Authorisation.
Environmental Impact Assessment Regulations, 2014 (as amended)	Item 12 of GNR 327 ("Listing Notice 1"), dated 7 April 2017	The development of— (xi) boardwalks exceeding 100 square metres in size; or (xii) infrastructure or structures with a physical footprint of 100 square metres or more- where such development occurs— (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse—	Although a small drainage line runs below the main dwelling the above will not apply as the proposed development entails the modification, alteration or expansion of this structure and your attention is drawn to the legislated thresholds of Activity 48. The Constructed wooden deck, boardwalk and septic tank and soakaway have exceeded legislated threshold.	The extent of the wooden deck over the dam and the wooden bridge over the adjacent watercourse is 83,24m <sup>2</sup> , which is below the 100m <sup>2</sup> trigger. The septic tank and soakaway is also less than 100m <sup>2</sup> in size at 15m <sup>2</sup> . Therefore, this activity is <u>not</u> relevant.

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
	Item 19 of GNR 327 ("Listing Notice 1"), dated 7 April 2017	The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse; but excluding where such infilling, depositing, dredging, excavation, removal or moving— (a) will occur behind a development setback; (b) is for maintenance purposes undertaken in accordance with a maintenance management plan; (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies	The above will not apply provided that no infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, pebbles or rock of more than 10 cubic metres from a watercourse is undertaken. The infilling/depositing of more than 10 (ten) cubic metres of material into a watercourse resulting from the activities that have been undertaken within the watercourse on Portion 10 of Farm Fagazaan No. 17599, uMngeni Municipality.	The bare areas on steep slopes above the dam in the vicinity of the wooden deck were of concern, but EDTEA approved the soft rehabilitation measures put forward by the EAP and silt traps were installed at 5 m intervals down the slope to act as waterbars/pole drains to reduce possible siltation into the dam and watercourse. Silt traps were also put across the slope at an angle of about 10°, which will trap the silt, reduce flow velocity and direct the water to the downhill side of the slope and into adjacent vegetation. The bank adjacent to Unit 4 adjoining the watercourse was stabilised with a Geojute product due to its steepness. It is highly unlikely that 10m <sup>3</sup> was deposited into the dam and watercourse. Therefore, this activity is also <u>not</u> relevant.

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
	Item 27 of GNR 327 ("Listing Notice 1"), dated 7 April 2017	The clearance <sup>1</sup> of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation <sup>2</sup> , except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The above will not apply as the proposed development is approximately 2000m <sup>2</sup> (viz. 0.2ha) in extent and falls well below the legislated threshold for this activity viz. 1 hectare or more. Any extension to the development footprint which requires the clearance of 1 hectare of land or more or which occurs in phases is likely to be triggered by this activity. The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation on Portion 10 of Farm Fagazaan No. 17599, uMngeni Municipality, would have required environmental approval prior to the commencement of this activity.	The cleared areas caused by construction activities, as identified in Table 2 are not on indigenous vegetation (they are kikuyu pastures, landscaped gardens or old lands), so <b>this activity is <u>not</u> triggered</b> . However, the cleared areas are quite considerable, amounting to 2,108m <sup>2</sup> . Urgent remedial action in the form of planting kikuyu runners on bare areas and stabilising steep banks with geojute was taken prior to the spring rains, to prevent erosion and to take full advantage of the summer growing season.
	Item 48 of GNR 327 ("Listing Notice 1"), dated 7 April 2017	The expansion of— (i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more where such expansion occurs— (a) within a watercourse;	It is noted that the footprint of the main dwelling will be expanded from approximately 357m <sup>2</sup> to 1196m <sup>2</sup> to accommodate five separate suites and that a small drainage line runs below the main dwelling. This Department considers that the above will apply if the expansion of this structure is undertaken within a watercourse or within 32m	Unit 4 and a portion of the Entertainment Area of the Main House (amounting to 150m <sup>2</sup> ), has been constructed within 32 metres of the watercourse north of the main house. The original house was constructed just 19.6m from the watercourse. <b>Therefore, this activity</b> <u>is triggered but it is our opinion that it should</u>

<sup>&</sup>lt;sup>1</sup> Ploughing of land, bulldozing of an area, eradication or removal of vegetation cover with chemicals, amongst others, constitutes *clearance of vegetation*, provided that this will result in the vegetation being eliminated, removed or eradicated.

<sup>&</sup>lt;sup>2</sup> Indigenous vegetation: refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding 10 years.

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Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
		<ul> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse</li> </ul>	of a watercourse.	rather be superceded by Activity 23 of GNR 324 ("Listing Notice 3").
	Item 6 of GNR 324 ("Listing Notice 3"), dated 7 April 2017	The <u>development of resorts</u> , <u>lodges</u> , <u>hotels</u> , <u>tourism or hospitality facilities that</u> <u>sleeps 15 people or more</u> - d. KwaZulu-Natal xi. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; xii. Outside urban areas: (aa) <b>Areas within</b> 10 kilometres from national parks or world heritage sites or <b>5</b> <b>kilometres from any terrestrial protected</b> <b>area identified in terms of NEMPAA or</b> <b>from the core area of a biosphere</b> <b>reserve</b>	The above will apply as the proposed establishment will be utilised as tourism or hospitality facilities, is able to accommodate up to 36 people at full occupancy and is located within a listed geographical area (viz. outside urban areas within 5 kilometres from any terrestrial protected area identified in terms of the NEMPAA i.e. Michaelhouse Nature Reserve and Blue Crane Nature Reserve). The site also includes areas identified as being sensitive in terms of the uMgungundlovu District Municipality Environmental Management Framework (EMF).	This activity <u>is</u> triggered.

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Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
	Item 14 of GNR 324 ("Listing Notice 3"), dated 7 April 2017	The <u>development</u> of— (ii) infrastructure or structures with a physical footprint of <b>10 square metres</b> or more; where such development occurs— (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse d. In KwaZulu-Natal: vii. Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; viii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; ix. Core areas in biosphere reserves; x. Outside urban areas: (aa) Areas within 10 kilometres from national parks or world heritage sites or <b>5</b> kilometres from any terrestrial protected area identified in terms of NEMPAA or from the core area of a biosphere reserve	EDTEA did not comment on this activity.	The extent of the wooden deck over the dam and the wooden bridge over the adjacent watercourse is 87.9m <sup>2</sup> , which is above the 10m <sup>2</sup> trigger. The septic tank and soakaway is also above the 10m <sup>2</sup> in size at 27,657m <sup>2</sup> . Therefore, this activity is relevant.

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Act/ Regulation Name	Government Notice	Activity Description	EDTEA Comment	EAP Response
	Item 23 of GNR 324 ("Listing Notice 3"), dated 7 April 2017	The expansion of— (ii) infrastructure or structures where the physical footprint is expanded by <b>10 square metres</b> or more; where such expansion occurs— (a) within a watercourse; (b) in front of a development setback adopted in the prescribed manner; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse d. In KwaZulu-Natal: vii. Critical biodiversity areas or ecological support areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; viii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; ix. Core areas in biosphere reserves; x. Outside urban areas: (aa) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any terrestrial protected area identified in terms of NEMPAA or from the core area of a biosphere reserve	EDTEA did not comment on this activity.	The expansion of Unit 4 and the portion of the entertainment area that falls within the 15m riparian buffer amounts to 150m <sup>2</sup> and is an expansion to the main house and therefore this activity is triggered.

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### **4** ACTIVITY CONTEXT

#### 4.1 ACTIVITY COMPATIBILITY

From a provincial perspective the uMngeni Spatial Development Framework (SDF) was consulted to assess the compatibility of the proposed development with this provincial planning tool. At a strategic level, the uMngeni Municipal Spatial Development Framework, identifies the area as being for <u>Agriculture and High Intensity Tourism</u> and located along the <u>tourism link</u> between Balgowan and the Curry's Post Road. The zoning for Agriculture and High Intensity Tourism encourages tourism developments as a supplementary source of income and economic growth. The application site is located within the central Midlands along a popular tourism route leading from Balgowan to the N3 and the numerous tourist attractions of the area. The site is situated in an advantageous position in terms of municipal strategic planning for the establishment of tourist facilities. The location of hospitality establishments in rural settings is becoming increasingly popular. Beautiful rural views and scenic surroundings enhance the attractiveness of rural settings for short term stays in particular. The proposed tourism establishment will be centrally located within the Midlands and will provide a competitive service to people looking for an attractive venue or scenic setting for holiday accommodation. The additional self-catering accommodation is in compliance with the Municipal Spatial Development Framework.

There are no restrictive conditions of title which will prevent the development from taking place. The property complies with conditions A.1, C1.2, and C1.3 in that all buildings are located over 15m from the road reserve of the P144 and the KZN Department of Transport were in agreement. The property is also subject to some right of way servitudes which remain unaffected by the upgrade of the buildings on the property.

The conversion of some of the existing infrastructure and construction of addition buildings in support of a tourism establishment is in compliance with the strategic planning contained in the Municipal Spatial Development Framework (Figure 3).



#### Figure 3: Extract of the uMngeni Municipal SDF showing the land use classification of the site.

Provincial corridor Secondary corridor Agriculture Medium Intensity Tourism Agriculture High Intensity Tourism Urban Agriculture & Eco-Tourism Limited Mixed Use Tourism

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#### 4.2 NEED AND DESIRABILITY

**NEED**: There is a need for upmarket tourist accommodation in the Midlands area. There are many reasons why people wish to stop over in the KwaZulu-Natal midlands from visiting schools in the area and attending one of the many sports functions or arts and crafts functions in the area or simply travelling along the N3 between the interior and the KZN Coast. Some of the key reasons the proposed accommodation will be a success are as follows:

- The site is well located between the R103 and the N3, two of the most important transport routes in KwaZulu-Natal
- The site is located very close to Michaelhouse which is a private school for approximately 550 boys. For most weekends and during sporting and cultural events, the school is a focal point for parents many of whom travel from the interior or the North Coast and need accommodation.
- There are numerous function venues in the KZN Midlands. The additional accommodation will be used to accommodate overflow from function venues.
- The KZN Midlands is home to the Comrades Marathon, the Hilton Arts Festival, the Midmar Mile, cycle races, and numerous arts and crafts festivals. Visitors make use of accommodation throughout the Midlands for these events.
- The Midlands is simply one of the more attractive areas to go on holiday and is close to Durban and Johannesburg
- The Midlands Meander is one of the most successful tourism routes in the country. People recreating in the Midlands need places to stay.

Accommodation venues in rural areas compete to provide a higher level of service and to provide different scenic settings. Municipalities generally consider accommodation venues in scenic rural settings favourably because it brings tourists to the area. Rural settings are favoured by people who want to recreate in scenic and quiet surroundings. One of the success factors of such developments is the ability to offer something unique and different. The proposed venue is designed and constructed as a unique conversion with a high quality of furnishing and finishing throughout.

In summary, there is a recognised need for high quality and professionally managed tourism facilities in the uMngeni area which relies significantly on income from the tourism trade. The proposed tourism establishment is situated in an area where the Municipality and other government departments would like to see the development of tourism and tourism-related initiatives and so is fulfilling a need identified by the authorities in its strategic planning.

**DESIRABILITY**: In terms of desirability, the proposed development has a number of features to its benefit. These are as follows:

• Local Benefits: Being located within a scenic rural valley in the heart of the Midlands Meander, the site occupies a very desirable and accessible location. The site enjoys quick and easy access via major roads leading to all major centres in KwaZulu-Natal and inland. The site also has quick and convenient access to the range of other recreational facilities and activities in the region and to a range of commercial and social facilities provided in nearby urban areas of Howick and Nottingham Road.

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- The development provides an integrated land development, making full use of existing transport infrastructure and existing service infrastructure to bring additional employment opportunities to the area and meet the need for specialised tourism accommodation.
- It is anticipated that approximately between 10 and 18 additional employment opportunities will be created. The economic need for the proposed development in terms of generating employment opportunities in the area and assisting in alleviating poverty and addressing the objectives of the government in meeting its 6% growth targets, are clear.
- Additional revenue to government will continue to be derived from the sale of services.
- Topography & Landscaping: The additional accommodation suites will be contained in and around the existing main dwelling and the old farm sheds which are being upgraded, extended and converted for this purpose. The main dwelling is located in an attractive and well maintained garden area with views over the surrounding agricultural land. The extensions to the existing buildings will be located on previously disturbed land immediately around the existing buildings. The development has excellent views across the valley to the south, west and east. The land around the existing buildings consists of gardens, lawns and well-maintained farm infrastructure. A Landscaping Plan will be developed if and when environmental authorisation is received and will include an indigenous planting palette, and an avenue of locally indigenous trees up the length of the driveway from the guard house to the staff complex.
- All of the buildings are designed to maximise the existing ambiance of the property and will be finished to a high standard. The location and well vegetated surroundings of the existing buildings and the indigenous gardens around the buildings, means that the development blends into the surrounding environment.
- The closest residence is to the northwest of the site, is approximately 270m away and is hidden behind an established field of bush. The closest residence to the east is approximately 200m away and cannot be seen from the proposed development because of the rising topography and the presence of exotic vegetation on the neighbouring site and dense vegetation around the dwellings. It is therefore likely that some noise disturbance will be caused to immediate neighbours, but not of any great significance that impacts can't be managed.
- Parking Provision: All parking must be accommodated on site. Generally one parking bay per 4 guests is required for accommodation establishments. Adequate parking is provided for vehicles adjacent to each of the seven suites and in the main courtyard. There is sufficient space for 12 additional on-site parking at the guardhouse, which will accommodate special event day guests. The total number of parking spaces on site is 26.
- Traffic Impact: Provincial District Road P144 is a high standard provincial road capable of accommodating the traffic visiting the site. The existing access to the site is via a gravel access servitude with a B2 type access onto the main road providing common access to the site and adjacent property. It is estimated that up to 24 vehicles will visit the site during events, mainly on week-ends. The surrounding provincial roads are in a good condition and can accommodate the additional traffic.

### 4.3 Legal and Policy Framework

A comprehensive view of policy and legislation relevant to the proposed developments is provided in Table 4 together with an indication of how the proposed developments are compliant and/or responsive to these.

Table 4:	A list of relevant legislation and policy
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Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
Constitution of	This is the fundamental law of South Africa, setting out the Bill of Rights as well as the	National	The proposed activities have been
Republic of South		Government	conceptualised, designed and planned in

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

	IVIUNIC	ipality	
Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
Africa (108 of 1996):	relationship of various government structures to each other. "Everyone has the right – (a) to an environmental that is not harmful to health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that – a. prevent pollution; b. promote conservation; and c. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.		respect of meeting these constitutional requirements in that all recommended mitigation actions will be implemented and frequently monitored ensuring that any pollution risks are avoided and addressed and that conservation is promoted. Both construction and operational phases will happen within the limits of sustainability.
Conservation of Agricultural Resources (Act 43 of 1983):	The purpose of the Conservation of Agricultural Resources Act No. 43 of 1983 (CARA) is to provide for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants.	National Department of Agriculture (DAFF)	Mitigation measures are in place to ensure that no impacts on soil and water occur during the construction and operational phases of the proposed developments, and the need to address potential weed infestations is also noted in the EMPr.
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004):	The objects of the National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA) are to provide for the management and conservation of biological diversity within South Africa and of the components of such biological diversity; to give effect to ratified international agreements that are binding on South Africa; and to ensure the protection of the ecosystem as a whole, including species that are not targeted for exploitation.	Department of Environmental Affairs	As all of the proposed development is located on existing infrastructure and brown field sites there are limited biodiversity concerns. However, their locality within the Balgowan Conservancy has highlighted the potential impact on the natural environment and relevant mitigation measures have been recommended to ensure that these impacts remain insignificant.
National Forests Act, 1998 (Act no 84 of 1998):	The purposes of the National Forests Act No. 84 of 1998 (NFA) are, inter alia, to promote the sustainable management and development of forests for the benefit of all and to enact special measures for the protection of certain forests and trees. The minister may declare any tree, group of trees, woodland or species to be protected trees, groups of trees and species (Section 12) or a particular forest to be a "natural forest" (Section 7). Specified activities in respect of these areas or trees are prohibited by the NFA. Protected trees require permits to move, or damage them.	Department of Agriculture, Forestry and Fisheries	All protected species of trees and shrubs will be avoided in all of the proposed developments.
National Heritage Resources Act 25 of 1999	The National Heritage Resources Act legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares (ha) and where linear developments exceed 300 metres in length. In this regard, the proposed development site are be subject to engagement with the South African Heritage Resources Agency (SAHRA). Potential impact on cultural heritage, paleontological or archaeological resources through excavation activities or disturbance, whilst unlikely, will need to be monitored.	South African Heritage Resources Agency (SAHRA)	A chance find protocol will be implemented.
The National Water Act, (Act No. 36 of 1998)	The purpose of the National Water Act 36 of 1998 (NWA) is to ensure that the nation's water resources are protected, used, developed, managed and controlled in ways that ensure that the integrity of water	Department of Water and Sanitation through the	None of the proposed activities will trigger the need for a Water Use Licence.
National	resources are protected. The National Environmental Management:	Department of	Waste generation volumes are insignificant
	<b>0</b>	•	

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Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
Environmental Management Waste Act 59 of 2008	Waste Act (NEMWA) was primarily enacted 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.	Environmental Affairs	and do not require a license.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993):	The purpose of this Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with, the activities of persons at work. The proposed development will therefore be subject to this Act during the construction and operational phases of the project.	National Department of Labour	The EMPr speaks to these aspects for all phases of the development and the Applicant has provided commitments to meeting these requirements in both construction and operation.
DEA Integrated Environmental Management Information Series	IEM is a key instrument of NEMA and provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. The aim of the information series is to provide general information on techniques, tools and processes for environmental assessment and Management.	Department of Environmental Affairs	These guidelines have been applied in the assessment of the proposed development and its potential impacts on the natural, social and economic environment.

## 5 SITE DESCRIPTION

#### 5.1 **BIO-PHYSICAL FEATURES**

#### 5.1.1 <u>Climate</u>

The climatic conditions characteristic of Fagazaan may be described as humid, with an annual rainfall ranging from 800mm to 1,280mm. Heavy mists are a common and important feature, providing additional moisture, particularly to forests. The mean annual temperature is 17°C. Climate hazards include occasional droughts, usually of short duration, occasional hail, frost which varies from slight to severe, and excessive cloudiness during the summer growing season. Hot north-westerly "berg" winds, followed by sudden cold temperatures or cold fronts, make for unpredictable conditions, particularly in the spring and early summer.

#### 5.1.2 <u>Topography</u>

The topography of the general area ranges in altitude from 900 – 1400 mamsl, and may be described as hilly, rolling country with a high percentage of arable land. On the Fagazaan site itself, the altitude ranges from 1320 mamsl in the southwest, across pastures up to 1390 mamsl in the north east forest and grasslands. All of the built infrastructure is located at about 1345 mamsl.

#### 5.1.3 Geology and Soils

The Upper Beaufort Series forms the gently rolling country of the KwaZulu-Natal Midlands. It consists of fine to medium-grained yellow sandstones and red, green, blue and purple shale or mudstone. About 180 million years ago and 20 million years after the start of the Jurassic period (208 to 144 million years ago), the tectonic plates of the super-continent of Gondwana, consisting of Africa, Antarctica, South America, Australia and India, started drifting apart. This resulted in the

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extension (or stretching) of the tectonic plates, causing magma (molten rock) to flow up onto the surface through rifts in the earth's crust in a process called fissure eruption. During the period of fissure eruption, some lava flows forced their way up into underground cracks and cavities. These intrusive lavas form the common blue dolerite of Natal. Once the surrounding rock is eroded away they form hard, erosion-resistant prominences called dykes (if they are mainly vertical) or sills (if they are mainly horizontal and cover a large surface area).

The dolerite is more resistant to weathering and erosion than the surrounding sedimentary rocks so the dolerite stands out from the surrounding landscape as a row of koppies and large boulders. Dolerite beds give rise to a fairly rich soil which is very fine in texture and neutral to alkaline. The soils are known locally as rooigrond (red soil), due to the high iron content, which rusts to give a deep red colour. Rooigrond has the ability to shrink and swell during alternate dry and wet periods, which has implications for built infrastructure requiring strong foundations.

The potential of soils for the area (Bioresource Unit Yc11) are moderate, in spite of the fact that the inherent nutrient status is very low. Particular problems are P-fixation and Al-toxicity. Soils are highly leached and thus have an important bearing on the economy of the area. It is most suited to intensive forms of farming.

#### 5.1.4 Hydrology

The site falls within the uMngeni River Catchment, which is strategically important in that it supplies water to a series of water major supply dams, namely Midmar, Albert Falls, Nagle and Inanda Dams. The water supplied from these dams is essential for socio-economic development within the Pietermaritzburg-Durban development node – the second most important economic complex in South Africa after Gauteng. Due to the high water demands from these nodes, the uMngeni River catchment is no longer able to meet demands at reasonable levels of assurance. In order to supplement the shortfalls in water supply, the uMngeni catchment now receives water via an interbasin transfer from the adjacent Mooi River catchment to the north. Spring Grove Dam was developed purposefully to capture water from the upper Mooi River system. Water from Spring Grove is then pumped across into the uMngeni catchment. The Outfall into the iMpofana lies about 2.8km downstream of Fagazaan. Both the Mooi and uMngeni catchments are 'closed' catchments, no longer open to streamflow reduction activities such as afforestation, expansion of irrigated agriculture or the construction of storage dams.

#### 5.1.4.1 Water Demand

Fagazaan therefore lies within a Very High Priority Water Production Area. The following development planning objectives, listed in the uMgungundlovu Environmental Management Framework, and in the first column below, are critical. Responses are given in column 2 below:

To ensure that the ecological reserve is maintained such that aquatic ecosystems will continue to supply the number of beds from 57 to 36, and by goods and services to society.

Fagazaan has reduced their demand by reducing applying the following water use efficiencies:

- Water meters will be installed at the main house, shed, laundry and staff house to measure water consumption. In this way, consumption can be tracked and leaks can be detected early.
- Water pressure will be set at the correct levels so as not to produce unnecessary waste of water.
- Install water-saving water fittings and appliances, i.e. low-flow shower heads and dual-flush toilets.

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To ensure the development is flood neutral and does not result in significant hydrological alteration.	<ul> <li>Use energy-efficient appliances that avoid wasting water, i.e. low-water-use washing machines.</li> <li>The increase in hardened surfaces has increased by 48% (from 999-2457,83m<sup>2</sup>), which is still nominal. A stormwater management system is in place to accommodate storm water flows, with the addition of attenuation measures before the outfalls.</li> </ul>
To avoid streamflow reduction activities (e.g.	n/a
plantation forestry and dryland agriculture).	.,, ~
Development (e.g. dam) is not permitted, unless the	n/a
social-economic value is assessed in relation to	
aquatic ecosystems (i.e. the social-economic value of	
the dam must then be significantly greater than the	
importance of aquatic ecosystems).	
Maintain and/or enhance ecological infrastructure	A programme is in place to remove and maintain
(wetlands, riparian areas, grasslands, etc.) to improve	the clearing of invasive alien plants on site.
water supply to downstream users and safeguard	All drainage requirements from roads are

Ensure adequately-sized buffers for aquatic ecosystems are maintained and/or reinstated, and managed in an optimum, natural/near-natural condition (i.e. good vegetation cover free of alien vegetation).

ecological requirements.

oads are currently managed by grassed drains, and mitre drains which dissipate runoff into the areas adjacent to the roads.

Buffers determined according to best practice guidelines (see Section 5.1.4.2).

Fagazaan's existing borehole (KZN180725) testing was done by a competent test pumping contractor, Tadiramanzi Pumps, in accordance with the SABS standards, and was found to have an available daily abstraction of 22.6kl/d (Du Preez, June 2021). It is estimated that the total water demand will be 11.5kl/day, based on the calculations below, with the additional allocation of 15kl for fire flow, totalling 26.5kl, if needed. The storage tanks currently consist of a 30kl capacity, which is sufficient for the daily per person and fire demand.

	Water Allocation (It)	No. people	Total (kl/day)
Guests	350	36	9,7
On-site staff	150	8	1,2
Off-site staff (incl. construction staff)	50	10	0,5
		Sub-total	11.4
		Fire flow	15.0
		Total	26.4

#### 5.1.4.2 Buffer Determination

The Buffer Zone Tool for the determination of aquatic impact buffers and additional setback requirements for riparian ecosystems by MacFarlane et al (2014) was used for the buffer determination for the riparian zone for the first order stream north of the main house and was determined as being 15 metres (Figure 4). The input data and outcomes for this process have been captured in ANNEX E: Wetland Buffer Determination Data Sheet – Riparian Zone. As can be seen from Figure 4, the Septic Tank, Unit 4 and a portion of the Entertainment Area, falls within the 15m buffer.

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From a flood risk perspective, this is a first order stream with a small catchment of about 20 hectares. East of the house at 4, it is moderately steep and fast-flowing, but becomes increasingly less steep as it flows westwards past the house at 4 (Figure 4). A cross-section though the riparian zone, shows how it opens up but also cuts in to a depth of 4 - 5m past the house. The likelihood of a 1:100 year flood beyond the riparian zone is unlikely. The 15 m buffer serves more as a biodiversity buffer than a flood line.

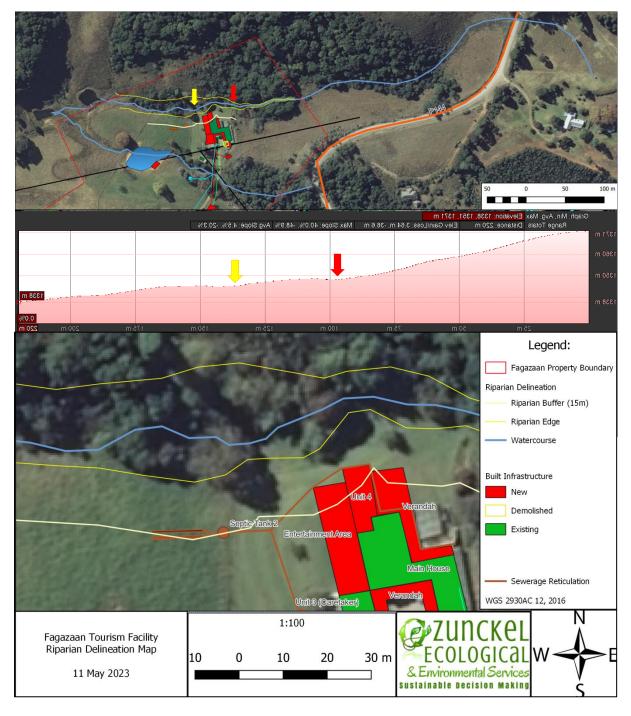


Figure 4:

**Riparian Delineation** 

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#### 5.1.4.3 Water Quality

More broadly speaking the upper reaches of the uMngeni River catchments are in a poor condition with alien plant infestations accounting for losses in water production together with incompatible land uses and degradation contributing to both a decrease in water production capacity as well as quality. Intensive agricultural practices such as dairies, poultry batteries and piggeries all contribute to releasing pollutants into the system in the upper reaches of the catchments, while the urban centres all contribute industrial and human waste (GroundTruth, June 2017). Aquatic systems in the UMDM are extremely stressed due to the fact that demand far exceeds supply which exacerbates the water quality issues already described.

Fagazaan falls within a distal catchment with the potential to influence key supply features with **high potential for elevated pollutant concentrations**. The existing and predicted high pollutant loads, mostly from intensive agricultural practices such as dairies, poultry batteries and piggeries, indicate that the ability of the natural environment to ameliorate these impacts and assimilate the pollution loads is already heavily utilised. Developments in these areas that discharge large quantities of liquid waste to the environment (i.e. point source discharges) or activities with a high potential for spills and stormwater contamination should be excluded. Activities undertaken in these areas should be limited to those with a low impact on water quality, which the Fagazaan tourism establishment is.





A water sample from the Fagazaan's borehole, KZN180725, was conveyed to an accredited laboratory for analyses according to the SABS specifications for *Domestic Water Supplies SABS standards*, and was classified as Class II - Health & Aesthetic with total coliform bacteria, standard plate bacteria, manganese substances and also high concentrations of calcium (Ca) and magnesium (Mn) which indicate very hard water (total hardness concentration of 184mg/l). This makes the raw water unsuitable for human consumption without treatment (Du Preez, June 2021). The water treatment system installed by Van Der Kooy Water Quality Testing, Consulting & Treatment, will remove iron, manganese and heavy metals with adsorption; eliminate pathogenic bacteria with ultraviolet (UV) disinfection; and soften the water with an ion exchange process called water

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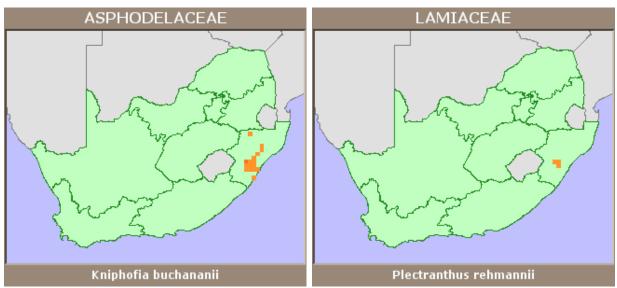
softening (the calcium and magnesium cations will be exchanged with sodium and potassium). The system is designed to treat a maximum flow rate of 5 000 litres an hour.

Sewerage infrastructure was already discussed in Section 3.2.

#### 5.1.5 <u>Vegetation</u>

At a very coarse level, Fagazaan falls within one biome and one bioregion: The Grassland Biome, and the Sub-Escarpment Grassland Bioregion. Fagazaan falls mainly within the Midlands Mistbelt Grassland (Gs9) vegetation type (Figure 6), occurring at altitudes of about 760–1,400mamsl (Mucina & Rutherford, Reprint, 2011). Midlands Mistbelt Grasslands are **endangered**, and are one of the most threatened vegetation types of KwaZulu-Natal. Only a small fraction (about 0.5%) is statutorily conserved in a number of reserves such as Ngeli, Impendle, Blinkwater, Qudeni, Doreen Clark, Karkloof and Queen Elizabeth Park - so it is still heavily underrepresented in conservation plans. More than half of the vegetation type is already transformed by timber plantations, cultivated land or urban sprawl. Uncontrolled fires and poorly regulated grazing by livestock add threats to this unique grassland.

There are also elements of Southern Mistbelt Forest (FOz3) on site in the upper reaches of the two watercourses (Figure 6), the status of which is least threatened (with some 8% is statutorily conserved in KwaZulu-Natal in Impendle, Igxalingenwa, Karkloof and Qudeni Nature Reserves). Several private reserves protect smaller patches. About 5% has been transformed for timber plantations. Uncontrolled harvesting of timber, poles and firewood, overexploitation of non-timber forest products and mismanagement of fire and burning regimes in surrounding grasslands are considered as current major threats to this vegetation type (Mucina & Rutherford, Reprint, 2011).



*Kniphofia buchananii* and *Plectranthus rehmannii* are two KZN endemics that are predicted to occur on site. Both plants' status are 'Least Concern' but neither were found during any of the site visits.

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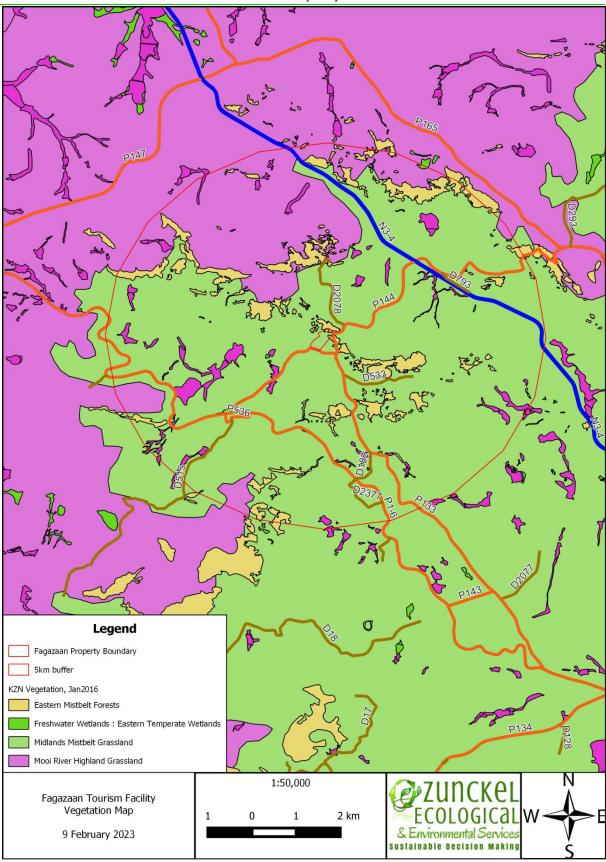
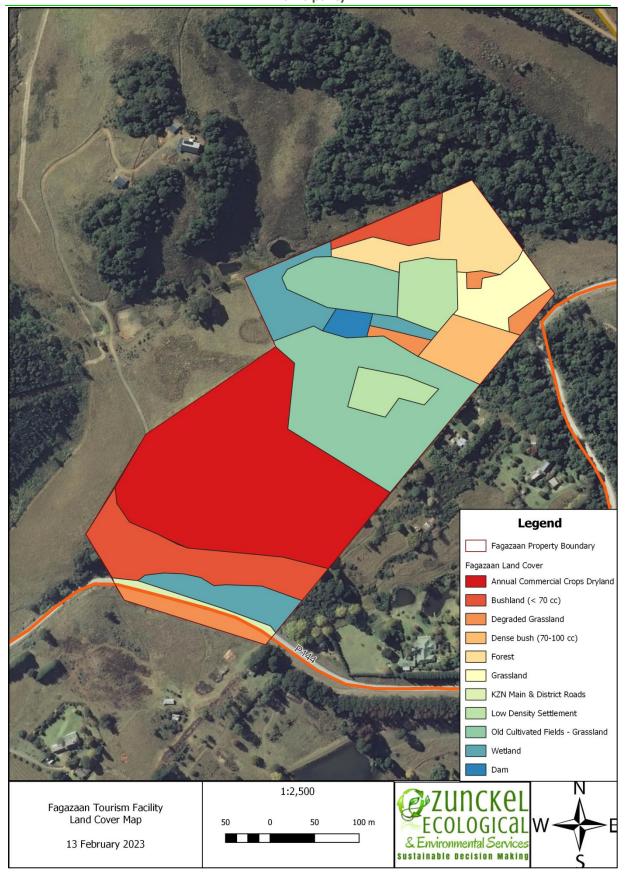


Figure 6:

Vegetation Types found near Fagazaan

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The land cover map (Figure 7) provides a better representation of the condition of the vegetation on site, the majority of the lower reaches being transformed dryland crops. The grasslands below the Low Density Settlements are all kikuyu pastures. Just 5.1 hectares (34% of the 14,8651 Ha property) are untransformed natural wetlands, grasslands, bush or forest.

An extensive Invasive alien plants (IAPs) eradication programme was carried out by Gumede's Garden Service in the week preceding Easter. Trees were marked by the EAP and shown to the contractor, who removed them and undertook a training exercise of the Fagazaan groundsmen so that they can continue with follow-up treatment. IAPs includes Syringa (Melia azedarach), Bugweed (Solanum mauritianum), Australian blackwood (Acacia melanoxylon), Black Wattle (Acacia mearnsii), Penny Gum (Eucalyptus cineria), Saligna Gum (Eucalyptus grandis), Pin Oak (Quercus palustris), Japanese Maple (Acer palmatum), various Privet spp., St. John's Wort (Hypericum perforatum), Yellow Flag Iris (Iris pseudacorus) and various Rubus spp (European Blackberry and American Bramble). The large trees were being ringbarked and their lower cambiums, treated with Kaput<sup>®3</sup>, so that nesting birds and other fauna can adapt yet still use them for perching. The smaller trees and shrubs were be felled and stem-treated, and the Rubus spp were cut with a brush cutter and stemtreated, especially in the natural grassland areas. Flag Irises were be dug out and will be replaced with locally indigenous Red Hot Pokers (Knipofia spp.). Compared with many neighbouring properties, the problem is not severe, but climate change projections are that we are seeing more woody species invading the grasslands, and the owner has committed to follow-up treatment throughout the operational phase.

One of the reasons for EDTEA issuing a Compliance Notice was the clearing of vegetation on site. Although the cleared vegetation was not indigenous, and therefore did not trigger the need for Environmental Authorisation, the client was willing to rehabilitate these areas. The EAP compiled a rehabilitation report (Annex F), the mitigation measures of which EDTEA agreed to in order to stabilise the banks, and to prevent soil erosion on the steep slopes above the dam and the bank adjacent to the watercourse around Unit 4. The contractor carried out the rehabilitation, which was inspected by the EAP on the 11 February 2023, and the site was found to have recovered well with the good rains received. Minor short-comings of the rehabilitation were pointed out with a commitment from the contractor to address them immediately.

The land around the main house consists of gardens and lawns. A Landscaping Plan will be developed if and when environmental authorisation is received and will include a water-wise indigenous planting palette, and an avenue of locally indigenous trees up the length of the driveway from the guard house to the staff complex.

<sup>&</sup>lt;sup>3</sup> Kaput<sup>®</sup> is a water-based gel paint-on systemic herbicide acting through cut surfaces of certain woody plants.

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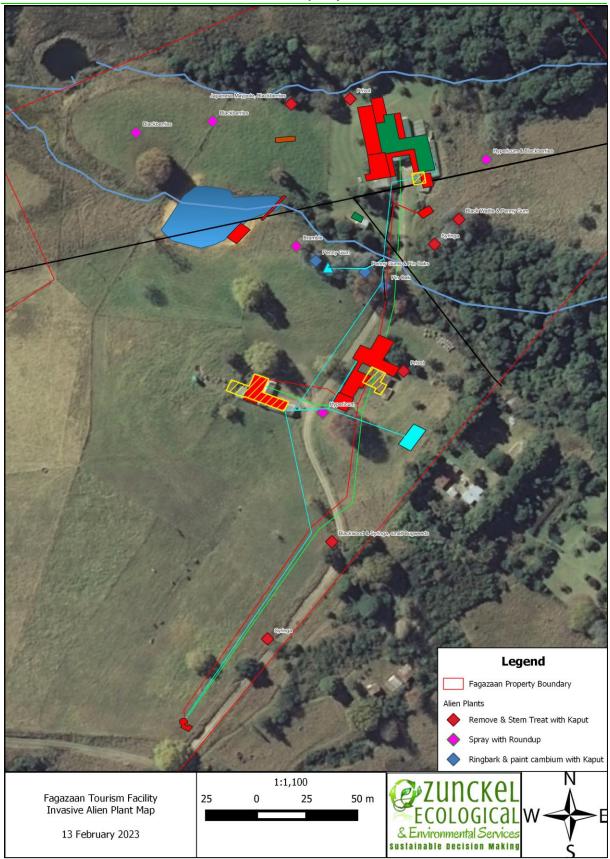


Figure 8: Invasive Alien Plants that were marked on site and have been eradicated

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#### 5.1.6 <u>Fauna</u>

There is one butterfly SA Red Data species of special concern that is known to occur or likely to occur within the Fagazaan area. An additional five millipede species are considered endemic to the region as listed in Table 5.

PHYLUM	CONSERVATION STATUS (IUCN RED LIST)			
PHILOIVI	Species	Status		
Butterflies	Karkloof Blue (Orachrysops ariadne)	Endangered		
Millipedes	Glomerate slender spined millipede (Spinotarsus glomeratus)	KZN Endemic		
	Doratogonus montanus	KZN Endemic		
	Doratogonus peregrinus	KZN Endemic		
	Doratogonus natalensis	KZN Endemic		
	Centrobolus tricolor	KZN Endemic		

#### Table 5: A broad indication of the fauna that is predicted to occur in the Fagazaan region

While the endemic millipedes may occur on site, none were found, nor was it sampled for specifically. The impact of development on the site is unlikely to impact significantly on the millipede species due to the limited expansion areas and the site's transformed state. In fact, the cessation of ploughing and grazing on site is likely to have more of a positive influence on millipede species numbers, as will the eradication of invasive alien species. It is therefore recommended that no further action is required.

The potential impact on the Karkloof Blue butterfly is discounted on account of no habitat lost in the 0.70 hectare natural grassland on the western slope to the east of the house. It occurs in Midlands Mistbelt Grasslands on relatively moist and cool south-facing slopes containing both the larval host plant and host ant. The removal of invasive alien plants from this area is likely to improve the habitat for the butterfly and may in fact present an opportunity for future colonisation of this species. It is therefore critical that control of *Rubus, Hypericum* and any other IAP species in the grassland area be done with extreme caution, but effectively and on a sustained basis.

There were no species of special concern noted and no nests were located during any of the site visits. It is likely, considering the reduced level of grazing, that some wildlife naturally uses the property from time to time, i.e. Common Reedbuck, Grey Duiker, Bushbuck and possibly some nocturnal animals. Provided that electrified security fences are limited to the main house only, it is high likely that wildlife will increasingly use the property, especially when occupancies are low.

#### 5.1.7 <u>Ecological Functionality</u>

Tourism establishments that sleep 15 people and more that are within 5km of a **terrestrial protected area** trigger item 6 of GNR 324 ("Listing Notice 3"). The Blue Crane (Stonehaven) and Michaelhouse Oribi Nature Reserves fall within 5km of the site which also includes areas identified as being "**sensitive**" in terms of the uMgungundlovu District Municipality Environmental Management Framework (EMF) - Very High Priority Water Production Area, Water Quality Feature, Critical Biodiversity Area (CBA) and Other Natural Areas and Wetland Areas (Figure 9).

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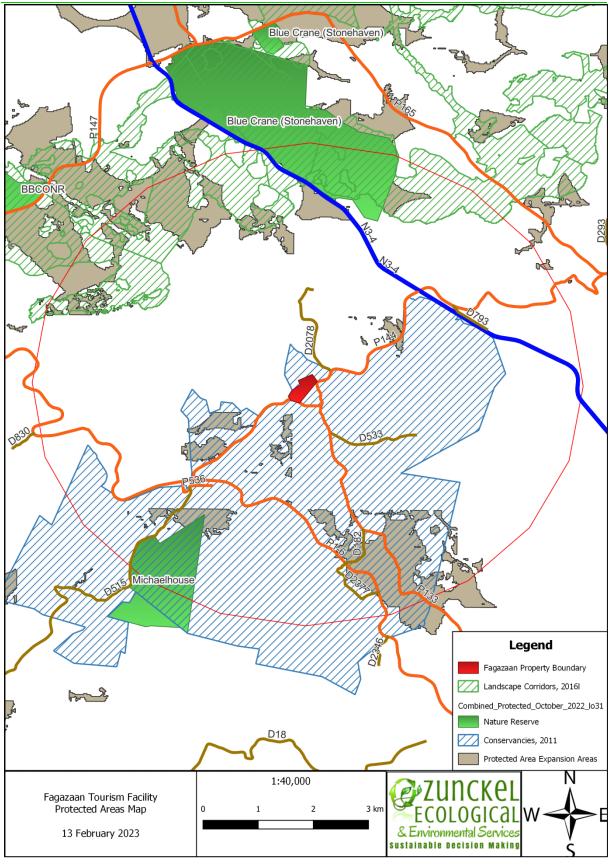
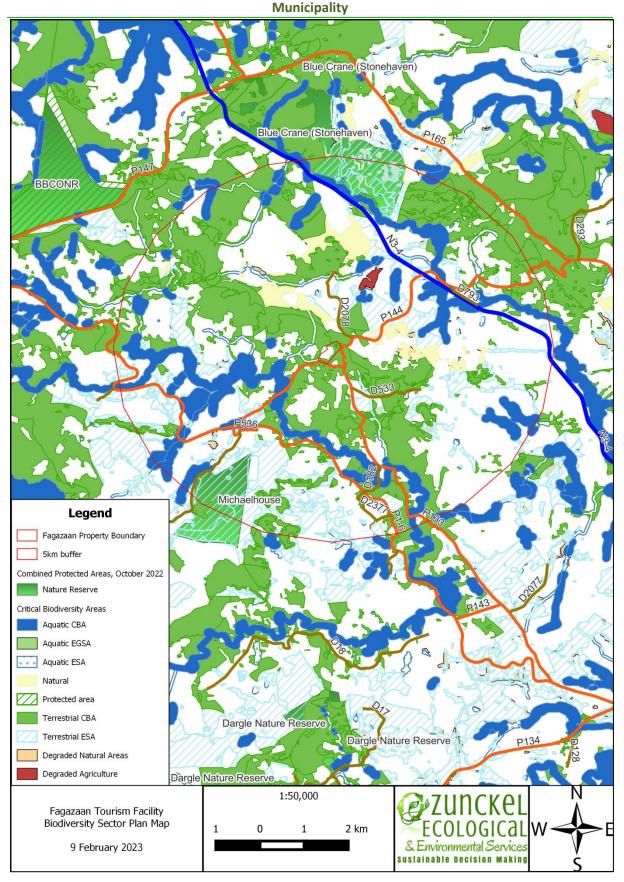


Figure 9: Fagazaan Protected Areas Map





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Fagazaan falls within the northern portion of the 3,802 hectare **Balgowan Conservancy**, the oldest conservancy in South Africa, whose objectives are to support sustainable resource utilisation, and to conserve wildlife and their habitats. They promote nearby attractions, i.e. the Milestone Forest Walk, The Bush Pig Trail, various mountain biking trails, birding and fishing. Existing conservation areas can provide a useful starting point for pursuing contract agreements, as long as they fall within important areas for protected area expansion, of which there are a few within 5km of Fagazaan (Figure 9).

A Landscape Biodiversity Corridor is identified to the north of the site. These are defined as 'networks of interconnected terrestrial and aquatic habitat areas which allow linkages and passage of species and ecological processes across transformed landscapes'. The maintenance of connectivity is essential to a number of movement-related ecological processes, including species migrations, seasonal and altitudinal dispersal, and range displacement in response to climate change.

The Midlands Mistbelt Grassland, being a Threatened Terrestrial Ecosystem, as well as falling within a terrestrial **Critical Biodiversity Area (CBA)** with indigenous forest, makes Fagazaan crucial for supporting biodiversity features, ecosystem functioning and providing ecological services (Figure 10). CBAs are important for maintaining conservation targets and as such should be retained in (or rehabilitated to) a natural state to ensure the continued existence of species and that ecosystem processes and delivery of services from these systems are maintained.

The Balgowan area is considered moderately ecologically functional. There are however still significant patches of untransformed natural vegetation as well as landscaped areas that maintain a relatively close semblance of the natural condition. The area therefore still hosts a variety of the fauna and flora common to the area.

It is our opinion that the Fagazaan development is compatible with the receiving environment since it is returning the majority of the property back to its natural condition, tourism numbers are low and it is taking place largely on existing footprints. The development has considered, and assessed all of the following principles contained in the EMF:

- Loss of natural land supporting biodiversity and functioning ecosystems has been avoided.
- The development has utilised already transformed areas as far as possible.
- The development has been planned and designed according to principles of conserving biodiversity by maintaining and/or enhancing biodiversity features on-site.
- The development will ensure a "no nett loss" of biodiversity, with management measures and mechanisms put in place to conserve and/or enhance the biodiversity value of the land. The natural forest and grassland areas on the north and eastern portions of the site and the wetland in the south are to be maintained and managed as landscapes that encourage biodiversity through linkages and corridors that connect other natural areas outside the property.

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# 5.2 Cultural / Historical Features

Nothing on the Fagazaan property represents an historical, cultural or social event or occurrence nor does it contribute to our understanding of the history or culture of the local or provincial or national interest. From an aesthetic perspective, the site has been well positioned on the property on flat land, nicely tucked into to the surrounding forest/bush which holds appeal, compared with other developments in the area that break the skyline. The old cowshed was more than 60 years old, so required a permit from AMAFA to upgrade. The architects then discovered that it had been built without foundations and the walls were badly cracked. They had to put in an application for complete demolition of the building, which was approved by AMAFA on the 16 May 2021. The Shed has been reconstructed on the same footprint, in a similar architectural style. It is highly unlikely that any other cultural and/or historical heritage features will be found to occur along or within any of the refurbishment sites, as these areas are already disturbed and their expansion areas are minimal. It is, however, recommended that in the event of chance finds during any refurbishment or operational activities, that work will cease until a qualified Heritage Practitioner is able to assess the artefact/s and guide the management of such heritage finds/sites.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

# 6 PUBLIC AND AUTHORITY PARTICIPATION

## 6.1 PUBLIC PARTICIPATION

Public involvement in this s24G assessment process was facilitated through the actions listed below:

- A Site Notices in A3 format was posted at the Fagazaan entrance gate on 14 November 2022 and is still in place (Annex G).
- Notice of s24G Application was placed in and published by the Village Talk on 16 November 2022. There have been no responses to the site notice or the advertisements (Annex G).
- Notification was sent to all immediate neighbours via email with a Background Information Document (BID) (Annex H), on 15 November 2022. A copy of the BID is provided with this report as Annex F. Balgowan Conservancy forwarded this to their members, which generated a large response because of the concern around illegal development and the bed numbers of 57, which has been reduced to 26.
- All registered Interested and Affected Parties were provided with a copy of the Draft s24GAssessment Report on 12 May 2023. The contacts database for registered I&APs is provided in Table 6.
- The Comment and Response Report is provided in Annex J.

FIRST NAME	SURNAME	AFFILIATION	ADDRESS	PHONE	EMAIL
Sandile	Zungu		The Zunguness	082 858 8476	info@thezunguness.com
Christiaan	GM	Neighbour	51B Curry's post Rd, Balgowan	033 940 9747	christiaan@thezunguness.com
Margaret	Klipp	Neighbour	Willow & Lily B&B B19 Curry's Post Rd, Balgowan, 3275	082 071 4419	info@willowandlily.co.za
Dr CJ Benjah	Botha	Neighbour	Curry's post Rd, Balgowan	082 449 3873	<u>cjbmin@gmai.com</u>
Sarah	Richards	Neighbour	Ptn 9 of the Farm	083 707 0126	sarah@sarahrichards.co.za
Kevern	Sandalls	Neighbour	Fagazaan No.17599	083 400 0342	kev@sandog.biz
Binadien	Miller	Neighbour	Impangele Farm	033 234 4425	
Joni Mlibo	Warburton Tyala	Michaelhouse	Financial Director	033 234 1285	jonwar@michaelhouse.org MliTya@michaelhouse.org
Murray	Armstrong	Neighbour	Kwa Heri Farm, Balgowan	032 533 1229	astrong@iafrica.com
Craig	Perry	Neighbour	Shangri-la B2, WILDE ALS SPRUIT 1085 ERF 104 1085 57	079 529 9393	Craig.Perry@smiths.co.za
Caroline	Canderle	La Lampara Restaurant		082 416 0195	lampara@mweb.co.za
Pino	Canderle	Canderle Family Farm	Boschfontein, Balgowan	082 600 6688	
Darryl	Wood		Heaven's Gate Farm, Balgowan	083 994 7494	darryl-wood@outlook.com
Gillian	Addison	Neighbour	Eqeleni – Portion of New Boschfontein 12011	082 459 4625	gillian.addison@gmail.com
Ed Michail Melissa	Coleman Kemp Pillay		Glen Arum, P144 Old Curry's Post Road, Balgowan	071 031 4776 082 850 3649 031 765 5663	ed@glenarum.co.za

#### Table 6: Contact database for registered I&APs

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

FIRST NAME	SURNAME	AFFILIATION	ADDRESS	PHONE	EMAIL
Richard &	Beddow	Neighbour	The Brook, R103,	083 299 1195	richard@forexpeople.co.za,
Paula		Neighbour	Balgowan	073 152 9293	paula@forexpeople.co.za
Paola	Verolini		Uzekamanzi Farm, D2377, Balgowan	076 872 7734	paolapav@gmail.com
Lilian	Nadrowski		Edi's B&B	073 542 4631	liliannadrowski@gmail.com
Nicola & Stof	Taylor		Entubeni Farm, Balgowan	082 806 4232	nixhall@gmail.com stoftaylor84@gmail.com
Jan	Jefferiss		Inkwazi Farm, Balgowan, 3275	076 191 24 99	janjef@vodamail.co.za
Warwick	Fraser	n/a	4 Duncan Lane Amberglen Howick, 3290	084 7795375	warfras@gmail.com
Murray	Armstrong		Windermere Estate PO Box 1 Canelands, 4344	082 654 1325	astrong@iafrica.com
	,		STAKEHOLDER	s	1
Philani	Ndabezitha	AMAFA		033 394 6543	Philani.Ndabezitha@amafainstitute.org.za
Jessica Leslie Kate Mike	Young Rhodes Pryor	Balgowan Conservancy		082 940 9039	balgowanconservancy@gmail.com kate.rhodes50@gmail.com mikepryor19@gmail.com
Dominic	Wieners	Ezemvelo KZN Wildlife			Dominic.Wieners@kznwildlife.com
Mandisa	Khomo	uMgungundlovu District Municipality			mandisa.khomo@umdm.gov.za
Zotha	Zondo	uMngeni Local Municipality	PO Box 5, Howick, South Africa, 3290	033 239 9214	Zotha.Zondo@umngeni.gov.za
Xoli	Madiba	KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA)		082 492 3787 033 3471820	Xoli.Madiba@kznedtea.gov.za
Thabede	Bongiwe	KZN Department of Agriculture & Rural Development			
Zanele	Msimang	Water Affairs		082 908 8141	MabuzaZ@dws.gov.za

# 6.2 AUTHORITY PARTICIPATION

A pre-application meeting was held via Zoom with Ms Xoli Madiba of the EDTEA, the Client, Ms Busi Tshili of Anganna Investments 177, the Architect, Ms Nadia Tromp on 14 October 2022. Minutes of this meeting are included with this report as Annex I. Ms Madiba confirmed via email on 27 Jan 2023 that she was happy with the Minutes and that they are the true reflection of what was discussed.

Digital copies of the draft s24G Assessment Report were distributed to the following stakeholders on 12 May 2023:

• AMAFA via South African Heritage Resources Agency (uploaded to SAHRIS)

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- Balgowan Conservancy (digital via OneDrive)
- Ezemvelo KZN Wildlife (digital via OneDrive)
- uMgungundlovu District Municipality (digital via OneDrive)
- uMngeni Local Municipality (digital via OneDrive)
- KZN Department of Economic Development, Tourism and Environmental Affairs (EDTEA) (digital via OneDrive)
- KZN Department of Agriculture & Rural Development (digital via OneDrive)
- Water Affairs (digital via OneDrive)

Comments received and responses provided are included in the Comment and Response Report included as Annex J.

# 7 CONSIDERATION OF ALTERNATIVES

# 7.1 Alternative Sites

No alternative locations were considered as the tourism development has made use of existing buildings and footprints on the property.

# 7.2 Alternative Uses for the Site

No alternative uses were considered for the site as the area within which the site is located is already zoned in the Municipal Spatial Development Framework as Agriculture and High Intensity Tourism which is the land use classification given to properties along the P144 and is intended to encourage tourism related developments in association with the agricultural use of the land. According to the policy of the Department of Agriculture, an agriculturally viable portion of land needs to be able to sustain 100 head of cattle, be at least 20 hectares in extent and have arable land and water rights. The application site is only 14.8 hectares in extent and contains only a small agricultural portion approximately 8 hectares in extent which consists of land on the western slopes of a hill. The property does not have abstraction rights for irrigation and given the location of the property on the side of said hill, has a small stream running above and below the existing dwelling. The viability of the property to be fully utilised while its ecological functionality is enhanced and maintained as a contribution to the Balgowan Conservancy and the upper uMngeni River catchment. Any other activity would be seen as being in contrast to the current use and character of the area.

# 7.3 Alternative Technologies

No alternative high cost technologies have been considered for this tourism development. However, an upgrade presents an opportunity to consider and bring about additional new technologies which

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will enhance the efficiencies of the development, i.e. better LED Lighting, low flow showers and flow regulators, the use of biodegradable detergents and body products, etc.

# 7.4 NO-GO OPTION

Without modernising the existing infrastructure on the property, it will continue to deteriorate and depreciate. Farming is unviable on such a small property. The opportunity to improve the layout, enhance technologies and management of impacts of each unit would be lost. There would be opportunity costs associated with the loss of jobs and business opportunities for adjacent communities and the local economy. Unmanaged spread of invasive alien plants will result in the deterioration in the overall biodiversity on and ecology of the property and the likelihood of it spreading to surrounding land which is not in keeping with the objectives of the Balgowan Conservancy. This development is therefore considered to be an improvement, where construction impacts have been managed and kept to a minimal, and will continue to be audited according to the EMPr.

# 8 ANALYSIS OF POTENTIAL IMPACTS

## 8.1 Assessment Method

This section provides a discussion on the existing and potential impacts of the development, and an indication of their significance through superimposing all phases of the project, as described in Section 3, on the environmental aspects of the receiving environment as described in Section 5. The assessment considers the socio-economic, biophysical, noise/visual/aesthetic and cultural heritage aspects of the receiving environment. In addition to this is an indication of the extent to which these impacts may be avoided or mitigated. It will be shown that as all existing and potential impacts may be successfully avoided or mitigated, <u>no offsets will be required and no fatal flaws were identified</u>.

It is noted that environmental impact assessment processes call for the assessment of all the phases of a proposed development, i.e. planning, pre-construction, construction, operation and decommissioning. In the case of this development it is only the construction and operational phases that are considered relevant for this assessment. The fact that this project has already been initiated and the assessment is being done retrospectively deems the need to assess the planning and preconstruction phases unnecessary.

The detailed analysis of existing and potential impacts was guided by the scoring allocations as listed in Table 7 and explained in detail in Annex N. Impacts that retain a post-mitigation score higher than 40, i.e. those colour coded from yellow to red, would be recognised as potential fatal flaws that could render the proposed development environmentally unsustainable, and/or which may require further detailed specialist studies and off-set considerations.

Potential impacts have been considered according to the construction and operational phases of the development as described in Section 0. As there are no plans for decommissioning, assessment of this phase has not been carried out. The outcomes of this process are captured in Table 8 and Table

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

9 below. Note that the tables were originally configured to address negative impacts but have been adapted to include positive impacts as well. Where these have been listed, the scoring for 'mitigation efficiency' has been applied conversely in order to cater for the positive effect of the enhancement recommendation. The colour code is also adapted here where only green is used to retain the denoting of a positive impact.

The tables have been completed by the EAP on the basis of their understanding of both the development and the receiving environment. This understanding has been generated through the interrogation of relevant documents and reports (mostly referenced in this report) and site visits on 13 October 2022, 14 November 2022 and 11 February 2023. Consideration of comments received from registered I&APs and relevant authorities also influenced this understanding.

		PRE-MIT	IGATION			POST-MI	<b>FIGATION</b>	
Extent		Duration	Intensity	Probability	Weighting factor (WF)	Significanc e rating (SR) <sup>4</sup>	Mitigation efficiency (ME)	Mitigated aspects (MA) <sup>5</sup>
Site	1	Short term (0-3 years)	Low	Unlikely	Low	Low	High	Low
		1	1	1	1	0-19	0.2	0-19
Local	2	Short to medium		Possible	Medium low	Medium low	Medium High	Medium low
		(3-5 years) 2		2	2	20-39	0.4	20-39
Regional	3	Medium term (5-10 years)	Medium	Likely	Medium	Medium	Medium	Medium
		3	3	3	3	40-59	0.6	40-59
National	4	Long term (10-30 years)		Highly Likely	Medium High	Medium High	Medium low	Medium High
		4		4	4	60-79	0.8	60-79
Internationa	al 5	Permanent (>30 years)	High	Definite	High	High	Low	High
		5	5	5	5	80-100	1.0	80-100

 Table 7:
 Impact assessment score allocation guide.

# 8.2 Specialist Findings and Recommendations in terms of Potential Impacts

Based on the comments received by Interested and Affected Parties (I&APs) on the Background Information Document, it was deemed necessary to commission an **Environmental Noise Specialist Study** for this assessment. It was performed by Occutech on 15 and 16 April 2023 (the full report can be seen in ANNEX Q: Occutech Environmental Noise Specialist Study).

During this period no activity occurred at Fagazaan and at night no weddings occurred at Willow and Lily Bed and Breakfast and The Zunguness Wedding and Conference Venue or if they did occur, did not generate and release noise which could be heard or identified at Fagazaan, or at entrance to Willow and Lily or Zunguness. The operation of holding a wedding at Fagazaan was determined by using measurements provided by similar activities at other venues. The sound which can occur at a wedding venue was also simulated at the other wedding venues. It is noted that all may not operate together. But the worst case was considered.

 <sup>&</sup>lt;sup>4</sup> Significance Rating (without mitigation) = SUM (
 <sup>5</sup> Significance Rating (with mitigation) = Signifi

<sup>=</sup> SUM (Extent, Duration, Intensity, Probability) \* Weighting Factor

on) = Significance Rating (without mitigation) \* Mitigation Efficiency

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

The music from the Fagazaan Wedding Venue will exceed the ambient noise levels (measured) and that provided in the SANS Code of Practice 10103. This noise is above the ambient for ±400 m. This noise would exceed the 7 dB(A) criteria for approximately:

- daytime 125 m around the site, although to the north due to the terrain, the distance is likely to be ± 100 m; and
- night time 400 m around the venue.

The first offsite residential property to the north is likely to receive outdoors noise of 49 dB(A). Indoors this will be lower. Due to the terrain, the noise received by the property will be lower. Furthermore, if the Fagazaan Wedding Venue windows facing north are closed, a further reduction would occur.

The sound levels received at various locations around the Fagazaan property was calculated.

The music from Willow and Lily, a neighbouring wedding venue SSE of Fagazaan, will impact on the area surrounding this site. The noise impact from this music will primarily be open land and then a few farmhouses to a distance of 250 m. The music will only impact on Fagazaan's Wedding Venue after 450 m. At this distance, the sound will be at ambient noise levels.

Zunguness Wedding and Conference Venue, lies further to the SE of Fagazaan. The noise from this venue has limited impact on Fagazaan. If Zunguness is operating and producing sound, low sound may be heard at times. The bass noise would also be heard; however, this will add no additional noise onto the noise at Fagazaan Farm if it is also producing music.

Cumulative Noise Impact should more than one venue operate at the same time, was assessed:

Fagazaan's wedding venue is located approximately 500 m from Willow and Lily and 1000 m or more from Zunguness. Noise from Fagazaan's wedding venue would have little impact on that at Willow and Lily (maximum would be 0.5 dB(A)). Noise from Fagazaan's wedding venue would have little to no influence on the noise at Willow and Lily. The noise from Fagazaan's wedding venue and Zunguness Wedding and Conference Venue will not have any impact on each other.

The following recommendations were provided:

- Establish a complaints register and systems.
- Record all complaints.
- Investigate complaints and consider if additional control is feasible, and then implement.
- Prior to wedding, inform neighbours when a wedding is to occur.
- Consider start time and end time.

When operating, the Wedding Venue would generate noise. The primary noise source is likely to be the music centre and people talking. The music can be loud, and this sound can cause an offsite impact if inadequate noise control is implemented. The location of this and the speakers is critical. Using the incomplete building (room) alongside the Main Building as the wedding venue, noise control at the source and in the transmission path of the noise will be required. The incomplete

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

building will require walls, windows, doors, and roof<sup>6</sup>. All these will need to be able to reduce sound transmission.

The wall should be solid. All holes or gaps increase the amount of sound which can be released. Brick and concrete wall provide better noise reduction than gypsum or plywood.

The roof is to be steel and glass. This would provide a sound reduction of 1 to 2 dB, and without acoustic panels or treatment, will not adequately reduce the noise. The use of sound absorbers will be required to reduce the sound escaping the building. These would be required on the ceiling/roof and high up the walls.

Location of the speakers will also be a factor. Placing the speakers on the walls or ceiling/roof without acoustic control - vibration pads (acoustic material) will result in the speaker sound entering the structure. The speakers need to be placed on acoustic panels or if on walls, the acoustic panel must be between the speaker and the wall. Live bands generate high noise, and their speakers would also need to be placed on acoustic material and should be directed away from the nearest offsite properties.

No other specialist studies were deemed necessary for the following reasons:

- the development is on a brownfield site;
- the assessment showed that all of the potential impacts post mitigation, are insignificant; and
- the EAP has a good understanding of the ecology and biodiversity of the KZN Midlands.

<sup>&</sup>lt;sup>6</sup> The entertainment covered patio will not have walls, windows or doors, but please see Section 3.2 for a description of the acoustic blinds/drapes which the architects are proposing for below the roof covering and elevations. These will block 100% of sound reverberation and also provide protection against the elements.

# 8.3 CONSTRUCTION PHASE

 Table 8:
 Potential environmental impacts and recommended mitigation measures for the Fagazaan development Construction Phase.

POTENTIAL IMPACTS AND RECOM	IMENDED MITIGATION MEASURES	EXTENT	DURATION	VSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEME NT POTENTIAL	MITIGATED ASPECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	EXTI	DURA	INTENSITY	PROBA	WEIGH	SIGNIFI RAT	MITIG. Effici	ENHANG NT POTEN	MITIG ASPE
	SOCIO-ECONOMIC									
A direct impact will be the employment of external contractors to undertake the development and who employ local people to assist with the work.	Ensure that employment opportunities are made available to adjacent communities. Where skills are not present or adequate and it is practically possible, relevant capacity building should be carried out.	3	1	1	5	3	30	H: 1	H: 1	30
	BIOPHYSICAL									
The loss of biodiversity from the vegetation cleared for the area required to accommodate the extensions to the existing footprint.	The building extensions must be positioned so as not to disturb any protected and/or threatened plants and the clearing of vegetation must be limited to the immediate development	1	5	1	5	2	24	0.6		14.4
The loss of ecosystem functionality through the loss of natural vegetation cover.	footprint with a narrow margin surrounding it to facilitate construction movement. The area must be clearly demarcated and no movement outside will be allowed. Access to the site must also be clearly demarcated and limited to a single entry and exit point. No building material and/or construction equipment is to be stored, even temporarily, on or immediately adjacent to the construction site but rather in a pre-determined area within the development footprint. Remove and store plants from the development footprint so that they can be used for progressive rehabilitation.	1	5	1	5	2	24	0.8		19.2
Disturbance caused by noise and the movement of people, machinery and vehicles that may impact on the movement of fauna.	Access to be limited to the immediate development footprint with no movement outside of this allowed, except on existing roads and paths. Vehicles and machinery to be well serviced, and include exhaust dampers. All communications on site to be kept low with no unnecessary shouting or raised voices. Limit construction work during normal working hours.	2	3	2	5	2	24	0.4		9.6
The creation of dust that settles on adjacent vegetation and decreases its palatability to grazing and browsing fauna.	Where it is apparent that dust is being created, the working surface should be kept damp and any vegetation that has become unpalatable due to dust settling on it should be sprayed clean.	1	1	2	2	2	12	0.4		4.8

POTENTIAL IMPACTS AND RECOM	IMENDED MITIGATION MEASURES	EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEME NT POTENTIAL	MITIGATED ASPECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	EXT	DURA	INTER	PROBA	WEIGH	SIGNIFI RAT	MITIGATION EFFICIENCY	ENHAN N POTEI	MITIG ASPE
Potential soil erosion caused by the removal of the vegetation cover, removal of soil and compaction of surrounding areas.	Rehabilitate exposed surfaces as soon as possible after development and where the surfaces are permanently exposed, ensure that appropriate anti-erosion mechanisms are in place.	2	3	2	4	3	33	0.4		13.2
The introduction of invasive alien plants (IAPs) from contractor's equipment and vehicles, as well as the opening of ground cover and the disturbance of soil, making the area vulnerable to infestations.	All current infestations must be cleared before construction work is initiated, disturbed areas must be rehabilitated progressively throughout the development process, and the areas must be monitored regularly after completion of the works to ensure that there are no new infestations.	2	4	3	3	5	60	0.4		24
The presence of external contractors poses the threat of poaching of both plants and animals.	Ensure that contractors and their staff are well informed of the codes of conduct for working in a conservancy, as this relates to the illegal removal of plants and animals. Ensure that this aspect is included in the contractor's contract. Ensure that all movements are monitored and restricted to the development footprint.	2	1	3	2	3	24	0.2		4.8
Potential pollution of the immediate environment through the introduction of solid and liquid waste from contractors and their workers.	Ensure that contractors are aware of, and sign agreements, to ensure that there will be no littering what-so-ever and that they have access to ablution facilities provided on site. All waste is to be separated and stored on site during the day and removed at the end of the day on a daily basis. A water quality test from the dam that the northern and southern watercourses feed into should be undertaken as a baseline from which to measure annual follow-ups through the operation phase.	1	1	3	3	3	24	0.4		9.6
	NOISE / VISUAL / AESTHETIC									
Disturbance caused by noise and the movement of people, machinery and vehicles that may impact on the movement of fauna and neighbours.	Access to be limited to the immediate development footprint with no movement outside of this allowed, except on existing roads and paths. Vehicles and machinery to be well serviced, include exhaust dampers and dis-engage reverse signals. All communications on site to be kept low with no unnecessary shouting or raised voices. Limit construction work during normal working hours.	2	1	3	3	3	27	0.4		10.8

POTENTIAL IMPACTS AND RECOM	IMENDED MITIGATION MEASURES	ENT	URATION	VSITY	BILITY	HTING TOR	CANCE ING	ation Iency	JCEME T NTIAL	ATED ECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	ЕХТ	DUR⊅	INTE	PROBA	WEIGI	SIGNIFI RAT	MITIG. EFFICI	ENHAN N POTEI	MITIG ASPI
The clearing of vegetation and exposure of soil, as well as the presence of contractors, workers and their vehicles and equipment may be visible from some neighbouring properties.	Ensure that construction is carried out during daylight hours thus preventing the need for lights and that the number of vehicles used and the size of the contract team are kept to the minimum required to get the works done as soon as possible.	2	1	5	5	3	39	0.4		15.6
	HERITAGE									
Clearing of vegetation cover and earth works may unearth archaeological material.	Implementation of 'chance find' procedure.	1	1	3	3	3	24	0.2		4.8

# 8.4 OPERATIONAL PHASE

## Table 9: Potential environmental impacts and recommended mitigation measures for the Fagazaan development Operation Phase.

POTENTIAL IMPACTS AND RECON	IMENDED MITIGATION MEASURES	EXTENT	URATION	INTENSITY	PROBABILITY	<b>NEIGHTING</b> FACTOR	<b>IIFICANCE</b> ATING	MITIGATION EFFICIENCY	JCEMENT ENTIAL	MITIGATED ASPECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	EXT	DUR	INTE	PROB/	WEIG	SIGNIFIC RATIN	MITIGATI EFFICIEN	ENHANC POTEN	MITIC ASP
	SOCIO-ECONOMIC									
Direct employment opportunities for local people as well as for local service providers will be generated by the operation of the development.	Ensure that employment opportunities are made available to adjacent communities. Where skills are not present or adequate and it is practically possible, relevant capacity building should be carried out.	3	5	1	5	3	42	H: 1	H: 1	42
The principles of sustainability are fully understood and appreciated by the staff and guests.	Implement a continuous programme of environmental awareness and responsibility training and ensure that senior employees demonstrate implementation of the requirements of the EMPr and that guests are well aware of the implementation of sustainability principles.	3	5	1	5	3	42	H: 1	H: 1	42
	BIOPHYSICAL	-	-							

POTENTIAL IMPACTS AND RECOM	IMENDED MITIGATION MEASURES	EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	EXI	DUR	INTE	PROB.	WEIG	SIGNIF RA	MITIG EFFIC	ENHAN POTE	MITIC ASP
The loss of biodiversity from the vegetation cleared from the additional development footprint.	Ensure that the development skirts surrounding the buildings are immediately rehabilitated and landscaped with plants that	1	5	1	5	2	24	0.4		9.6
The loss of ecosystem functionality in relation to the development footprint.	are locally indigenous.	2	5	1	5	2	26	0.4		10.4
Exceed the ecological reserve such that aquatic ecosystems will not continue to supply goods and services to society.	Reduce the demand by limiting the number of beds, and by applying water use efficiencies discussed in Section 5.1.4.1.	3	4	1	2	3	30	0.4		12.0
Potential rupture of sewerage reticulation and over-flow from septic tank resulting in unnatural eutrophication of adjacent watercourse.	Regular checks and maintenance on infrastructure. Water quality tests from the dam that the northern and southern watercourses feed into should be undertaken annually in the dry season when concentrations will be higher, and compared with the baseline test results.	1	5	1	1	3	24	0.4		9.6
Potential soil erosion caused by the slight increase in hardened surface area and the resultant accelerated run-off.	Install gutters and rain water tanks to attenuate run-off from the roofs. Ensure that surrounding vegetation remains in a good condition so that it retains the capacity to retard run-off and hold the soil. Monitor for soil erosion.	2	5	2	5	3	42	0.4		16.8
The proliferation of invasive alien plant infestations as a result of the disturbances caused by the development and neighbouring properties.	Monitor the situation closely and ensure that the emergence of any IAPs is dealt with immediately and in the most effective way. Ensure that post development rehabilitation is complete and successful.	2	5	3	3	3	27	0.4		10.8
	NOISE / VISUAL / AESTHETIC									
The development will be visible from some neighbouring properties.	Ensure that the buildings are designed to be aesthetically compatible with the surroundings as well as the existing architecture.	2	5	1	1	1	9	0.4		3.6

POTENTIAL IMPACTS AND RECOM	MMENDED MITIGATION MEASURES	EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	NIFICANCE RATING	MITIGATION EFFICIENCY	CEMENT NTIAL	MITIGATED ASPECTS
ІМРАСТ	MITIGATION / ENHANCEMENT	EXI	DUR	INTE	PROB	WEIG	SIGNIFICAN RATING	MITIG	ENHANCEME POTENTIAI	MITIC ASP
Noise disturbance from wedding receptions in a tranquil, rural setting.	Acceptable rating levels for outdoor noise in rural districts is 35 dBA at night and 45 during the day (SANS 10103, 2008) <sup>7</sup> . 'Disturbing noise' means a noise level which exceeds the zone sound level or, which exceeds the ambient sound level at the same measuring point by 7 dBA or more. The nearest neighbours are 270m east and southeast of the site. Most of the sound is likely to be felt down slope of the entertainment area where the nearest neighbour is 300m to the north east. The forest should buffer the sound to some extent, but the managers will need to be mindful of noise impacts in this rural setting, keep music to a reasonable sound level and have a cut- off time for music at receptions.	2	5	4	3	4	56	0.6		33.6

 $<sup>^{7}</sup>$  How loud is 45 decibels? The City of Tshwane's Noise Management Policy document gives comparisons such as 25 – 30 decibels being akin to the quiet rustling of leaves while 35 – 46 decibels equates an average suburban home during night time. 50 decibels is equal to an average suburban home during the day time while 70 decibels would be a blaring radio and 85-100 decibels would be the inside of a disco on a Saturday night.

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## 8.5 CUMULATIVE IMPACTS

It is recognised that there are a plethora of guest house facilities within the Balgowan Conservancy and that the development of an additional one may be seen as an intensification of the density of built structures in the area. However, considering that this development is on an existing development footprint with some extensions, it is not causing any significant cumulative impacts.

The change of the activity on site from residential to tourism may well be seen as a cumulative impact, particularly where this relates to the risk of waste water entering the adjacent watercourse. However, this potential impact has been identified and the mitigating measures are deemed to be sufficient to address this risk. Therefore, cumulative impacts resulting from this development are negligible.

In addition and when considering the potential capacity that the operation of the development has to generate an income greater than that of the agricultural potential, and this there will be investment into the ecological restoration and maintenance of the property, the over-all impact will be positive.

# 9 ENVIRONMENTAL IMPACT STATEMENT

## 9.1 SUMMARY OF KEY FINDINGS

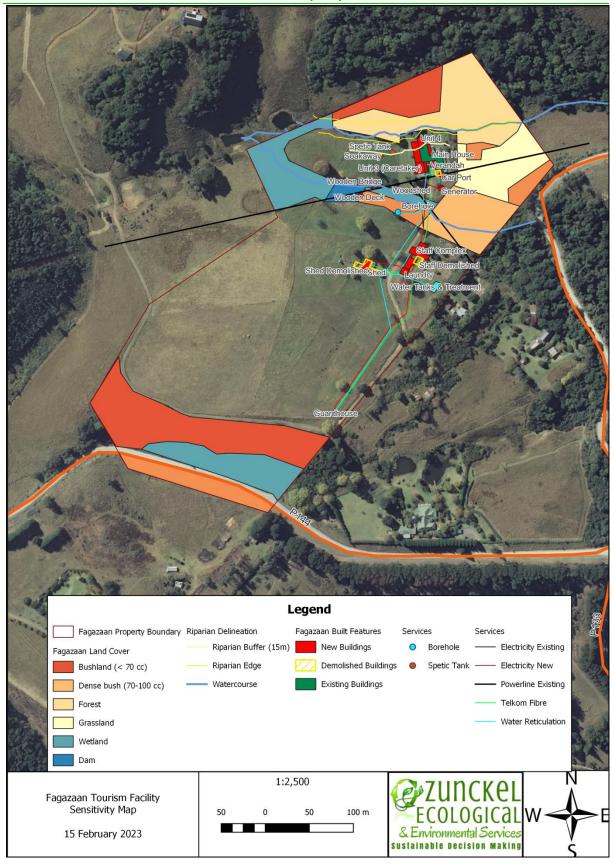
Most of the potential impacts are relatively insignificant prior to mitigation and post mitigation they are insignificant. The only potential impacts that are significant prior to mitigation are associated with the introduction of IAPs, soil erosion and the poaching of fauna and flora. Mitigation of these is possible and to levels of insignificance.

## 9.2 SENSITIVITY MAP

Being located within a critical terrestrial biodiversity area (CBA), the entire extent of the site may be considered 'sensitive' within the context of what is required of this section. However, at the site level, the Sensitivity Map (Figure 11) shows the built infrastructure overlain on the natural land cover types and the riparian delineation as the top layer. Built features that overlap the natural land cover and lie within the riparian buffer are dealt with individually below:

- Expansion of portions of Unit 4 and the Entertainment Area of the main house that fall within the 15m riparian buffer.
- The development of the septic tank falls within the 15m riparian buffer and the wooden bridge and deck fall above the dam falls within the 32m of the southern first order watercourse.
- The bridge that crosses the watercourse to the south of the main house, along which the service infrastructure (power, water and telecommunication fibre) has been routed.

These components' impacts have been identified, assessed and mitigation measures have been recommended in Section 8. None of the potential impacts are significant after mitigation.





#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

# **10 ASSUMPTIONS AND LIMITATIONS**

The Assessment Report has been prepared on the strengths of the information available, from site visits and that provided by the Applicant and other relevant sources at the time of the assessment. Comments and inputs from I&APs were carefully considered. Topographical, vegetation and other spatial databases were consulted. The assumptions made and constraints that were prevalent did not obviously have any restrictive or negative implications on the study.

In undertaking this investigation and compiling the Assessment Report, the following has been assumed:

- The information provided by the client is accurate;
- The scope of this investigation is limited to assessing the environmental impacts associated with the construction and operation of the proposed Fagazaan tourism establishment; and
- Should the project be authorised, the Applicant will implement any recommendations and mitigation measures outlined in the Assessment Report, the Environmental Management Plan report and any conditions of establishment contained in the environmental authorisation; and these will be integrated into the detailed design and construction contract specifications of the proposed projects.

There is a high level of confidence in the accuracy of the information provided, sourced and gathered and that the resultant assessment has produced recommendations that are appropriate and that will ensure the sustainability of the proposed development.

# **11 RECOMMENDATION AND CONDITIONS OF AUTHORISATION**

It is recommended that the proposed Fagazaan tourism establishment as described in Sections 3.2, and the listed activities as presented in Section 3.3 be granted environmental authorisation. The proposed conditions of authorisation are all the mitigation measures listed in Sections 8.3, 8.4 and 8.5 and which need to be strictly adhered to within the context of the compliance monitoring recommendations, as well as adherence to the stand-alone EMPr, included as Annex C.

# **12 CONCLUSION**

In conclusion it may be stated that the development assessed in this report will have an overall positive impact on the biodiversity and ecosystem functionality of the Balgowan area as it progressively works to improve its management effectiveness as well as the redress of negative impacts from the past.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

# **13 REFERENCES**

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- GroundTruth, June 2017. uMgungundlovu District Municipality Environmental Management Framework: Water Yield Report. Report prepared for the Institute of Natural Resources, Pietermaritzburg.
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# ANNEX A: FULL CURRICULUM VITEA OF KEVAN ZUNCKEL: ENVIRONMENTAL ASSESMENT PRACTITIONER

# Curriculum Vitae Kevan Zunckel

#### PERSONAL DETAILS

Full Names: Kevan Zunckel Home Address: 'Grace Cottage', 7 Annthia Road, Hilton, 3245, South Africa Tel: H: +27 (0) 33 343 1739 W: +27 (0) 33 343 1739 Fax: H: +27 86 517 5582 W: +27 86 517 5582 E-mail: kevanzunckel@gmail.com Cell: +27 82 929 4270

Age: 60

Date of birth: 29<sup>th</sup> June 1961 ID number: 6106295044084 Nationality: South African Marital Status: Married on the 19<sup>th</sup> April 2003 Children: Tamaryn (2 February 1987) Jessica Grace (13 April 2005) Hannah Kathleen (4 February 2008) Health: Excellent

#### EDUCATION

#### Matriculation

Attained in 1987 at Kingsway High School – Amanzimtoti, KwaZulu Natal, South Africa.

Other achievements during the matric year were as follows: first team rugby first team squash first team basketball (nominated for Durban and District trials) chairman of the schools "Out-door Club" which entailed the organising and leading of regular hiking trips to the Kwa Zulu-Natal Drakensberg

#### Under Graduate (1981 - 1984)

Four year B.Sc. Forestry / Nature Conservation at the University of Stellenbosch.

#### Post Graduates (1988 - April 1990)

M.Sc. Environmental Science at the University of Cape Town. The year of 1988 entailed full-time study in the form of course work and group projects. A scientific report / thesis was then compiled during the period from January 1989 to April 1990. The thesis was entitled "The Ecology and Management of the Kaapsehoop Cycad (*Encephalartos laevifolius*)".

#### RESUME OF WORKING EXPERIENCE

#### May 2010 to current

Partner with Zunckel Ecological & Environmental Services providing independent consulting services in the fields of specialist biodiversity assessments and management, protected area planning and management, sustainability assessments and management, resource ecology, pro-active and re-active environmental assessments and management planning. Some examples of relevant projects undertaken are tabled below.

EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
Deutsche	Lisa Blanken	Participate as a member of a consulting team with the	Oct 2021 –

EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
Gesellschaft fur Internationale Zusammenarbeit (GIZ) - Botswana	Cell: +267 72 817 577 Email: lisa.blanken@giz.de	determination of the resource economic value of SADC TFCAs.	on-going
UNDP Country Office Cape Verde	Goetz Schroth Email: goetz.schroth@undp.org	Compile a Project Information Form for submission to the Global Environment Facility for funding to support the revision and upgrading of biodiversity conservation governance for Cape Verde.	July – Nov 2021
UNDP Country Office Botswana	Chimbidzani Bratonozic Cell: +267 74217124 Email: chimbidzani.bratonozic@undp.org	Provide assistance as an external expert to the Environment and Climate Change portfolio of the Botswana Country Office of the UNDP in the process of developing the Country Programme Document for the period of 2022 – 2026.	Feb – June 2021
Mkambati Matters (Pty) Ltd.	Keith Stannard Cell: +27 82 7880086 Email: keith@lodgelogistics.com	Fulfil the role of an independent Environmental Compliance Officer to monitor compliance with the conditions of establishment as detailed in the environmental authorisation and report to the relevant authorities on a monthly basis.	July 2020 – on-going
South African Experiences Trading (PTY) Ltd	Lysta Stander Cell: 0716888201 Email: lysta@experiences.co.za	Undertake the environmental impact assessment and facilitate the process of applying for environmental authorisation for the operation of two mobile seasonal tented camps in the Kruger National Park.	August 2020 – on-going
and Tourism	Chimbidzani Bratonozic Tel.: +267 74 217 124 Email: chimbidzani.bratonozic@undp.org	Provide assistance to MENT and facilitate the process of their Annual Work Planning within the context of the recent political changes in the country, i.e. their desire to shift from a middle-income to a higher income economy, as well as the changes in approach to dealing with wildlife management (the reintroduction of hunting and the management of elephant).	14 Feb 2020 – May 2020
African Wildlife Foundation	Fiesta Warinwa Tel.: +254 711 063260 Email: fwarinwa@awf.org	Support the Ethiopian Wildlife Conservation Authority in the completion of the General Management Plan for the Simien Mountains National Park World Heritage Site.	Dec 2019 – October 2020
UNDP Lesotho	Lebone Molahlehi Tel.: +266 5896 3956 Email: lebone.molahlehi@undp.org	As the Chief Technical Advisor provide strategic support to the GEF/UNDP funded project "Reducing Vulnerability to Climate Change in the lowlands of the Senqu River catchment in Lesotho".	May 2019 – Dec 2021
Kruger Shalati (Pty) Ltd.	Keith Stannard Tel: +27 82788 0086 Email: keith@lodgelogistics.com	Facilitate and complete the process of applying for environmental authorisation for the Kruger Shalati development at Skukuza in the Kruger National Park and on-going environmental auditing as an independent compliance auditor for project implementation.	Jan 2018 – on-going
Environment and	André Baumgarten Tel: +264-81-5622-212 Email: andre.baumgarten@gopa.de	Facilitate the development of national guidelines for the zoning of Namibian protected areas.	Feb – April 2019
Londolozi Game Reserve	Chris Goodman Tel.: 013 735 5653 Cell: 084 692 2294 Email: chrisgoodman@londolozi.co.za	Provide ecological advice, environmental management and environmental compliance monitoring services for specific projects as and when needed. Thus far involvement has included ECO services for a number of projects, EIA for proposed developments and the facilitation of the development of a management plan for the property.	Oct 2017 – on-going
Singita Sabi Sands (Pty) Ltd.	Marc Alkema Tel.: +27 13 735 9800 Email: Marc.A@singita.com	Provide environmental management services for specific projects as and when needed in the Singita Sabi Sands portion of the Sabi Sands Game Reserve.	Oct 2017 – Sept 2019
Deutsche Gesellschaft fur Internationale	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Facilitate the process for and mentor key staff of the Ethiopian Wildlife Conservation Authority in the compilation of General Management Plans for three of	Feb 2018 – July 2019

EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
Zusammenarbeit (GIZ)		their national parks, i.e. Awash, Borenasaint and Chabera Chachura.	
Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ)	Vincent Frémondière Tel.: + 251 (0) 967 898 614 Cell: +33 6 13121510 Email: vincent.fremondiere@giz.de	Compile and present a course on an integrated approach to the planning and management of protected areas to relevant staff of the Ethiopian Wildlife Conservation Authority in Addis Ababa, Ethiopia.	Nov 2017
Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ)	Vincent Frémondière Tel.: + 251 (0) 967 898 614 Cell: +33 6 13121510 Email: vincent.fremondiere@giz.de	Provide protected area management expertise to the process of assessing the organisational structure and strengthening potential for the Ethiopian Wildlife Conservation Authority, working in collaboration with a senior human resource management specialist.	Aug – Sept 2017
Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ)	Martin Leineweber Tel.: +267 –723 004 13 Email: martin.leineweber@giz.de	Provide a summarised version of the SADC TFCA Guidelines inclusive of a flow diagram reflecting the guideline recommendations.	July – Sept 2017
UNDP Small Grants Programme	Anele Moyo Tel.: 012 354 8166 Cell: 079 879 7314 Email: anele.moyo@undp.org	Facilitate a process of intense stakeholder consultation and compile a COMPACT Site Strategy for the Maloti Drakensberg Park World Heritage Site on the foundation of a scoping exercise, a baseline assessment, and conceptual model and institutional modalities.	June – Sept 2017
UNDP and South African Department of Environmental Affairs	Mandy Cadman Tel.: 041 379 4221 Cell: 084 464 2559 Email: mandycadman@telkomsa.net	Facilitate a process of engagement with national and provincial conservation agencies to secure their inputs into the development of a National Biodiversity Framework for South Africa on the basis of the National Biodiversity Strategy and Action Plan.	Feb – June 2017
Environmental Rural Solutions	Nicky McLeod Tel.: 039 737 4849 Cell: 082 782 6067 Email: nicky@enviros.co.za	Facilitate a stakeholder engagement process aimed at the building of capacity to undertake an ecosystem services review and comparative analysis of scenarios related to options for the management of the Umzimvubu River catchment.	Feb – June 2017
Graham Muller and Associates	Graham Muller Tel: +27 31 206 1249 Cell: +27 83 457 1150 Email: grahammuller.co.za@gmail.com	Undertake and coordinate the environmental screening as part of a feasibility study for a proposed cableway development adjacent to the uKhahlamba Drakensberg Park World Heritage Site in the KwaZulu Natal Drakensberg.	Sept 2016 – Jan 2017.
IUCN Eastern and Southern African Regional Office	Leo Niskanen Tel.: +254 (20) 249 3561 /65 Cell: +254 (738) 420 766 Email: Leo.Niskanen@iucn.org	Investigate and compile a development plan for the establishment of a transboundary hiking trail in the Afar Region of Ethiopia and Djibouti.	May – Aug 2016
Eko Horizont	Ms Maja Vasilijević Tel: +385 (91) 3010 194	Working in collaboration with fellow transboundary conservation specialists, develop training material based on the latest IUCN WCPA Best Practice Guideline on Transboundary Conservation (Vasilijević et al, 2015) and present this at the international workshop on Transboundary Conservation "Hands Across Borders" in the Glacier National Park in September 2016.	July 2015 – Sept 2016
IUCN ESARO	Mr Leo Niskanen Tel: +254 (738) 420 7660750 Email: Leo.Niskanen@iucn.org	Compile a Joint Management Plan for the Lower Awash – Lake Abbé Transboundary Conservation Landscape in collaboration with key stakeholders in Ethiopia and Djibouti.	May – Aug 2016
University of South Africa (Varsity College – Pietermaritzburg)	Ms Kirsten Forbes Tel: +2733-386 2376 Email: kforbes@varsitycollege.co.za	Prepare and deliver lectures on Environmental Education to 2 <sup>nd</sup> year UNISA BA students.	Feb – April 2016
	Ms Christine Mentzel Tel: +27 74 452 0750 Email: Christine.Mentzel@iucn.org	Review the current situation with regards to the monitoring and evaluation of SADC TFCAs and design a project and road map for the development of a M&E	Feb – March 2016

EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
		framework.	
University of KwaZulu Natal: Centre for Water Resources Research	Prof Graham Jewitt Tel: +2733-2605678 Cell: +2784 717 0766 Email: jewittg@ukzn.ac.za	Contributions to the Green Fund project: Investing in Ecological Infrastructure to Enhance Water Security in the uMngeni River Catchment. Jewitt, G., Zunckel, K., Dini, J., Hughes, C., de Winnaar, G., Mander, M., Hay, D., Pringle, C., McCosh, J., and Bredin, I. (eds.), 2015, 'Investing in ecological infrastructure to enhance water security in the uMngeni River catchment, Green Economy Research Report No. 1, Green Fund, Development Bank of Southern Africa, Midrand.	July 2014 – November 2015
lsikhungusethu Environmental Services (Pty) Ltd.	Mr Roger Davis Tel: +2782 775 8834 Email: roger@isik.co.za	Undertake a comparative analysis of community livelihood strategies using an ecosystem services review approach as a means to equip stakeholders to assess the potential impact of the proposed Fuleni Coal Mine and to engage more pro-actively with the impact assessment process.	Sept – November 2015
IUCN World Commission for Protected Areas: Transboundary Conservation Specialist Group	Ms Maja Vasilijevic maja.vasilijevic1@gmail.com +385 (91) 950 9970	Revise and update the IUCN Best Practice Guideline on Transboundary Conservation. Vasilijević, M., Zunckel, K., McKinney, M., Erg, B., Schoon, M., Rosen Michel, T. (2015). Transboundary Conservation: A systematic and integrated approach. Best Practice Protected Area Guidelines Series No. 23, Gland, Switzerland: IUCN. xii + 107 pp.	Aug 2012 – May 2015
SADC Directorate for Food, Agriculture and Natural Resources (FANR)	Dr Bartolomeu Soto bsoto@tvcabo.co.mz	Compile guidelines for the establishment and development of SADC TFCAs in collaboration with the SADC TFCA Network.	Dec 2013 – Sept 2014
Institute of Natural Resources (INR)	Fonda Lewis Tel: +2733 346 0796 Cell: +2782 803 8989 Email: flewis@inr.org.za	Support the selection and design of economic instruments to incentivise improved natural resources management in target areas in the uMzimvubu and uMngeni River catchments.	Feb 2014 – May 2014
Wildlands Conservation Trust	Kevin McCann Tel: +2733 343 6380 Cell: +2783 447 0657 Email: KevinM@wildlands.co.za	The Building of Institutional Capacity for the AmaNgwane and AmaZizi Communities for the Declaration and Management of new Protected Areas	Sept 2014 – July 2015
Institute of Natural Resources (INR)	Fonda Lewis Tel: +2733 346 0796 Cell: +2782 803 8989 Email: flewis@inr.org.za	Support the INR project team in the identification and assessment of economic instruments that could create meaningful incentives for improved natural resource management in the South African case study, i.e. the upper uThukela valley.	July 2013 – May 2014
Ezemvelo KZN Wildlife	Mr Lehlohonolo Joe Phadima Email: phadimal@kznwildlife.com Cell: +2782 727 8761	EKZNW Climate Change Response Strategy on the four biomes in KZN.	Feb-2013 - Apr-2013
Emross Consulting (Pty) Ltd.	Mr Andrew Rossaak Email: andrew@emross.co.za Cell: +2782 3399 627	Design of the UNDP project: Improving Management Effectiveness of the South African Protected Area Network	Oct – Dec 2013
South African National Biodiversity Institute (SANBI)	Ms Kristal Maze Tel: +2712 843 5260 Cell: +2782 890 0188 Email: k.maze@sanbi.org.za	Coordination of Market Supply Chain for Payment for Ecosystem Services in the Upper uThukela, Umzimvubu and uMngeni Catchments for the SANBI Grasslands Programme.	May 2011 – August 2013
KZN Dept. Economic Development and Tourism	Mr Roger Davis Email: roger@isik.co.za +2782 775 8834	Ecosystem Goods and Services Specialist for the KZN Spatial Economic Development Strategy.	April 2011 - April 2012
KZN Biodiversity Stewardship Programme Coordinator Ezemvelo KZN	Mr. Kevin McCann Tel: +2733 343 6380 E-mail: KevinM@wildlands.co.za	Facilitation of the KZN Biodiversity Stewardship Agreement process for the Upper uThukela (AmaNgwane and AmaZizi) Wilderness Areas, inclusive of a biodiversity assessment and the compilation of protected area management plans.	Sept 2010 – May 2011

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

DURATIO					
EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	AND DATE		
Wildlife					
David Bristow, Green Safari Africa Project	David Bristow Email: eardstapper@gmail.com	Author of assessment criteria and sustainability assessor of ±28 Lodges in 4 African countries for the book <i>Africa's Finest: The Most Responsible, Sustainable</i> <i>Safari Destinations in Africa</i> , showcasing the top 50+ sustainable safari destinations in sub-Saharan Africa in 14 countries and 30 "other green places to visit" finalists.	Dec-10 – June 2012		
Ezemvelo KZN Wildlife	Mr Oscar Mthimkhulu Cell: +2782 457 7174 Email: mthimkho@kznwildlife.com	Economic assessment of the natural capital of the buffer zone of the uKhahlamba Drakensberg Park World Heritage Site and development of economic incentive options for residents to participate in the establishment and maintenance of the buffer	Sep 2009 – April 2010		
South African National Biodiversity Institute	Prof John Donaldson +2783 290 1170 Email: J.Donaldson@sanbi.org.za	Stakeholder engagement process and compilation of the Biodiversity Management Plan for the Albany Cycad <i>(Encepholortos latifrons)</i>	Jan 2009 – July 2009		
South African National Parks	Dr Michael Knight +2783 640 4918 Email: mknight@nmmu.ac.za	Feasibility study for the establishment of a high altitude grassland conservation and development area in the Eastern Cape Drakensberg	Dec 2009 – May 2010		

#### April 2008 to March 2010

Environmental consultant with Golder Associates Africa (Pty) Ltd. within the Sustainable Development Division and based in their KwaZulu Natal office. Participated in a number of climate change relates projects for the City of Durban related to food security and community resilience.

#### September 2002 to March 2008

Project Coordinator: Maloti Drakensberg Transfrontier Project. This position entailed the establishment of a Project Coordinating Unit consisting of a team of multi-disciplinary specialists and the coordination of their activities both within South Africa and with Lesotho, within the Maloti Drakensberg Bioregion. A key aspect of the position was also to ensure continued support for and participation in the project by key role-playing national, provincial and local government departments and stakeholders. Considering that this was a closed ended five year contract position a key focus was on a sustainable exit strategy. Part of this involved investigating income generating opportunities associated with the natural and cultural resources of the bioregion. One of the more exciting components of the latter was the possibility of establishing trading systems related to the delivery of ecological services. Also key to project sustainability was the establishment of strong institutional structures and linkages within and between the three spheres of government and the two countries. This project was funded by the Global Environment Facility through the World Bank with a grant amount of US\$ 7.9 million. For more information see www.maloti.org.

#### April 2002 to August 2002

Independent consultant having provided my expertise to the following agencies/organisations:

The USA aid agency Development Alternatives Incorporated in the compilation and review of the joint management plan for the Greater Limpopo Transfrontier Park.

I was employed by the Southern African Wildlife College to facilitate a curriculum development workshop related to the Bush Meat Crisis.

The Forestry Stewardship Council used my services to facilitate a workshop with forestry companies and compliance auditors looking for ways to improve the accreditation process.

The national Dept. of Water Affairs and Forestry employed me to provide mentoring services to their indigenous forest managers in terms of the compilation of Integrated Management Plans.

#### January 1996 to March 2002

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Head of the Research and Development (R&D) division of the Mpumalanga Parks Board (MPB). The change in name of this division from the traditional Scientific Services was significant in the sense that the commercialisation mandate given to the MPB put emphasis on the need to formulate ways in which sufficient funds could be generated to support conservation in the Province. The identification of the fund generating opportunities became the responsibility of R&D. To ensure that the integrity of the resource base was not compromised in the pursuit of self-sufficiency, a process following Integrated Environmental Management Principles was identified, and has been adhered to. It was expected of R&D to ensure that the MPB remains focused on their core business of nature conservation while still commercialising the assets for which it is responsible.

As Head of this division I championed and contributed to a number of initiatives that have been recognised within the conservation fraternity as being visionary. The management planning process for protected area management, the commercialisation strategy and various land acquisition proposals are examples of these. The short course entitled "A strategic approach to the integrated planning and management of protected areas", which I presented for three years at the Southern African Wildlife College, has become one of the college's most popular short courses.

I served as the founding Chair of the Board of Trustees for the Ekangala Grassland Trust for two years. This body was established to champion the establishment and maintenance of an inter-provincial grassland biosphere reserve of approximately 1 million hectares. Although I lost my original place on the Board of Trustees through my retrenchment from the MPB, I was requested to remain on the Board as a Trustee. This I accepted and was consulted often by the current Chair and Project Co-ordinator.

I became involved in the process of establishing a Trans-Frontier Park between South Africa, Mozambique and Zimbabwe, the Greater Limpopo Transfrontier Park. At a workshop between the three countries I compiled and presented a power point presentation entitled "A framework for the joint management plan for the Gaza-Kruger-Gonerazhou Trans-Frontier Park" (the name by which it was previously known). This was accepted and was used to guide the compilation of the joint management plan. I also reviewed the plan as mentioned above.

In recognition of the growing and potential threat of bovine TB to the above initiative, as well as to the management of wildlife in the Kruger National Park and adjacent livestock, I worked in collaboration with the Mpumalanga office of the Dept. of Agriculture's veterinary services, and the veterinary services in the Kruger National Park, to convene and facilitate and workshop of all relevant stakeholders. The workshop was known as the International TB Indaba and was hosted by the Mpumalanga Parks Board. Delegates presented various perspectives on the issue and formulated recommendations that were handed over to the national Dept. of Agriculture for implementation.

#### November 1994 to January 1996

Although there was essentially no change in employer, this period has been entered separately into the C.V. due to the change in direction that took place within the organisation as a result of the political changes in the country and the formation of nine new provinces. This period therefore entailed the amalgamation of 3 conservation agencies that then existed in the new Mpumalanga Province into one, the Transvaal Provincial Administration's Nature Conservation component, KwaNdebele Nature Conservation and the Kangwane Parks Corporation.

The vehicle that was used to achieve the above was an Executive Committee which was comprised of a number of task teams representing the various disciplines within a typical nature conservation agency. I was given the responsibility of leading the Scientific Services task team.

The main function of this role was to compile a business plan for the scientific services component within a new paradigm of conservation that would be applicable to the new South Africa. This necessitated much interaction with the scientists and technicians to ensure that they were both included in the process, in terms of their inputs, and that they embraced the new paradigm. In addition to this I had to ensure that the results of the above process fitted into that of the vision of the new organisation.

The reason why this period seems to have taken almost two years was due to political complications. The direction taken for the new agency was one of a parastatal nature, and while this was originally supported by the politicians, it had to go through a long period of re-evaluation just when everything was in place for

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implementation, i.e. March 1995. From then until September 1995 all that had been achieved was scrutinised very carefully, including a 2-month intensive commission of enquiry.

The end result of this process was confirmation that all that had preceded it was correct. A significant addition that was made, however, was that in accepting the parastatal nature of the organisation, the Provincial government gave the MPB the mandate to commercialise conservation and to ensure financial self-sufficiency within 5 years. This then set the next process into motion and that was finalising the organisational structure and appointing key personnel. Even though people had been fulfilling specific roles, such as myself as leader of the scientific services task team, we had to apply for a position in the new organisation. This period lasted from September 1995 to January 1996 at which point my application for the position of Head of Research and Development was successful.

To begin with, the R&D Division had a staff component of 40 comprised of 14 scientists, 20 technicians and 6 field assistants. Although the staff worked closely together, the organisational structure included ecologists, specialist scientists, conservation planners, a GIS component and one developing an environmental management and audit system.

#### February 1991 to November 1994

Head of the Ecological Services Division of the Transvaal Provincial Administration's chief Directorate of Nature and Environmental Conservation office in Nelspruit.

The responsibilities of this post were to lead and co-ordinate the section that was to supply the Regional Head with scientifically based information to ensure the wise utilisation of the natural resources of the region. The region being the Eastern Transvaal, from the Olifants River in the north to the Pongola River in the south. The section was comprised of three ecologists and the Divisional Head.

The Division's activities included providing resource management advice on State Land (mostly TPA Nature Reserves) and private land such as game farms and private nature reserves, conservation education internally and externally and environmental conservation, i.e. impact assessments.

Towards the end of this period the political restructuring began and in preparation for the development of the new provinces, a Strategic Management Committee was formed. I became involved in drawing up the new structure for the Eastern Transvaal Province's Department of Environmental Affairs and was requested to coordinate the section of the structure that was called "Professional Services". This portfolio included ecologists, environmental scientists, terrestrial and aquatic scientists, a Geographical Information System's expert and a Landscape Architect.

#### August 1989 to January 1991

Nature Conservation Scientist for Flora Scientific Services in the above organisation, working on the threatened plants of the Transvaal. This project entailed surveys of the distribution and conservation status of threatened plants and the subsequent compilation of Conservation Plans for each species worked on.

#### January 1985 to July 1989

Conservation Planner for the Eastern and Southern Transvaal Forest Regions of the Forestry Branch of the Department of Water Affairs and Forestry, based in Nelspruit.

The responsibilities of this post primarily entailed the drawing up of Conservation Plans for the State Timber Plantations in the above mentioned regions. Integrated Environmental Management (I.E.M) principles were used in the compilation of and motivating for the implementation of these plans.

In April 1987 the conservation areas and the related personnel of the Forestry Branch, throughout the country, were transferred to the various Provincial Conservation bodies. Forestry's conservation personnel in the Transvaal were transferred to the TPA and then seconded back to Forestry. In the middle of 1989 the post with Flora Scientific Services was offered to me and I accepted. The reason for acceptance of this offer was that there seemed to be little future for a career in conservation in the Forestry Branch. The understanding of the importance of sound environmental management had not yet taken root within the Forestry Branch. Resignation was not necessary as the move merely entailed withdrawing from secondment.

#### NATIONAL SERVICE

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Carried out during 1979 and 1980 in the South African Air Force as a Meteorological Observer. After basic training and completion of the relevant course in Pretoria, 3 months were spent at the radar station on Mariepskop (near Hoedspruit), 9 months at Grootfontein and 6 months at Air Force Base Durban. I played rugby for the S.A.A.F at Mariepskop and Grootfontein.

#### REFERENCES

NAME	POSITION	CONTACT
Mr Oscar	Chief Executive Office	+27824577174
Mthimkhulu	Sabi Sands Game Reserve	
Ms Maja	Director of Ekohorizon and Vice-chair of the IUCN WCPA	+385 (91) 3010 194
Vasilijević	Transboundary Conservation Specialist Group	maja.vasilijevic1@gmail.com
Dr Mandy	Biodiversity Specialist	+27 41 379 4221
Cadman	Independent Consultant	mandycadman@telkomsa.net

#### PAPERS PUBLISHED AND CONFERENCE PRESENTATIONS

- Zunckel, K. and de Wet, S.F. 1992. Veld condition assessment of some game farms and nature reserves in the Eastern Transvaal lowveld during the 1991/92 drought. Paper presented at the Third International Wildlife Ranching Symposium A Celebration of Diversity, held at the CSIR in Pretoria in October 1992.
- Zunckel, K. 1993. The role of insects and fire in the ecology of *Encephalartos laevifolius* and the management implications. Paper presented at the Third International Conference on Cycad Biology Conservation through Cultivation, held at the University of Pretoria in July 1993.
- Zunckel, K. 1996. The biological diversity and conservation status of the Eastern Transvaal Escarpment Grasslands. Paper presented at the Grassland Congress 31 held in Nelspruit in January 1996.
- Zunckel, K. and Gray, A.W. 1996. **The Mpumalanga Parks Board: facing the challenges of conservation in the new South Africa**. Paper presented at the Southern African Wildlife Management Association conference - Sustainable Use of Wildlife, held at the University of Cape Town in April 1996.
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- Zunckel, K and Matthee, M. 1999. A paradigm for the institutionalisation of environmental management in South Africa. Paper presented at the International Association for Impact Assessment conference of the South African chapter held at the University of Bloemfontein in September 1999.
- Zunckel, K. 2003. Managing and Conserving Southern African Grasslands with High Endemism: The Maloti Drakensberg Transfrontier Conservation and Development Program. Mountain Research and Development, Vol. 23, No. 2, 113 – 118.
- Zunckel, K; Mokuku, C and Stewart, G. 2004. **The Maloti Drakensberg Transfrontier Conservation and Development Project.** In Managing Mountain Protected Areas: Challenges and Responses for the 21<sup>st</sup> Century. David Harmon and Graeme L. Worboys, editors. Andromeda Editrice, Italy.
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- Zunckel K. 2015. **Global trends in transboundary conservation and peace building**. Presentation on behalf of the IUCN WCPA Transboundary Conservation Specialist Group to the World Leaders Conservation Forum on Jeju Island, South Korea from 7 9 July 2015.
- Zunckel, K and Zunckel, K.L. 2015. **The Application of Anthropocene Thinking to Environmental Assessments**. Paper presented at the International Association for Impact Assessment: South African Chapter, national conference at Champagne Sports, 11 – 14 August 2015.

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- Zunckel, K. 2015. Ecological Infrastructure: A Global Context for Local Action. Presentation on behalf of the Endangered Wildlife Trust at their National Business and Biodiversity Network function in Durban on 1 October 2015.
- Vasilijević, M., Zunckel, K., McKinney, M., Erg, B., Schoon, M., Rosen Michel, T. 2015. Transboundary Conservation: A systematic and integrated approach. Best Practice Protected Area Guidelines Series No. 23, Gland, Switzerland: IUCN. xii + 107 pp.
- Zunckel, K. 2014. Southern African Development Community Transfrontier Conservation Guidelines: The establishment and development of TFCA initiatives between SADC Member States. Guidelines compiled for and in collaboration with the SADC TFCA Network and the SADC Directorate for Food, Agriculture and Natural Resources Gaborone, Botswana.
- Jewitt, G., Zunckel, K., Dini, J., Hughes, C., de Winnaar, G., Mander, M., Hay, D., Pringle, C., McCosh, J., and Bredin, I. (eds.), 2015, Investing in ecological infrastructure to enhance water security in the uMngeni River catchment, Green Economy Research Report No. 1, Green Fund, Development Bank of Southern Africa, Midrand
- Zunckel, K. (2017). Social Ecology and Transboundary Conservation: (Re-) Connecting Nature and People in Borderlands; in "The Social Ecology of Border Landscapes", Edited by Anna Grichting and Michele Zebich-Knos. Anthem Press, London, 250pp, ISBN: 9781783086696.
- Zunckel, K and Abera, K (2019). Using Resource Economics to Motivate for the Effective Management of Ethiopia's Protected Areas. Paper presentation at The Conservation Symposium, Howick, KwaZulu Natal, South Africa, November 2019.
- Verdugo, D. & Zunckel, K. (2020) "Lake Abbé and the Djibouti-Ethiopia LALA Transboundary Hiking Trail" Case Study of Chapter 5: The meaning of routes in Tourism Routes and Trails by D Ward-Perkins; C Beckmann; J Ellis (authors). CABI, 2020, ISBN 9781786394767 (hardback), ISBN 9781786394774 (paperback)

#### AFFILIATIONS

Environmental Assessment Practitioners Association of South Africa – Ref. 2020/1483

International Association for Impact Assessments: South African Chapter - Mem. No. 2396.

IUCN World Commission on Protected Areas – member.

IUCN World Commission on Protected Areas, Transboundary Conservation Specialist Group, Chair.

IUCN World Commission on Protected Areas, International Connectivity Conservation Network, Focal Point for Africa.

IUCN Theme on Indigenous Peoples, Local Communities, Equity and Protected Areas (TILCEPA) – member.

IUCN Commission on Environmental, Economic and Social Policy (CEESP) - member.

#### COMPUTER SKILLS

Most Microsoft packages with specific proficiencies in word processing, spreadsheets, Power Point presentations and electronic communications. Although not proficient in spatial data software, I was instrumental in introducing the use of Idrisi and later other GIS packages (ArcView and ArcInfo) to the TPA and MPB. I therefore have a good understanding of the value and application of such spatial data management tools. Typing proficiency is fast and accurate.

#### LANGUAGE PROFICIENCY

Language	Spoken	Written	Reading
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good

#### CONFIRMATION OF AUTHENTICITY

I, Kevan Zunckel, the undersigned hereby confirm that all that is recorded in this document is authentic.



Kevan Zunckel Zunckel Ecological & Environmental Services

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

ANNEX B: SIGNED DECLARATIONS OF INTEREST BY EAP AND SPECIALISTS AND SPECIALIST CVS

ANNEX C: ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

# ANNEX D: PHOTOS OF THE PROPOSED FAGAZAAN ESTABLISHMENT<sup>8</sup>

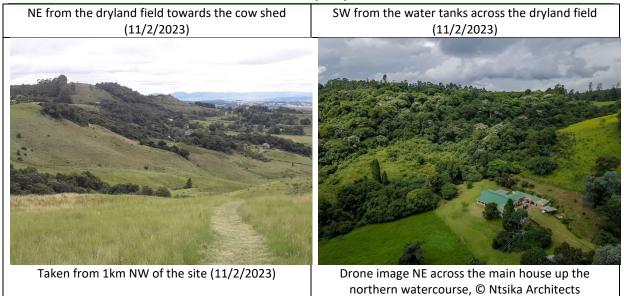
## $13.1\,Colour$ vantage point photographs of the site and its surroundings



<sup>&</sup>lt;sup>8</sup> All photographs are the copyright of KL Zunckel, unless otherwise stated.

Zunckel Ecological & Environmental Services

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## 13.2 Past and recent Aerial photographs



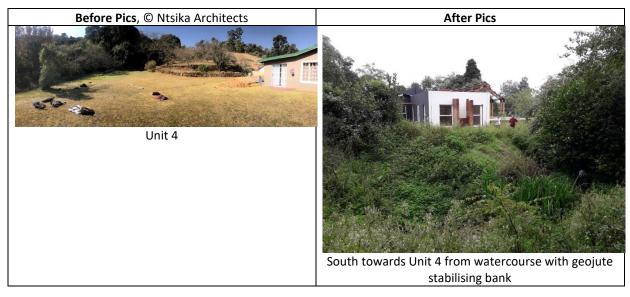
#### Figure 12: Before Aerial Photo WGS 2930AC-12, 2016

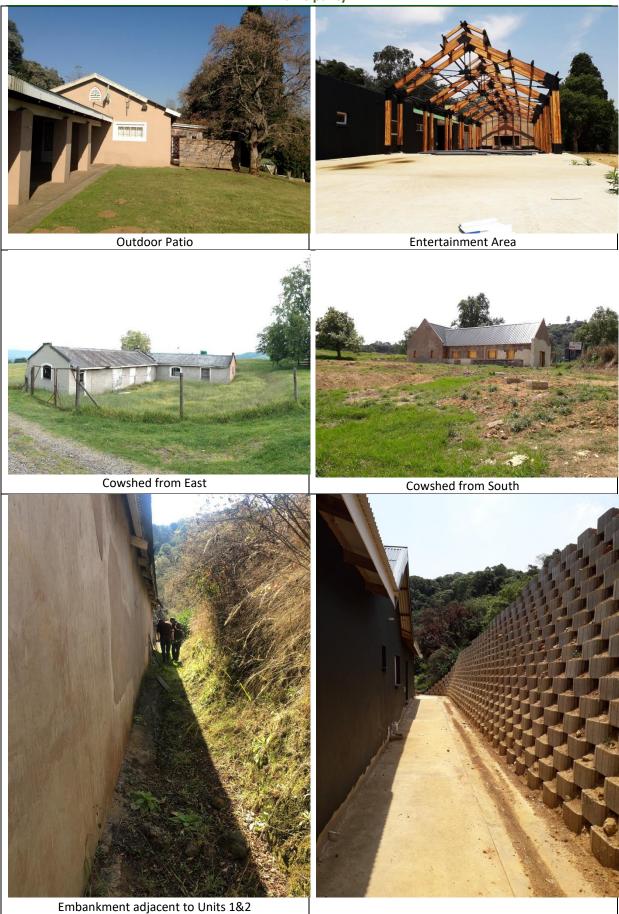
for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality



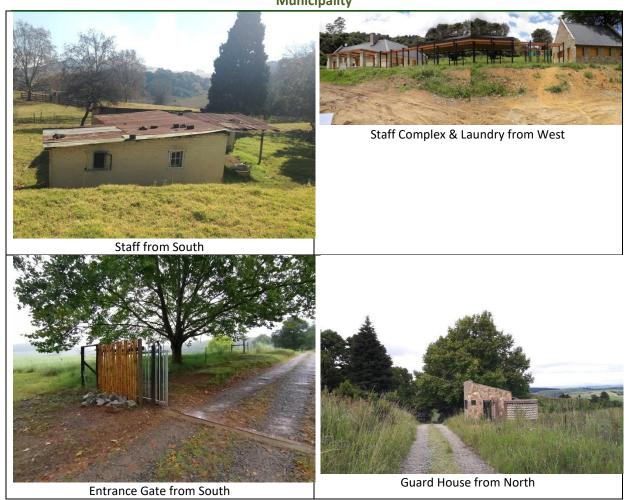
Figure 13: After Google Earth image 6/8/2022

# $13.3\ Colour\ {\rm photographs}\ {\rm of\ the\ site\ before\ and\ after\ the\ activity\ commenced}$





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# 13.4 Colour photographs of the site before and after soft rehabilitation





## ANNEX E: WETLAND BUFFER DETERMINATION DATA SHEET – RIPARIAN ZONE



#### BUFFER ZONE TOOL FOR THE DETERMINATION OF AQUATIC IMPACT BUFFERS AND ADDITIONAL SETBACK REQUIREMENTS FOR RIVER ECOSYSTEMS

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WATER

#### Nate: For further quidance on the application of this tool, werschould refer to the preliminary quideline for the determination of buffer soner. It is also important to note that buffer uidths calculated by the model only cotor for imports associated with diffuse source surface runoff. Additional mitigation measures should therefore be defined to cotor for other potential imports. Finally, the buffer sone tool has been designed to be wed one carestudy at a time.

	Threat Posed by the proposed land use / activity	Desktop Threat Rating	Specialist Threat Rating	Justification for changes in threat ratings
	1. Alteration to flow volumes	VL.	VL.	
e S	2. Alteration of patterns of flows (increased flood peaks)	L	VL.	Stormwater Management Plan includes attenuation. Development footprint will not impact on channel.
, P	3. Increase in sediment inputs & turbidity	н	VL.	Implementation of stormwater management.
<u>د</u>	4. Increased nutrient inputs	VL	VL.	
ē	5. Inputs of toxic organic contaminants	VL.	VL.	
ion i	<ol><li>Inputs of toxic heavy metal contaminants</li></ol>	L	VL.	n/a to activity
str	7. Alteration of acidity (pH)	L	VL.	n/a to activity
5	8. Increased inputs of salts (salinization)	N/A	N/A	
0	<ol><li>Change (elevation) of water temperature</li></ol>	VL.	VL.	
	10. Pathogen inputs (i.e. disease-causing organisms)	VL.	VL.	
	1. Alteration to flow volumes	м	VL.	Stormwater Management Plan in place. Scale of developemtn is VL.
	2. Alteration of patterns of flows (increased flood peaks)	м	VL.	Stormwater Management Plan includes attenuation. Development footprint will not impact on channel.
Į.	3. Increase in sediment inputs & turbidity	L	VL.	Implementation of stormwater management.
<u> </u>	4. Increased nutrient inputs	м	L	Treated waste water effluent will flow dowlstream away from watercourse.
2	5. Inputs of toxic organic contaminants	L	L	Biodegradable detergents and body products will be used, and in insignificant quantities.
. <u>e</u>	<ol><li>Inputs of toxic heavy metal contaminants</li></ol>	VL.	VL.	
Ē	7. Alteration of acidity (pH)	VL.	VL.	
÷.	8. Increased inputs of salts (salinization)	VL.	VL.	
	<ol><li>Change (elevation) of water temperature</li></ol>	VL.	VL.	
	10. Pathogen inputs (i.e. disease-causing organisms)	L	L	
Desktop buffer requirement (m) 15 Note: This buffer does not cater for any important biodiversity features. It is also not designed to cater for a range of impacts other than those associated with lateral inputs. As such, this desktop buffer requirement should only be used to provide a course-level indication of potential setback requirements for the land use under consideration.				

MDS BUILDERS P.O. BOX 1000, ANERLEY, 4230 Cell: 082 372 6978 Email: <u>mdsbuilders@lantic.net</u>

Attention: João Da Silva

15 November 2022

Dear João

## ANNEX F: REHABILITATION OF PORTION 10 OF THE FARM FAGAZAAN NO. 17599, **UMNGENI LOCAL MUNICIPALITY**

Further to Kevan and my site visit with you yesterday, I would like to confirm our agreed upon remedial actions by means of annotations in the below photographs.



Figure 14: Plant kikuyu runners across the contours of the banks at the staff house/laundry and stabilise with geojute and 'intengus' at 0.5 – 1m intervals



Figure 15: Install rock gabions in wire cages underneath the wooden deck

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality



Figure 16: Plant kikuyu runners across the contours of the banks adjacent to the deck and stabilise with geojute and 'intengus' at 0.5 – 1m intervals



Figure 17: Terrace the pathway to a maximum width of 1.5m, using poles and surface with gravel. Plant kikuyu runners up to the pathways, across the contours and stabilise with geojute and 'intengus' at 0.5 – 1m intervals

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality



Figure 18: Other pathways on more gradual slopes do not need to be terraced, but should be gravelled to a maximum width of 1.5m. Kikuyu runners should be planted up to the pathways, across the contour.





Figure 19: Plant kikuyu runners across the contours of the banks at the main house and stabilise with geojute and 'intengus' at 0.5 – 1m intervals. The bare areas around the septic tank & soakaway should be planned with kikuyu across the contour, spaced a maximum

distance of 0.5 m apart.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality



Figure 20: Clear rubble and use it to fill erosion channels. Smooth bank and plant with kikuyu runners across the contours of the banks at the main house and stabilise with geojute and



'intengus' at 0.5 – 1m intervals.

Figure 21: Reslope more gently away from the watercourse and plant with kikuyu runners across the contours of the banks at the main house and stabilise with geojute and 'intengus' at 0.5 – 1m intervals.



Figure 22: This area should be planned with the Landscaping Consultant. As a temporary

Zunckel Ecological & Environmental Services

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

measure, either plant with kikuyu runners or seed with *Cynodon dactylon*. The channel should have rock packs installed at intervals of about 2 metres, with Red Hot Pokers planted behind them to dissipate the flow and trap silt.



Figure 24: Stabilise the bank at the main house by planting kikuyu runners across the contours with geojute and 'intengus' at 0.5 – 1m intervals.

We agreed that you would contact me at any time to discuss issues or if you need me to come out to site.

I hope that this clarifies what we discussed.

Yours sincerely

KL

Karen Zunckel Partner



Figure 23: Seed the driveway areas with *Cynodon dactylon* and install waterbars/pole drains at an angle of about 10°, which will trap the silt, but turn and direct the water to the downhill side of the slope.



S24G ASSESSMENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

## ANNEX G: EVIDENCE OF PUBLIC NOTIFICATION



Figure 25: Site notice put up at the entrance to the Fagazaan property on the P144 on 14 November 2022

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

Figure 26: Village Talk Advertisement, PAGE 10, FRIDAY, 18 NOVEMBER 2022

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

ANNEX H: BACKGROUND INFORMATION DOCUMENT

#### S24G ASSESSMENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

### ANNEX I: MINUTES OF PRE-APPLICATION MEETING



## **PRE-APPLICATION MEETING**

ZUNCKEL ECOLOGICAL & ENVIRONMENTAL SERVICES ON PORTION 10 OF THE FARM FAGAZAAN NO. 17599, UMNGENI LOCAL MUNICIPALITY9 November 2022, 10:00 – 11:30

## AGENDA

- 1. Introductions
- 2. Compliance Notice Status
- 3. Rehabilitation confirm
- 4. Developer's plans PAX for accommodation and restaurant; associated infrastructure
- 5. S24G what does it include (BAR &/or EMPr, specialist studies)
  - Fine?
- 6. Confirm which listed activities are relevant to s24G
  - Activity No. 6 of GNR 324 The development of resorts, lodges, hotels, [and] tourism or hospitality facilities that sleeps 15 people or more...
  - Activity 12 of GNR 327 the wooden deck over the dam and the wooden bridge over the adjacent watercourse, I concede that the extent exceeds 100m2
  - Activity 19 of GNR 327 the bare areas on steep slopes above the dam in the vicinity of the wooden deck. Total Cleared Areas 2107.95 m<sup>2</sup>.
  - Activity 27 of GNR 327 cleared areas are not on indigenous vegetation.
- 7. Way forward

## 1 INTRODUCTIONS

The meeting was attended online by:

- Xoli Madiba Xoli.Madiba@kznedtea.gov.za, Compliance Officer
- Busi Tshili Busi@busana.co.za, Developer / Applicant
- Nadia Tromp nadiat@ntsika.co.za, Project Manager / Architect
- Suzette Matthew & Dominic Pryce, Ntsika Architects
- Kevan Zunckel kevanzunckel@gmail.com, EAP
- Karen Zunckel karzunckel@gmail.com, EAP

## **2** COMPLIANCE NOTICE STATUS

Zunckel Ecological and Environmental Services' representation in response to the Notice of Intent to Issue a Compliance Notice has been accepted on the basis that the Applicant has chosen to take the section 24G (Rectification Application) route. EDTEA will issue a formal letter, stipulating requirements and a timeframe of 6 months for the s24G process in the next week.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

## **3** REHABILITATION

The Department believes that the proposed rehabilitation measures put forward are soft measures, and not permanent structures, and considering the high rainfall we are receiving, should go ahead without delay. The EAPs will liaise with the Contractor and Landscaper in this regard. It is assumed that a visit on site before and after implementation will suffice.

### 4 DEVELOPER'S PLANS

The Applicant would like to include more than 15 beds in the proposed tourism facility, without changing the size of the developed structures or the number of rooms, which amount to seven in the plans which were authorised in the SPLUMA authorisation. This triggers Activity No. 6 of GNR 324 'The development of resorts, lodges, hotels, [and] tourism or hospitality facilities that sleeps 15 people or more'. Since the footprint will remain the same (with no additional rooms), it can form part of the s24G application.

- Ntsika Architects will send the EAPs a table outlining types of rooms for staff and guests, how the original total of 14 was calculated, with the addition of a column detailing the new total of 57 beds.
- Ntsika Architects will clarify the definition of 'medium intensity' in the property's zonation -Agriculture and Rural Tourism 1.

## 5 CONFIRM WHICH LISTED ACTIVITIES ARE RELEVANT TO THE S24G

Clarity was reached that the 'Restaurant' mentioned is in fact part of the communal area in which dining and lounge areas are for lodge guests only, and will therefore be included in the s24G.

Likewise, the wedding and conference venue mentioned in the SPLUMA authorisation, forms part of the existing footprint, so can be included in the s24G Application.

The Department confirmed that Activity 27 of GNR 327 'clearing of indigenous vegetation...' is not triggered if cleared areas are not on old pastures and gardens.

The rehabilitation of the dam triggers Activity 19 of Listing Notice 1 (GNR 327) '...the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 m3 from a watercourse...'. Because it was not put forward as part of the original plans, it would need to form part of a normal EIA Application after the s24G has run its course. Where a s24G Application and normal EIA Application are being applied for, the Department prefers that the s24G Rectification Application is concluded first, because it is their experience that the public becomes confused with the two concurrent applications.

#### for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

## 6 S24G PROCESS

The EAP will compile an Assessment Report following the guidelines set out in s24G1 of the NEMA Regulations. The Department confirmed that screening is not required.

Specialist Studies might be required if the public participation process reveals the need for them. The Department confirmed that a Riparian Delineation will suffice, which can be done by the EAPs, rather than a Floodline Investigation undertaken by an engineer.

It is unclear at this stage whether a Water Use License Application (WULA) is required. The following information, which Ntsika Architects will send the EAPs may shed light on the matter:

- Comments from the Authorities, i.e. DWA and uMngeni Municipality, from the SPLUM Application.
- The Civil Engineer's Report detailing water provision and liquid waste treatment capacity for a lodge of 54 beds.
- > Confirmation of whether the borehole is licensed under General of Special Permit.
- > Contact details of neighbours within 100m of the property boundary.

Ms Madiba outlined the s24G process - Minutes of the EAP's representation on the Notice of Intention to Submit a Compliance Notice and the Pre-Application Meeting Minutes are sent to Head Office where they will be reviewed before a 24G1 Directive is issued, which may call for additional information. The compliance section will make factual representation to the Provincial Committee where a decision is reached and an administrative fine is issued. The Application then goes to the EIA section where a decision is issued. The Applicant may lodge an appeal to the MEC on the value of the fine, and it is up to the MEC's discretion whether or not to reduce the fine.

The site construction work is currently suspended. Work may not continue without a positive authorisation, unless there will be more negative environmental impacts as a result of incomplete work, in which case the Applicant can put forward a motivation to the Department. Continuation is at the Applicant's risk, as should the decision be negative and the directive is that part of the development should be demolished, it will result in their loss. No additional structures can be built until authorisation is granted.

The Public Participation Process will commence ASAP, taking into consideration the fact that from 15 December, no consultation is allowed. A Background Information Document, Newspaper Advertisement and Site Notices will be placed, allowing for at least 30 days before the 15 December. In the New Year, a draft Application will be circulated to Stakeholders and I&APs for comment before finalising and submitting it to the Department. The Department legally has no more than 107 days to review the application and issue a decision. It is then up to the EAP to notify all I&APs and advertise the decision in a local newspaper within 14 days of receiving the decision. Should the Applicant choose to lodge an appeal, the MEC has 90 days in which to finalise the appeal.

## 7 WAY FORWARD

The meeting was concluded by agreeing on all of the actions required, which have been outlined in these minutes.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

message

\_\_\_\_\_

wuncipan

On Fri, 27 Jan 2023 at 08:44, Xoli Madiba <Xoli.Madiba@kznedtea.gov.za> wrote:

Forwarded

#### Good morning Karen

\_\_\_\_\_

Please note that I am happy with the Minutes and that they are the true reflection of what was discussed.

I have attached the application form for the application of the Maintenance Management Plan.

I have also attached the copy of the Regulations that guides the s24G application process, including what the report must contain. In case the information submitted in the report is not adequate, a Directive is then issued, directing the Applicant to provide that specific information required.

In October 2022, the Department agreed to the mitigation measures proposed to stabilise the banks, and to prevent soil erosion on the steep slopes above the dam in the vicinity of the dam and the bank around Unit 4. The Department was of the impression that these measures had already been implemented. A Compliance Notice has already been drafted and will be issued with timeframes for the lodging of the s24G application and implementation of the mitigation measures.

I hope I have answered your questions, but should you require more information, please do so.

## ANNEX J: COMMENT AND RESPONSE REPORT

I&AP	COMMENT	RESPONSE
	BACKGROUND INFORMATION DOCUMENT DD AF	PRIL 2022
Joni Warburton Financial Director, Michaelhouse jonwar@michaelhouse.org 16 January 2023	<ul> <li>Michaelhouse will be requesting that the authority require the offending development to be removed, for the following reasons:</li> <li>57 beds is not a lodge or a bed and breakfast, but a hotel;</li> <li>There is a very big risk of pollution of the groundwater from the French drains;</li> <li>Far too many people simply develop and say sorry afterwards. If the developer is required to remove and make good this will be an example to other developers.</li> <li>The developer cannot claim that they did not know what was required as they had already been through the process once already and were aware of the limitations placed on the developer.</li> <li>A development of this size requires a needs assessment to ensure <ul> <li>That there is sufficient demand to make it sustainable, otherwise the community will be left with a failed development</li> <li>that the impact of the development on other bed and breakfast operations in the area does not render them unsustainable.</li> </ul> </li> <li>The developer is trying to obtain consent for the larger development via the back door as they were probably aware that they would not have been granted consent if they had applied for a development of this magnitude originally</li> </ul>	<ol> <li>Bed numbers have been reduced to 28.</li> <li>Septic Tank &amp; soakaway have been assessed by the specialist engineer and shows that the assimilation capacity is sufficient for the volumes of treated waste released into the environment. The position of the soakaway falls on the 15m riparian buffer. The operational functionality will be monitored proactively, as per the requirements of the EMPr.</li> <li>Applicant is following due process and will adhere to the decision of EDTEA.</li> <li><i>Ibid.</i></li> <li>Was done as part of the SPLUMA application.</li> <li>All subject to the legal process, the outcome of which is yet to be determined.</li> <li>SPLUMA Application showed this not to be the case.</li> </ol>
Kevern Sandalls Neighbour on Ptn 9 of Farm Fagazaan No. 17599 <u>kev@sandog.biz</u> Fri, 27 Jan, 20:38	I am very concerned about this ongoing development and the impact it has already had on the ecology and tranquillity of this valley we live in. I have had direct dealings with the owner, grounds staff and builder of the portion 10 development, and although they are all very pleasant people to deal with, they have not demonstrated the actions necessary to convince me that they have any intentions of being custodians and protectors of this pristine and fragile biome they now manage. The email compiled via the Balgowan Conservancy sums up most of my concerns, so I am including it in this mail together with the highlighted Spluma Application to which it refers.	<ul> <li>All potential impacts related to ecology and tranquillity have been assessed and mitigating measures have been specified and included in the EMPr.</li> <li>The management of this property, as a small-scale tourism venture, removes it from agricultural practice and thus provides the potential for enhanced conservation management to be applied. The owner is fully committed to the removal of IAPs.</li> <li>Comments of the conservancy have been responded to in this report.</li> <li>The legal process will determine if authorisation is granted or not.</li> <li>See second response above and note that neighbouring properties need</li> </ul>

I&AP	COMMENT	RESPONSE
	It is my sincere hope that the development on portion 10 will never exceed the original 15 guest Bed & Breakfast Accommodation for which they applied, and that the owner and developer will repair the arears in which they have already contravened multiple listed activity. I further hope that the owner will see this objection as a call to action to protect the ecosystems on this property (and portion 8 which they also own), and begin to address the issues which will move these properties away from their currently degrading state.	to demonstrate the commitment being called for here by the eradication of their infestations of invasive alien plants which are relatively light on the property in question.
Kevern Sandalls <u>kev@sandog.biz</u> Neighbour on Ptn 9 of Farm Fagazaan No. 17599 Mon, 6 Mar 2023 at 14:53,	<ul> <li>We have our Balgowan Conservancy board meeting tomorrow, and I was wandering if it would be possible for you to give us an update on the status of this S24G application on Fagazaan portion 10?</li> <li>As neighbours, the lack of activity and maintenance on portion 8 and 10 has been conspicuous!</li> <li>We are finding it increasingly destressing to see the prolific invasive species on the grasslands in the valley, and especially on the hilly slopes and along the edges of the indigenous forest!</li> <li>We have on multiple occasions in the past offered our help to deal with this ongoing work.</li> <li>These offers have included educating the new property groundsman, supplying our skilled staff to do the work, and helping oversee the work of controlling these invasive plants.</li> <li>All of these offers have been rejected, and I have been informed by the owner and the groundsman that they will get this work done!</li> <li>So far almost none of the invasive species have been managed since the new owner has taken possession of the properties a few years ago now!</li> <li>I know the previous owner of portion 8 (Paul Cryer) very well, and we helped him manage this plot for the years he owned it.</li> <li>This included keeping the Bug-weed and Bramble at bay without the use of any poison (as we have been doing on portion 9 for around 16 years now) because of the sensitive water catchment zone that a large percentage of these properties contain.</li> </ul>	Status of the s24G Application is that the draft Assessment Report is nearing completion, where after it will be circulated to I&APs and Stakeholders for comment. We have called for a noise control specialist study, and are waiting for the engineer's sewerage assessment and the landscaping plan. W.r.t. alien plant control on site, the owner has removed IAPs from site and the groundsman on site have been trained to implement and follow up the clearing. I am interested to know your method of control that does not use herbicides? I must point out, however, that our observation of the IAPs on site are not as significant as many of their neighbours.
	It is therefore becoming an increasing concern for us that portion 8 and 10 are being left to degenerate like this, and become a breeding ground for the invasive plant seeds that the birds are spreading and thus impacting all the surrounding properties (see pic of Bug-weed attached)!	All of the bare areas on site have been satisfactorily rehabilitated, under our guidance, with the exception of the gabions under the wooden deck, which are still outstanding. There has been no overflow from this dam this season, which is clean. I am not sure which dam you are referring to, because the applicant owns all of the properties with dams – Ptn 4, 6, 7,

I&AP	COMMENT	RESPONSE
	On another note, we have also experienced the worst runoff muddying of our dam (downstream of the portion 10 development) in the 16 years we have owned our property (see attached pic). This includes summers in which we have experienced higher rainfall than this year!	8, 10 & RE of the Farm Fagazaan No. 17599. Nevertheless, I am confident in saying that the muddying of the dam is not from Ptn 10 of Fagazaan, but more likely from the road, which has been badly churned up during the recent heavy rains, and heavy vehicles getting stuck.
	It is therefore our conclusion that this is quite possibly a result of the present developments platforms, banks and drainages being constructed precariously close to the streams in the catchment!?	I believe that the Balgowan Conservancy will be pleased to know that we have been in discussion with the Owner of Ptn 10 of Fagazaan, to manage the property such that its ecological value to the conservancy will be enhanced.
Kevern Sandalls <u>kev@sandog.biz</u> Neighbour on Ptn 9 of Farm Fagazaan No. 17599 Tue, 7 Mar 2023 at 09:07,	I am pleased to hear how thorough your originations oversite of the environmental aspects of this development is going to be. To your point of the IAP's on the surrounding properties, I will be sure to bring this up in our meeting – this serves as a good opportunity to help educate and bring the whole valley up to speed. I am also pleased to hear about the training of the groundsman. I will still however be waiting with anticipation for the clearing of the mentioned Bramble and Bug-weed, which the owner and groundsman have been aware of for years now! I am very happy to share our strategy and method of keeping these invasives at bay.	
	Regarding the water runoff: As I mentioned, I have been observing this catchment for over 16 years now. The clean dam you are referring to is not the issue. From our property we look down onto two smaller dams (on portion 8) and the main house, and it is this house plinth which I observed being extended to within a couple of meters of the stream which feeds these and our dam. The retaining wall behind the main house also had a drain directed into this stream. I am certain therefor that your confidence about the muddying of our dam not being from this site is misplaced? It is for this reason that I am also concerned about the large sewerage system which has been installed very close to this stream.	The stormwater runoff from the main house carries a minimal additional roof area of 134,57m <sup>2</sup> from Unit 4 and the Entertainment Area, via the same drain it always did, some 35m long to a discharge point which is intact, undisturbed and well vegetated. We have recommended that the drain be planted with <i>Knifophia</i> sp. and other water-loving species, to slow the runoff and promote infiltration. We are satisfied in the interim that sedges have established themselves and are performing the same function. The retaining wall has been put in place to stabilise the bank and prevent sediment from being washed off. The risk of the bank collapsing without the retaining wall is that much higher.
	I am well aware of the road above, the various changes which have been made to it over the years and its effect on the dams below. It is correct that some of the road drains into this catchment, however much of it leads away from this catchment, and vehicles seldom get stuck in this catchment area, but rather on the muddy section below the Cribbins farm	It has been our personal experience that a large truck and bakkie were stuck on the road above the said drainage line on 11 February 2023, having churned up the road causing considerable damage. Being a first order watercourse, with a steep gradient, its capacity to assimilate the volume of sediments generated from the road is very limited and it is

l an its e has mar	ing the N3. n pleased to hear that you think the property will be managed such that ecological value to the conservancy will be enhanced. However, again, it been my observed experience that with regard to the development and nagement so far, this has not been the case. we all know from the original development application, the developer	therefore highly likely that the muddying of your dam is as a result of drainage off the road. With the exception of soft rehabilitation measures that have been undertaken on site to deal with the cleared areas, all other activities have been put on hold, and will remain as such, until such time as a decision has been received from EDTEA. It is our belief that the Client did
and proj	d owner were well aware of the conditions necessary to advance this oject in accordance with environmental concerns – the went ahead as otravened them anyway!	not intentionally contravene the environmental legislation, but that any contravention was an oversight on their behalf. I trust that considered perspective will be passed on to your meeting today.
Neighbour on Ptn 9 of Farm Fagazaan No. 17599 Tue, 7 Mar 2023 at 11:57, It se hav issu proi You doe In to The Extr stre The Pile A fe orig Has Was gue The orig	ave been including the Conservancy secretary (Jess Young) in all these mmunications, and will continue to do so. eeems clear to me that you will continue to site examples where problems we been solved or not heavily impacted so as to gloss over the various ues that have been created and that may well represent continued oblems in the future. Aur single experience of a truck and bakkie stuck on this section of the road es not represent the norm – we have owned property here for 16 years. <b>Serms of the development on portion 10 so far:</b> e plinth WAS extended right up to the edge of the stream. ra drainage WAS dug by a TLB along the back of the house towards this eam. e sewerage system IS installed in close proximity to this stream. e driven pillars WERE installed through a watercourse. <b>Even questions which may also answer further queries of disregard for the ginal application:</b> is the development already exceeded the applications 14 guest capacity? is the intention always to develop a wedding venue or just the original 14 est B&B? ere are many more issues and questions that I as a layperson reading the ginal application can easily observe.	You have received the Background Information Document, which outlines the s24G Application process. We are busy with the process and are addressing each of these issues. Please allow us to continue with our independent assessment, of which you will receive a copy for review and comment.

I&AP	COMMENT	RESPONSE
	their own development application. As an I&AP and neighbour, I read through that application before the development began, and it was quite clear in its prerequisites. I therefore do not accept your 'belief' that the entire operation went ahead without the awareness of where they were contravening their very own application!	
Caroline Canderle 082 416 0195 lampara@mweb.co.za La Lampara Restaurant 28 Jan 2023	Water Consumption Limit on guest numbers Midlands has so many venues	See Section 5.1.4 Bed numbers have been reduced to 36. This is a competitive market. As long as there are 'bums in beds', it brings money and jobs to the local economy, and provides the opportunity for co-operation between operators. A viable tourism establishment has the potential to contribute meaningfully to the conservation of the property.
Sarah Richards Neighbour on Ptn 9 of Farm Fagazaan No. 17599 <u>sarah@sarahrichards.co.za</u> 29 Jan 2023	I personally checked the original plans at the uMngeni Municipality before the plans were approved and building started. The plans indicated that due to environmental considerations the venue would be a bed and breakfast to sleep 15 people max. Now it seems, without approved plans or EIA the venue has increased its capacity and may actually be a wedding venue to house 57 people.	A SPLUMA amendment will be lodged if and when environmental authorisation is granted.
	Although I understand everyone has their reasons and needs when developing property, I am concerned that this particular expansion from the original plan may effect many people as well as the wildlife and forest adversely.	Bed numbers have been reduced to 28. A viable tourism establishment has the potential to contribute meaningfully to the conservation of the property.
	Water pollution – this development is right at the top of a catchment area which feeds the valley below, both humans and wildlife . If there are 57 people staying there and added unspecified visitors to a wedding venue this could affect the catchment adversely unless controlled properly. On a personal note our borehole is only about 300m away from the main building, sewage and kitchens etc. We also have a small dam which is home to many creatures small and large.	Your property is upstream of the development. Therefore any potential water quality issues are unlikely to impact on your borehole. However, water quality testing from the dam you mention will be undertaken annually in the dry season to make sure that the Fagazaan tourism establishment is not polluting downstream water users.
	Noise pollution – There are several properties surrounding this property and not that far from the main venue 300 – 500m away. In such a quiet area sound travels. This will disturb the natural environment and the creatures in it. The venue is surrounded by indigenous forest. On a personal note – we heard all the building sounds made through the year of building – and they were even building on the weekend. I am concerned it will be even worse	Noise impacts have been assessed in Section 8 and mitigation measures put forward such that they are reduced to low during construction and medium-low during operation. Considering that this is not the only wedding venue in the area, noise disturbance is already part of the environment, which reduces the intensity, slightly.

I&AP	COMMENT	RESPONSE
	with loud music and praise singers and load speakers every weekend, into the night. The peace and tranquillity of this area will be affected and disturbed. Light Pollution – Light at night disturbs the small creatures and disturbs their natural cycles. Perhaps it could be suggested that sensors can be installed on all spot lights so they only turn on if there are people around. I have copied and pasted the points made by the Balgowan conservancy as I think they may phrase things better than I. Kind regards	The tourism facility is a conversion and extension of the original farm buildings where the architectural style is in keeping with the original buildings. External lighting will be downcast and motion-sensor detected. No significant visual impacts are perceived likely from the development. Comments of the conservancy have been responded to in this report.
	Sarah	
Darryl Wood Heaven's Gate Farm, Balgowan 083 994 7494 darryl-wood@outlook.com 29 Jan 2023	<ol> <li>Having read the history of the development, and the current situation, I would like to voice the following concerns.</li> <li>Downstream flooding into the streams, dams and wetlands off the development which is situated well within the 32m limit of multiple stream water lines.</li> <li>Downstream water contamination of wetlands, streams and dams from the sewage systems which have been placed well within the 32m limit of water lines.</li> <li>Overuse of groundwater capacity from the existing borehole to support such a large development and entertainment facility.</li> <li>Noise pollution from the large outdoor entertainment area which is in close proximity to a number of neighbours and indigenous fauna zones.</li> <li>Light pollution impacting neighbours and the indigenous fauna in the forest on which the development borders.</li> <li>Waste disposal pollution created by such a large resort considering that uMngeni has no collection service in the area.</li> <li>Staff considerations – housing, ablutions/sewer, waste removal, etc</li> <li>Increased traffic on already poorly maintained roads - staff, service providers, guests, etc.</li> <li>Corrosion where development at the dam has taken place.</li> <li>This developer has shown no consideration for legislation to date which makes it more likely that they will ignore it going forward and waste disposal in particular would need to be monitored to ensure that marked in the base fore starts.</li> </ol>	All of these concerns have been addressed in our response to the Balgowan Conservancy's comments below.
Margaret Klipp	proper disposal is taking place. Even for a smaller venue. Noise level – in the evening when sitting with our guests on the veranda we	Noise impacts have been assessed in Section 8 and mitigation measures
Neighbour, Willow & Lily B&B	can hear people talking on the property. I would imagine a wedding would	put forward such that they are reduced to low during construction and

I&AP	COMMENT	RESPONSE
info@willowandlily.co.za 30 January 2023	be very loud.	medium-low during operation. Considering that this is not the only wedding venue in the area, noise disturbance is already part of the environment, which reduces the intensity, slightly.
Jessica Leslie Young Secretary of The Balgowan Conservancy balgowanconservancy@gmail.com 30 July 2022	<ul> <li>We are the oldest conservancy in South Africa and our intention is the preservation of the Indigenous forests and grasslands in our sensitive biome. Having read the history of the development, and the current situation, I would like to voice the following concerns.</li> <li>Installation of security barriers and electric fencing which reduce the natural migration and movement of animals in the highly sensitive region.</li> <li>Use of insecticides and herbicides to preserve gardens but impact on the natural microbes in the soils and downstream.</li> <li>Downstream flooding into the streams, dams and wetlands off the development which is situated well within the 32m limit of multiple stream water lines.</li> <li>Downstream vater contamination of wetlands, streams and dams from the sewage systems which have been placed well within the 32m limit of water lines.</li> <li>Overuse of groundwater capacity from the existing borehole to support such a large development and entertainment facility.</li> <li>Noise pollution from the large outdoor entertainment area which is in close proximity to a number of neighbours and indigenous fauna zones.</li> <li>Light pollution impacting neighbours and the indigenous fauna in the forest on which the development borders.</li> <li>Waste management concerns including potential for pollution, considering that uMngeni has no collection service in the area.</li> <li>Staff considerations seem to be misleading. Further consideration required such as housing, ablutions/sewer, waste removal, etc.</li> <li>Increased traffic on already poorly maintained roads - staff, service providers, guests, etc.</li> <li>Lack of consideration in terms of the legislation. Fear of the likelihood that the developer will continue to ignore such legislation going forward. Waste disposal and human effluent in particular, need to be monitored to ensure that proper disposal is taking place. Even with the smaller venue in mind, this seems to have been ignored.</li> </ul>	<ul> <li>The sensitivity of the site has been assessed, and a viable tourism establishment has the potential to contribute more meaningfully to the conservation of the property than an economically unviable farm.</li> <li>None of the external barbed wire fences have been changed. Only the main house is surrounded by an electric fence.</li> <li>The developer is committed to implementing an indigenous landscaping palette and no insecticides will be used. Biodegradable cleaning and body products will be used, and herbicides will be used conservatively to control IAPs on site, which will improve biodiversity.</li> <li>All stormwater outlet points must be attenuated before entering watercourses.</li> <li>Septic Tank &amp; soakaway have been assessed by the specialist engineer and shows that the assimilation capacity is sufficient for the volumes of treated waste released into the environment. The position of the soakaway falls on the 15m riparian buffer. The operational functionality will be monitored proactively, as per the requirements of the EMPr.</li> <li>Water use has been assessed and limits have been put in place to ensure that 50 litres potable water is available for the workers during the operational phase. Bed numbers have been reduced to 28.</li> <li>Noise impacts have been assessed in Section 8 and mitigation measures put forward such that they are reduced to low during construction and medium-low during operation. Considering that this is not the environment, which reduces the intensity, slightly.</li> <li>The tourism facility is a conversion and extension of the original farm buildings. External lighting will be downcast and motionsensor detected. No significant visual impacts are perceived likely from the development.</li> </ul>

I&AP	COMMENT	RESPONSE
Gillian Addison Neighbour at Eqeleni – Portion of New Boschfontein 12011 gillian.addison@gmail.com 30 July 2022	The destruction of the natural environment and both fauna and flora Disturbance and pollution of water sources Light pollution disturbing neighbours and wildlife at night Noise pollution disturbing neighbours and wildlife. The devaluation of surrounding properties because of the above. As a part owner of Eqeleni – Portion of New Boschfontein 12011 which borders on Fagazaan and is above the property, this development will affect us very badly. The reason people live in Balgowan is for the peace, beauty, and environment of the area. Having a large wedding venue next door and	<ul> <li>Recycling Facility. Temporary storage will be in a caged, roofed and bunded area.</li> <li>9. New staff accommodation has been built for 8 staff members on site with a new septic tank and soakaway system. Solid waste will be dealt with as above.</li> <li>10. Provincial District Road P144 is a high standard provincial road capable of accommodating the traffic visiting the site.</li> <li>11. As an interim measure, soft rehabilitation of the bare areas by the planting of kikuyu runners across the contours of the banks adjacent to the wooden deck and bridge and stabilising with 'intengus' at 0.5 –1mintervals has successfully been implemented. Rock gabions in wire cages are being placed underneath the wooden deck. It is proposed that these pathwways will be terraced to a maximum width of 1.5m, using poles and surfaced with gravel.</li> <li>12. The EMPr will be upheld if authorisation is granted.</li> <li>All of these issues have been addressed.</li> <li>Enhanced conservation management could increase the value of the properties.</li> </ul>
Edward Coleman Glen Arum Farms <u>ed@glenarum.co.za</u> 30 Jan 2023	below will be very detrimental to the quality of life of the people and wildlife, the noise will have a severe impact, as will the lights at night. The value of the property will be severely affected. My father was one of the founding members of the Balgowan Conservancy and he would have fought this development tooth and nail as we will as part of his legacy. There are several natural watersources located on the said property, which come through Glen Arum and join the Mpofane River, feeding the Midmar water scheme. Sewer and waste water treatment, is a concern, the above streams also feed the underground water system, which has several boreholes feeding residences and reservoirs for drinking water for livestock and human consumption.	Septic Tank & soakaway have been assessed by the specialist engineer and shows that the assimilation capacity is sufficient for the volumes of treated waste released into the environment. The position of the soakaway falls outside of the 15m riparian buffer. The operational functionality will be monitored proactively, as per the requirements of the EMPr. Protection of the natural fauna and flora comes down to habitat
	What measures will be undertaken to protect the natural fauna a flora within the property?	management. An indigenous landscaping plan will be adopted; invasive alien plants are being cleared and will be continually managed; and

I&AP	COMMENT	RESPONSE
	How will noise and lighting from the said venue be controlled?	external fencing will remain barbed wire and porous to game. Noise impacts have been assessed in Section 8 and mitigation measures put forward such that they are reduced to low during construction and medium-low during operation. Considering that this is not the only wedding venue in the area, noise disturbance is already part of the environment, which reduces the intensity, slightly. The tourism facility is a conversion and extension of the original farm buildings. External lighting will be downcast and motion-sensor detected. No significant visual impacts are perceived likely from the development.
Dr Warwick Fraser 4 Duncan Lane Amberglen, Howick, 3290 Cell No: 084 7795375 Email: <u>warfras@gmail.com</u> 7 February 2023	I have been made aware of this development and the numerous problems it poses to the environment. My chief concern is the possibility of the developer ignoring legislation especially on waste disposal and human effluent. in particular. There is also the need for the consultant to fully assess each situation and find solutions to each problem.	Applicant is following due process and will adhere to the decision of EDTEA. Septic Tank & soakaway have been assessed by the specialist engineer and shows that the assimilation capacity is sufficient for the volumes of treated waste released into the environment. The position of the soakaway falls outside of the 15m riparian buffer. The operational functionality will be monitored proactively, as per the requirements of the EMPr. That's the intention of an environmental assessment and the authorities
	There is also the need to assess the viability of the development and consequences of it failing.	will assess whether this has been done adequately or not. Need and desirability has been done. It is not in the investor's interest to allow the development to fail.
Murray Armstrong Windermere Estate PO Box Canelands, 4344 Cell: 082 654 1325 Email: <u>astrong@iafrica.com</u> 18 April 2023	<ul> <li>My concerns about the Anganna Investment 177 (Pty) Ltd proposed development:</li> <li>1. With so many breaches of the conservation rules 'disregarded', what 'guarantee' is there that the applicant, who already has done major construction, will in future stick to the 'rules'.</li> <li>2. Who and how will this development be monitored now and in the future.</li> <li>3. Having had much experience with overflowing septic tanks recently, this is a 'danger', particularly so close to the streams and with so many people on site.</li> <li>4. The roads leading to the site are not designed for the sort of traffic that will develop, it is after all a country link road, and in wet weather can be very 'difficult' in places.</li> <li>5. There is development on the hill above this proposed site which has two very high flood lights beaming out at night which surely is out of place in a countryside such as the 'rural midlands', which was never considered in the 'original plan'.</li> </ul>	<ol> <li>The environmental legislation requirements are being addressed through this process.</li> <li>Compliance monitoring during the remainder of construction will be carried out by an independent environmental assessment practitioner.</li> <li>Septic Tank &amp; soakaway have been assessed by the specialist engineer and shows that the assimilation capacity is sufficient for the volumes of treated waste released into the environment.</li> <li>Provincial District Road P144 is a high standard provincial road capable of accommodating the traffic visiting the site.</li> <li>External lighting will be downcast and motion-sensor detected. No significant visual impacts are perceived likely from the development.</li> <li>All stormwater outlet points must be attenuated before entering watercourses.</li> </ol>

I&AP	COMMENT	RESPONSE
	6. With a much larger area now 'covered' more water wil have to be	
	disposed of, presumably into the stream as well, and taking all the 'bits	
	and pieces' with it.	
	DRAFT ASSESSMENT REPORT DD MAY 2023	
	1.	

## ANNEX K: EVIDENCE OF DISTRIBUTION OF DRAFT ASSESSMENT REPORT TO I&APS

Evidence will be provided in the FINAL ASSESSMENT REPORT.

S24G ASSESSMENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality ANNEX L: COPIES OF COMMENTS FROM EDTEA &

STAKEHOLDERS

#### S24G ASSESSMENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality ANNEX M: RECORDS OF SITE MEETINGS WITH

AUTHORITIES

At the time of submitting the Draft ASSESSMENT REPORT, no site meeting was called for by any of the authorities.

Comments will be reflected in Annex L as a record of the findings, should any site visit/s take place.

for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local

#### Municipality

## ANNEX N: SUMMARY OF QUANTIFIERS AND QUALIFIERS USED FOR ASSESSMENT PURPOSES

CAREGORY	RATING	EXPLANATION
	Low	The aspect has very little value in terms of its ecological importance e.g. a
Sensitivity of Aspect		highly disturbed area is rated as low);
/ Magnitude or	Medium	The aspect has certain qualities which make it ecologically valuable); or
intensity of impact:	High	The aspect is near pristine and has numerous qualities which make it extremely ecologically valuable).
	Short-term	Impact restricted to construction and early operation (0-5 years);
Duration (time	Medium-term	Impact will cease on closure of the site (6-30 years);
scale):	Long-term	Impacts will exist beyond the life of the site (>30 years); or
	Permanent	Impacts will have permanent potential.
	Site	The impact will be limited to within the site boundaries;
	Local	The impact will affect surrounding areas;
Geographic Spatial Scale:	Regional	The impact will affect areas far beyond the site boundary but limited to the Province of KwaZulu-Natal; or
	National	The impact will affect areas far beyond the site boundary within the South Africa.
Ci	Low	The impact will have a minimal effect on the environment;
Significance rating pre / post-	Medium	The impact will result in a measurable deterioration in the environment; or
mitigation:	High	The impact will cause a significant deterioration in the environment.
		Definite (>90%);
Desures of containty u		Probable (>70%);
Degree of certainty:		Possible (40%); or
		Unsure (<40%).
		No mitigation necessary;
	Full	Full mitigation/reversal of the impact is possible;
Mitigation:	Partial	Only partial mitigation/reversal of the impact is possible; or
	None	No mitigation or reversal of the impact is possible.

#### S24G ASSESSMENT REPORT for the tourism development on Portion 10 of the Farm Fagazaan No. 17599, uMngeni Local Municipality

ANNEX O: APPROVED SITE PLANS

## ANNEX P: CIVIL ENGINEERS' SEWERAGE REPORT

# ANNEX Q: OCCUTECH ENVIRONMENTAL NOISE SPECIALIST STUDY