

UMZIMKHULU LOCAL MUNICIPALITY
KwaZulu-Natal



Environmental Impact Assessment for uMzimkhulu Ext 8 Community Residential Housing (CRU) Project

Basic Assessment Report (DRAFT)



Prepared for



Address: 68 Fourth Avenue, Norwood
Mthatha, 5100
Postal Address: 926 Casabella Estate, Taylor
Road, Honeydew, 2040
Tel: 083-276-8088

Prepared by

BIZYCON PTY LTD

KZN: 15 Eugene Marais Road, Napierville, Pietermaritzburg 3200P O Box 1978 Pietermaritzburg 3200

GAUTENG: Unit 77, Block 4, Riversands Business Hub, Ext4 Fourways, Midrand

Tel +27 724641197 ♦ Fax 27- 86 776 33 25 ♦ Email maccarthy@developmentimpact.co.za

OCT 2022

DRAFT L BASIC ASSESSMENT REPORT

UMZIMKHULU EXT 8 CRU Housing Project

UMZIMKHULU LOCAL MUNICIPALITY

HARRY GWALA MUNICIPALITY

KWAZULU-NATAL

REPORT CONTROL			
Project Title	uMzimkhulu Ext 8 CRU Housing Project		
Date	Oct. 2022	Report Version	Draft BAR for Comments
Quality Control Aspects	Name	Capacity /Designation	Signature

EDTEA REF:

Authors	Mr MacCarthy Honu-Siabi	Environmental Practitioner	Assessment
	Fhumulani Mudau	Environmental Officer	

DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, HONU-SIABI, MACCARTHY (MR) declare that I –

- (a) act as the independent environmental practitioner in this application;
- (b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014;
- (c) do not have and will not have a vested interest in the proposed activity proceeding.
- (d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
- (e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
- (f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- (g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;
- (h) will keep a register of all interested and affected parties that participated in a public participation process; and
- (i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Signature of the Environmental Assessment Practitioner:

Name of company: Bizycon Pty Ltd

Date

31/10/2022

DETAILS OF THE EAP

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (yrs)
MacCarthy K Honu-Siabi	MSSC Development Studies (UKZN) Certs Environmental Impact Assessments (NWU) Cert: Post Decision Environmental Control (Auditing)(NWU)	IAIASA, SAMEA EAPSA (registration pending)	12 years in the field of Environmental management and Impact assessment
Fhumulani Mudau	BSc Environmental Science (UV)		4yrs in Environmental management

McCarthy Honu-Siabi

MSSc Development Studies: University of KwaZulu-Natal
Cert: Environmental Impact Assessment & Management: North West University:
Certs: Environmental Control and Monitoring: North West University
Certs; Project Management: University of KwaZulu-Natal
Bachelor of Management Studies: University of Cape Coast

McCarthy Honu-Siabi has been involved in projects relating to environmental impact assessment, social impact assessment and socio-economic planning, community developments, delivery of sanitation facilities, housing, planning; strategic and general service delivery. For the past five years he has been a project manager in teams of development professionals in the delivery and administration of several Housing Projects in both rural and urban areas of South Africa. He has worked on more than 65 Development projects, relating to environmental impact assessments, and strategic impact assessments. He therefore possesses vast experience which has assisted in the compilation of this report. MacCarthy currently work with Bizycon Pty Ltd, as a Senior EIA Consultant, working with many Government Agencies, and Municipalities and private sector developers and planners, on EIA related assessments, Strategic Development Planning and Environmental Management Frameworks and Strategic Development Frameworks among others.

NAMES AND EXPERTISE OF SPECIALISTS

Names and details of the expertise of each specialist that has contributed to this report:

Name of specialist	Education qualifications	Field of expertise	Title of specialist report/ s as attached in Appendix D

Summary of where requirements of Section 22 of the 2014 NEMA EIA Regulations (GN R 983, as amended) are provided in this Basic Assessment Report

Section Requirements	YES/NO	SECTION IN BAR
<p>Objective of the basic assessment process</p> <p>1) The objective of the basic assessment process is to scope the issues in the environment through a consultative process-</p> <p>(a) Determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;</p> <p>(b) Identify the alternatives considered, including the activity, location, and technology alternatives;</p> <p>(c) Describe the need and desirability of the proposed alternatives,</p> <p>(d) Through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic , heritage and cultural sensitivity of the sites and locations within sites and the risk impact of the proposed activity and technology alternatives on the these aspects to determine-</p> <p style="padding-left: 40px;">(i) The nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and</p> <p style="padding-left: 40px;">(ii) The degree to which these impacts-</p> <p style="padding-left: 80px;">(aa) Can be reversed</p> <p style="padding-left: 80px;">(bb) May cause irreplaceable loss of resources; and</p> <p style="padding-left: 80px;">(cc) Can be avoided, managed or mitigated;</p> <p>(e) Through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to-</p> <p style="padding-left: 40px;">i. Identify and motivate a preferred site, activity and technology alternatives;</p> <p style="padding-left: 40px;">ii. Identify suitable measures to avoid, manage or</p>	<p>YES</p>	

<p>mitigate identified impacts; and</p> <p>iii. Identify residual risks that need to be managed and monitored.</p>		
<p>Scope of assessment and content of basic assessment reports</p> <p>2) (1) A basic assessment report must contain the information that is necessary for the competent authority to consider and come to a decision on the application , and must include :</p> <p>(a) Details of:</p> <p>i. The EAP who prepared the report</p> <p>ii. The expertise of the EAP, including a curriculum vitae:</p>	YES	
<p>(b) The location of the activity , including:</p> <p>i. The 21 digit surveyor general code of ach cadastral land parcel;</p> <p>ii. Where available, the physical address and farm name;</p> <p>iii. Where the required information items i and ii is not available , the coordinates of the boundary of the property or properties;</p>	YES	
<p>(c) A plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale; or if it is-</p> <p>i. A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or on land where the property has not been defined , the coordinates within which the activity is to be undertaken;</p>	YES	
<p>(d) A description of the scope of the proposed activity, including all listed and specified activities triggered and being applied for; and a description of the activities to be undertaken associated structures and infrastructure;</p>	YES	
<p>(e) A description of the policy and legislative context within which the development is proposed including-</p> <p>i. An identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are</p>	YES	

<p>applicable to this activity and have been considered in the preparation of the report ; and</p> <p>II. How the proposed activity complies with and responds to the legislation and policy context, plans, guidelines, tools frameworks, and instruments;</p>		
(f) A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location;	YES	
(g) A motivation for the preferred site, activity and technology alternative;	YES	
(h) A full description of the process followed to reach the proposed preferred alternative within the site, including:	YES	
i. Details of all the alternatives considered;		
ii. Details of the public participation process undertaken in terms of regulation 41 of the regulations, including copies of the supporting documents and inputs	YES	
iii. A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;	YES	
iv. The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;	YES	
v. The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts (aa) and (bb) may cause irreplaceable loss of resources; and (cc) can be avoided, managed or mitigated	YES	
vi. The methodology used in determining and ranking the nature, significance, consequences, extent, duration, and probability of potential environmental impacts and risks associated with the alternatives;	YES	
vii. Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be	YES	

	affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;		
viii.	The possible mitigation measures that could be applied and level of residual risk	YES	
ix.	The outcomes of the site selection matrix;	YES	
x.	If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and	YES	
xi.	A concluding statement indicating the preferred alternatives, including preferred location of the activity.	YES	
(i)	A full description of the process undertaken to identify, assess and rank the impacts the activity will impose on the preferred location through the life of the activity, including- <ul style="list-style-type: none"> i. A description of all environmental issues and risks that were identified during the environmental impacts assessment process; and ii. An assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures; 	YES	
(J)	An assessment of each identified potentially significant impact and risk, including- <ul style="list-style-type: none"> (i) Cumulative impacts; (ii) The nature, significance and consequences of the impact and risk; (iii) The extent and duration of the impact and risk; (iv) The probability of the impact and risk occurring; (v) The degree to which the impact and risk can be reversed; (vi) The degree to which impact and risk may cause irreplaceable loss of resources; and (vii) The degree to which the impact and risk can be avoided, managed or mitigated; 	YES	

<p>(k) Where applicable, a summary of the findings and impacts managements measures identified in any specialist report complying with Appendix 6 to these Regulations and an indication as to how these findings and recommendations have been included in the final report;</p>	<p>YES</p>	
<p>(l) An environmental impact statement which contains-</p> <ul style="list-style-type: none"> (i) A summary of the key findings of the environmental impact assessment; (ii) A map at an appropriate scale which superimpose the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers; and (iii) A summary of the positive and negative impacts and risks of the proposed activity and identified alternatives; 	<p>YES</p>	
<p>(m) based on the assessment, and where applicable, impact management measures from specialist reports, the recording of the proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr;</p>	<p>YES</p>	
<p>(n) any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;</p>	<p>YES</p>	
<p>(o) a description of any assumptions, uncertainties, and gaps in knowledge which relate to the assessment and mitigation measures proposed;</p>	<p>YES</p>	
<p>(p) a reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;</p>	<p>YES</p>	

<p>(q) where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required, the date on which the activity will be concluded, and the post construction monitoring requirements finalised;</p>	<p>×</p>	
<p>(r) an undertaking under oath or affirmation by the EAP in relation to:</p> <ul style="list-style-type: none"> (i) the correctness of the information provided in the reports; (ii) the inclusion of comments and inputs from stakeholders and I&APs; (iii) the inclusion of inputs and recommendations from the specialist reports where relevant; and (iv) any information provided by the EAP to interested and affected parties any responses by the EAP to comments or inputs made by interested and affected parties; and 	<p>YES</p>	
<p>(s) where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts</p>	<p>×</p>	
<p>(t) any specific information that may be required by the competent authority; and</p>	<p>×</p>	
<p>(u) any other matters required in terms of section 24(4)(a) and (b) of the act.</p>	<p>×</p>	

TABLE OF CONTENTS

DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER.....	4
DETAILS OF THE EAP	5
NAMES AND EXPERTISE OF SPECIALISTS	6
Table of Contents	13
List of Figures.....	16
List of Tables	16
1. BACKGROUND.....	17
1.1 Introduction	17
1.2 Project SITE Location.....	17
2. Project & Activity Description.....	21
2.1 Listed Activities in terms of NEMA Regulations Dec 2014 as amended	25
Activities applied for	25
3. THE EIA METHODOLOGY: The Basic Assessment Process	27
3.1 The detail site analysis (BASIC ASSESSMENT).....	27
3.2 Field visits and data collection	28
3.3 Public participation requirements	28
4. CONSIDERATION OF LEGAL AND REGULATORY REQUIREMENTS.....	28
4.1 National Environmental Management Act (NEMA) Act 107 of 1998	28
4.2 Occupational Health and safety Act (ACT 85 of 1993).....	28
4.3 Development Facilitation Act (Act 67 of 1995).....	29
4.4 Conservation of Agricultural Resources Act (Act 43 of 1983).....	29
4.5 National Water Act (Act 36 of 1998).....	29
4.6 National Forest Act (ACT 84 OF 1998).....	29
4.7 National Heritage resources Act (Act 25 of 1999)	30
5. Need and desirability	30
6. Motivation for the proposed site, activity and technological alternatives	31
Site Alternative.....	31
Activity alternative	31

Technological Alternative.....	32
No-go Alternative.....	32
7. DESCRIPTION OF THE RECEIVING ENVIRONMENT	33
7.1 Physical characteristics	33
3.1 Topography and Slope.....	33
3.2 Wetlands and rivers and catchments.....	33
3.3 Vegetation	34
3.4 Current and Potential Land Use.....	38
3.5 Major Hazardous installations (MHI).....	38
3.6 Cultural/ Heritage Archaeological Resources.....	38
3.7 Availability of support infrastructure /Bulk services	38
3.8 Legal Barriers	39
7.4 Current and Potential Land Use	40
7.5 Major Hazardous installations (MHI)	40
7.6 Cultural/ Heritage.....	40
8. IMPACT IDENTIFICATION AND ASSESSMENT	41
Impact Assessment and Rating Criteria /Framework	41
8.1 Description of impacts identified.....	44
8.2 Constructional Stage	46
8.2.1 Summary Rating of potential impacts and their ratings Alternative A (Preferred alternative).....	46
8.2.2 Detail Significance rating of identified impacts	47
8.3 Operational Stage	64
8.3.1 Summary of potential impacts and their ratings.....	64
8.3.2 Details Of Impact Assessments At Operational Phase Proposal (Preffered Alternative)	65
8.4 No Go Alternative.....	75
9 CONCLUSIONS AND ENVIRONMENTAL IMPACT STATEMENT	78
10 RECOMMENDATIONS	81
11 Appendixes	84
Appendix 1 Project lo	85
Appendix 2 Public Participation report Public Participation report.....	92
1. INTRODUCTION	95
2. PUBLIC ADVERTISEMENT	95

3. BACKGROUND INFORMATION DOCUMENT (BID).....	95
4. PUBLIC MEETINGS.....	95
5. COMMENTS FROM STAKEHOLDERS.....	95
Site Notice.....	97
Newspaper advertisement	99
Background information Document (BID) and Distribution List.....	100
BID Distribution List	106
STAKEHOLDER COMMENTS AND REPOSSES	113
Appendix 3 Wetland habbitat assessment and ecological report.....	116
I. Glossary of Terms and Abbreviations (See Annexure A).....	119
II. Key to Acronyms	119
1.1. Background.....	120
1.2 Aims and objectives of the EMPr.....	120
1.2.1 Aim	120
1.2.2 Objectives.....	120
SECTION 2: REGULATORY / LEGISLATIVE CONTEXT	121
DEALING WITH NON-COMPLIANCE WITH THE EMPr (Penalties/ Incentives)	121
2.1 Key Legislation and Regulatory Requirements.....	121
2.1.1 National Environmental Management Act No. 107 of 1998	121
2.1.1.1 Penalties for non-compliance	121
2.1.1.2 National Heritage Resources Act No. 25 of 1999.....	122
2.1.1.2.1 Penalties for noncompliance	122
2.1.3 Occupational Health and Safety Act No. 85 of 1993.....	122
2.1.3.1 Penalties for noncompliance.....	122
2.1.4 Other necessary legislations but not limited to:.....	122
2.2 KEY ROLE PLAYERS AND THEIR RESPONSIBILITIES	122
SECTION 3: SENSITIVE AREAS OF THE PROJECT AREA.....	123
3.1 The Development site.....	123
3.2 Protecting the Integrity of the Ecosystem of the project site.....	123
3.4 Ensuring Health and safety	125
5. EMP CONCLUSIONS AND RECOMMENTATIONS	144
Detailed CV of EAP	149

LIST OF FIGURES

Figure 1 Site layout with sensitive areas that may be impacted (work across watercourses).	123
--	-----

LIST IF TABLES

Table 1 Listed Activities).....	25
Table 2 EMPr Impacts and Management Actions (Template adapted from CSIR, 2016).....	126

1. BACKGROUND

1.1 INTRODUCTION

uMzimkhulu Local Municipality in collaboration the Department of Human Settlement (funder), intend to undertake a Community Residential Units (CRU) housing development on Ext 8. This will include construction of about 300 Low Income Houses to be put in duplex and three to four story complexes for beneficiaries. The internal roads on the site were already constructed as part of the previous township development.

As part of the feasibility assessment and planning of the proposed development, Bizycon Ltd has been engaged through Nata Construction to conduct an environmental assessment for the proposed development

As per the provisions of the Environmental Impact Assessment (EIA) Regulations, December 2014, as amended, under the National Environmental Management Act- NEMA (Act 107 of 1998) an environmental impact assessment is required for the proposed developments prior to commencing any physical activities that fall within any of the listings within the notices.

As determined in the preliminary study undertaken 2018 by the EAP to determine applicability of the EIA regulations and need for EIA in terms of Chapter 4 of 2014 EIA Regulation (GNR 982) as amended 2017, Basic Assessment (BA) process is required to be followed towards environmental authorisation for the proposed development. This EIA is to identify the potential impacts of proposed activities on the biophysical and social environment (and *vice versa*) and to facilitate any necessary authorisation for such activity which may be triggered in terms of the regulations. This having provided adequate measures to address such impacts.

1.2 PROJECT SITE LOCATION

The site under consideration is currently vacant but surrounded by existing. The site was part of a previous township establishment, but was not developed then, due to various reasons. the site is situated on the Noter, western portion of the uMzimkhulu Town. Stie is accessible from the R56, turning off at the street, in front of the Municipal offices opposite the uMzimkhulu Mall. The GPS Coordinates of the site are 30°16'27.79"S and 29°56'27.48"E. Location of the proposed site is also depicted in Figure 1.

PROPERTY DESCRIPTION	Ext 8 of uMzimkhulu Town	
SG 21-DIGIT NO	NOES04200000152000000	
ZONING	Residential	
GPS POINTS		
	30°15' 27.33"S	29° 55' 45.38"E

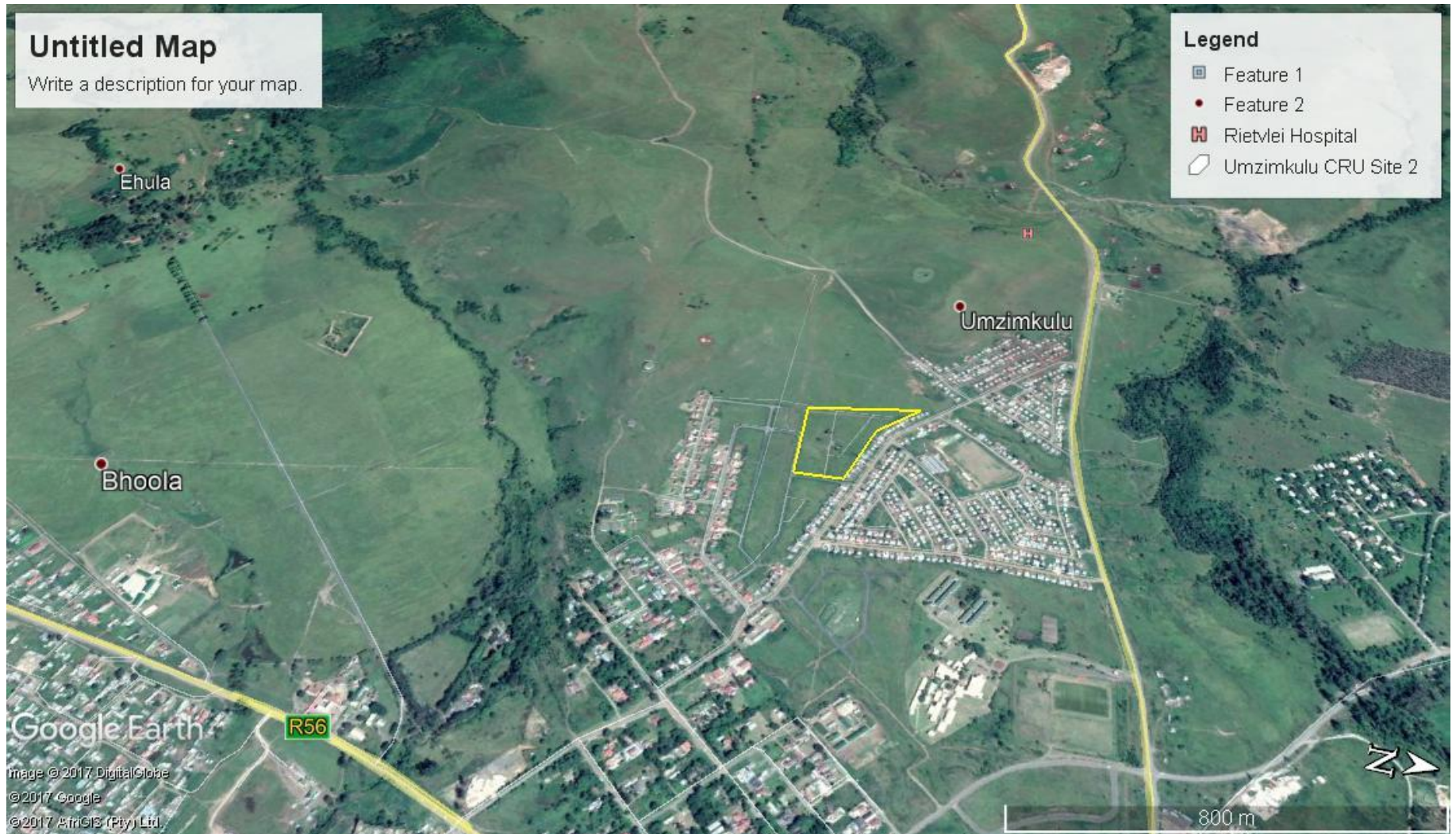
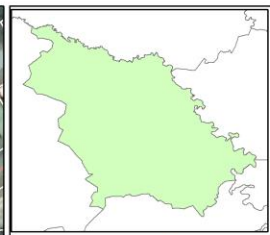


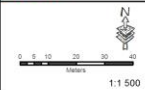
Figure 1 Site Locality



**CRU SITE
UMZIMKHULU LM**

Legend

- Place Names
- Streets
- CRU
- Cadastre
- Wards



Date: 2017/05/02

DISCLAIMER:
Umzimkhulu Municipality makes no warranty, representation, or guarantee of any kind regarding either any maps or other information provided herein or the sources of such maps or other information. Umzimkhulu Municipality specifically disclaims all representations or warranties, expressed or implied, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose.

Figure 2 Site Location, with evidence of inclusion in the previous township establishment.

2. PROJECT & ACTIVITY DESCRIPTION

A key part of government's theory of change on human settlement programme is to use housing as a vehicle to drive social and integrated settlement developments which allow for the provision of major services and access to urban amenities to communities in which such developments are implemented. In line with this purpose, the uMzimkhulu development will entail a holistic upgrade of the existing community.

The proposed development is being packaged in line with the Community residential Unit (CRU) Programme, to consist of 300 units

Housing /Ervens	<ul style="list-style-type: none"> • 300 residential units to be constructed in duplex complex formats semi-detached format. Typical units will be about 44.83m². Floor area for each block to be about 179m², on a total of 38836m² piece of land. • Option of increasing to 480 units as per layout 2.
Roads and Stormwater Mgt	<ul style="list-style-type: none"> • Stormwater Pipes to be used will range between 160mm - 250mm internal diameter PVC pipes for water and stormwater drainage.
Internal Roads network	<ul style="list-style-type: none"> • Roads are already constructed on the site, as part of the previous township establishment.
Water reticulation	<ul style="list-style-type: none"> • There are bulk water pipes available in the vicinity. • The pipe diameters of the network in the vicinity range from 75mm to 250mm and this will be applied to the proposed development. • The Water Treatment Plant next to the site has been upgraded hence the development is expected to be accommodated by the existing water provision.
Sewer	<ul style="list-style-type: none"> • There are formal bulk sewer services available in the vicinity of the study area.
Electricity	<ul style="list-style-type: none"> • The houses are already connected to electricity hence no special provision is required.

The consolidated layout / Master layout of the site is shown in Figure 3.

Layout 1 (300 CRU units)

UMZIMKULU

SCHEDULE OF RIGHTS RESIDENTIAL 1

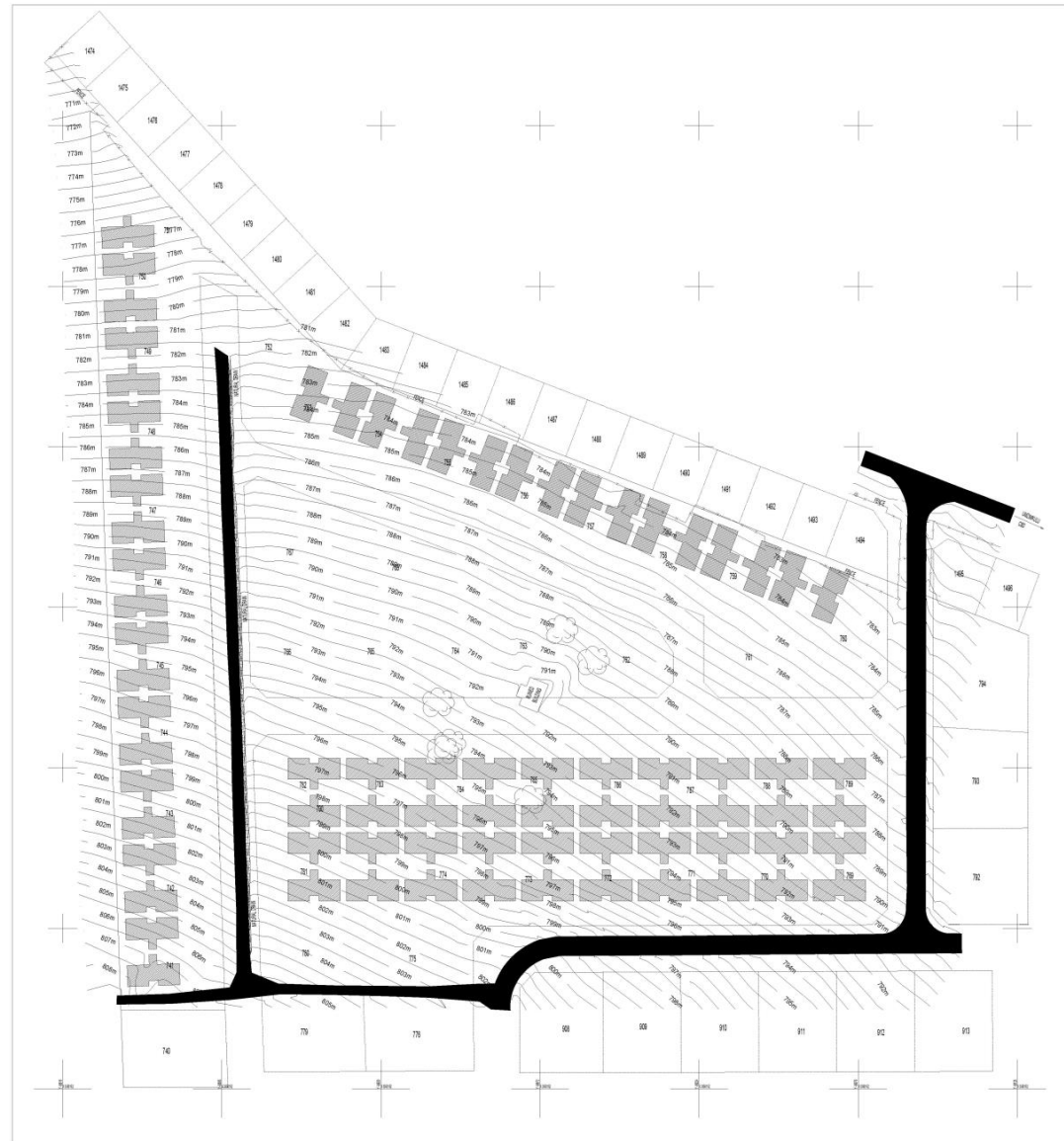
ZONE USE	RESIDENTIAL 1
AREA OF LAND	38836 m ²
LAND USE	NEW RESIDENTIAL
FLOOR AREA	TOTAL BLOCK AREA (TYPE A) = 13449m ² TOTAL AREA = 13449m ²
F.A.R	TOTAL BUILDING AREA = 13449m ² (0.35)
COVERAGE	TOTAL COVERAGE = 8969.25m ² (22.70%)

NUMBER OF UNITS

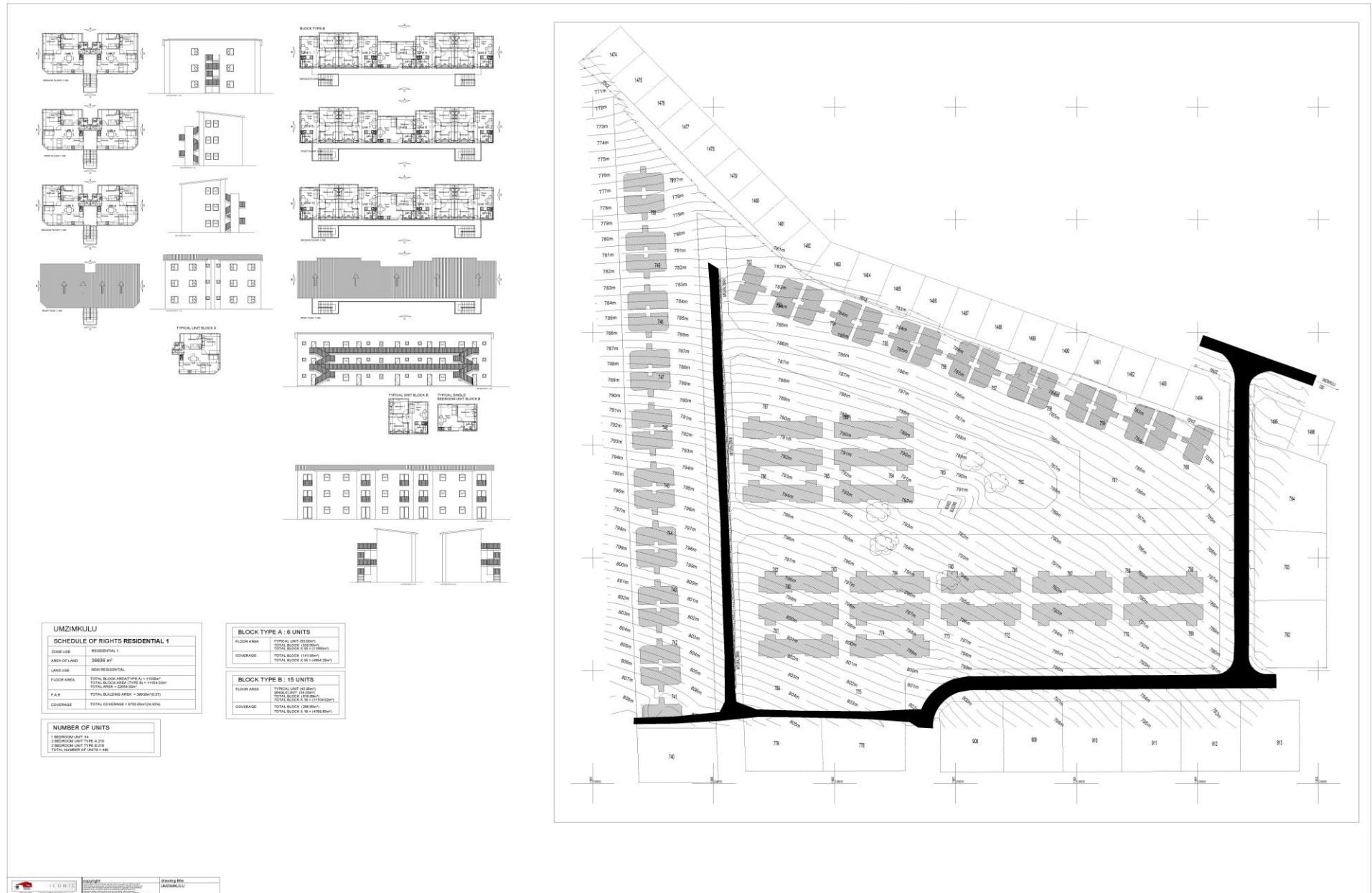
2 BEDROOM UNIT TYPE A.300
TOTAL NUMBER OF UNITS = 300

BLOCK TYPE A : 4 UNITS

FLOOR AREA	TYPICAL UNIT (44.83m ²) TOTAL BLOCK (179.32m ²) TOTAL BLOCK X 75 = (13449m ²)
COVERAGE	TOTAL BLOCK (119.59m ²) TOTAL BLOCK X 75 = (8969.25m ²)



Layout 2 (480 CRU Units)



2.1 LISTED ACTIVITIES IN TERMS OF NEMA REGULATIONS DEC 2014 AS AMENDED

The National Environmental Management Act 107 of 1998 is the legislative instrument that governs environmental implications in relation to development vis-à-vis sustainability and environmental management. Regulations have been developed to guide the implementation of the National Environmental Management Act, under which, are lists of activities that may require authorization from the relevant Environmental Department prior to implementation.

The implications of various aspects of the proposed development in terms of the regulations are discussed in the ensuing sections of this report. Determination of possible adverse impacts and mitigation would be an advantage to both the receiving environment and the beneficiaries. This report is also prepared in accordance with the environmental assessment requirements for housing projects as prescribed by the KZN Department of Human Settlement.

As per Chapter 3 and 4 of the Environmental impact Assessment Regulations 2014, as promulgated under the National Environmental Management Act (NEMA), Act 107 of 1998, a developer, upon crossing specified thresholds, must conduct environmental impacts assessment processes to obtain authorisation from a competent authority prior to the commencement of such activities. It is the duty of the EAP to determine if proposed activities fall within such schedule. Depending on the magnitude of the proposed activities, a Basic Assessment Process (under regulations 983) or a full scoping and EIA (under regulations 984) may be undertaken in terms of Section 24D .

From the screening of the activities proposed by the developer as detailed in the attached Preliminary Engineering report and layout, and as confirmed by the specialist studies undertaken, the following listed activities are noted, for which a Basic Assessment Process for authorisation is being undertaken. (Table 2).

ACTIVITIES APPLIED FOR

Table 1 Listed Activities)

- a. For an application for authorization that involves more than one listed or specified activity that, together, make up one development proposal, all the listed activities pertaining to this application must be indicated.

Indicate the Activity Number: Provide the relevant **Activity Listing** (ies) as set out in **Notice 1, 2 & 3** (GN R327, GNR325 & GNR324) **Describe each listed activity as per the project description (and not as per wording of the relevant Government Notice)¹:**

Act	Regulation	Activity No	Activity Description	Applicability to this project
-----	------------	-------------	----------------------	-------------------------------

¹Please note that this description should not be a repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description, i.e. describe the components of the desired development.

NEMA 1998 – EIA REGs April 2017 as amended	GNR 327 Listing Notice 1			
		12	The development of- vi) bulk storm water outlet structures exceeding 100 square metres in size;	Bulk pipes will be connected from the main water source to the reticulation pipes that connect the houses
		27	The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, 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 entire site consist of natural grassland which will be cleared for the proposed development which is about 3.4ha in total.
Listing Notice 3		12	Development of 300m2 of CBA zoned vegetation	Portion of the proposed site is categorised as CBA Optimal, but since the vegetation type is highly sensitive and about 1ha of it will be developed in addition to the areas not marked as sensitive.

Please note that any authorization that may result from this application will only cover activities specifically applied for.

3. THE EIA METHODOLOGY: THE BASIC ASSESSMENT PROCESS

The environmental impact assessment process as a whole is intended to provide information on the affected project area, to determine whether there are any fatal flaws that may militate against proposed development, to assess any positive factors that the development may take advantage of, identify alternatives at an early stage, facilitate consultation with all Interested and Affected Parties (I&APs) and key stakeholders, including specialists and to address the concerns of I&APs that may arise regarding the proposed development, thereby ensuring full public participation. This is to ensure a holistic planning approach that promotes full community engagement. A schematic representation of the basic Assessment (EIA) process is depicted in Figure 4.

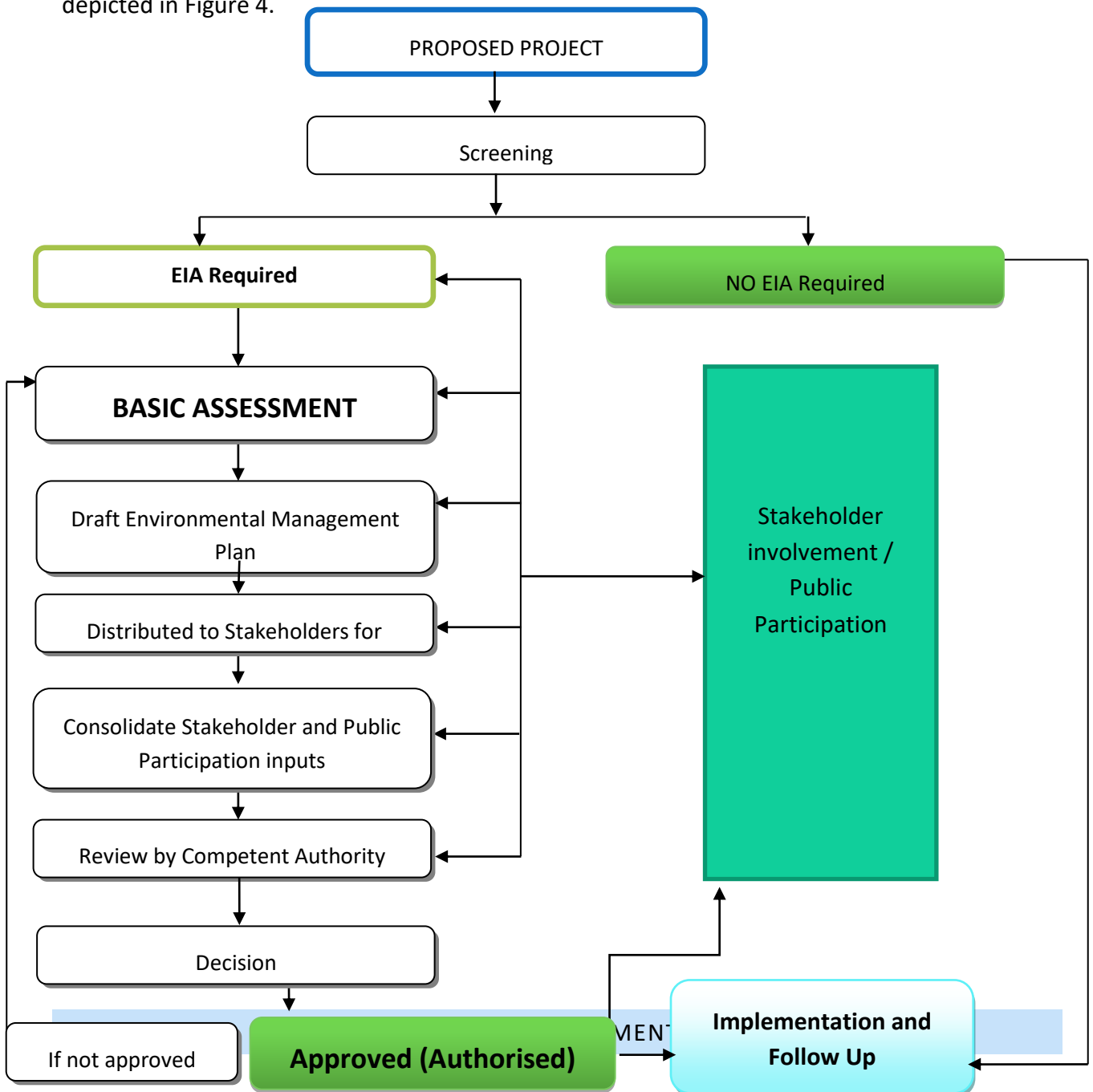


Figure 4 An illustration of the EIA Process flow (Source: Adapted from Aucamp J.P., 2010).

The project is currently at the detail environmental analysis and issue identification and assessment phase of the process. Public participation is fundamental at this stage phase because it assists the Environmental Assessment Practitioner (EAP) to identify, categorize, and recommend issues that are significant and what impacts they may have on the proposed development and Vice-versa in accordance with the guidelines contained in Regulation 327 and 325 of 2017, under the National Environmental Management Act 107 of 1998.

3.2 FIELD VISITS AND DATA COLLECTION

Field visits were conducted for two broad purposes namely collection of data for public participation and environmental assessment. Issues were identified using professional judgment, experience of similar projects, and previous knowledge of the study area, a review of available literature, public consultation, specialist input and consultation with relevant decision-making authorities. Additionally, specialist duties were conducted to identify and confirm the significance of some of the issues identified. –Reports on these are attached in appendix to this report.

3.3 PUBLIC PARTICIPATION REQUIREMENTS

The public participation process involved consultations with stakeholders, and the general public, neighbouring businesses, and stakeholders such as, South African National Biodiversity Institute (SANBI), The South African Heritage Resources Agency (SAHRA), and AMAFA Kwazulu-Natal, Department of Water and Sanitation (DWS) and all regional and local stakeholders. This draft report will be circulated for further comments, and these will be attached and integrated when received. Public participation report attached summarises the public participation process undertaken as part of this process.

4. CONSIDERATION OF LEGAL AND REGULATORY REQUIREMENTS

The following are some of the key legislations relevant to this development:

4.1 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA) ACT 107 OF 1998

The National Environmental Management Act 107 of 1998 has in terms of section 24 and 24D of the Act established regulations regarding the conduct of EIA processes made under section 24 (5) of the Act and published in Government Gazette 38282 of December 2014, as amended. These regulations published lists of activities (982, 983, 984 and 985) that require various levels of applications of EIA process. The section of the regulation that bears relevance to this project is R327, R325 and R324.

Under this regulation an environmental impact assessment, in this case, a basic assessment process is required, the elements of which are stipulated in relevant sections of the National Environmental Management Act 107 of 1998.

4.2 OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)

The specific requirements under this Act that are relevant to the proposed project are the regulations on Major Hazardous Installations (MHI) and their potential health and safety impacts. Section 9 of the MHI regulation, which came into force in 1999, requires that where practicable the developer shall prevent the establishment of developments adjacent to sites or areas that the MHI would potentially pose a hazard.

This Act also bears relevance to the National Environmental Management Act, which requires proponents of development to ensure a 'risk averse' approach where there is adequate information that a given development is associated with potential for health and safety risks to beneficiary and neighboring communities. Where a given development affects settlements, the requirement of this Act needs to be carefully and adequately integrated in the planning process.

4.3 DEVELOPMENT FACILITATION ACT (ACT 67 OF 1995)

The Development Facilitation Act was established to facilitate the speedy delivery of services and facilities to previously disadvantaged groups. However, enshrined in this Act is the provision that developers are to ensure that adequate provision is made for the assessment of the potential impacts that the development project is likely to have on the receiving environment, and provision made for the management of these impacts. The EIA process is therefore being undertaken in fulfillment of the requirements of this Act.

4.4 CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)

The objective of this Act is to provide for the conservation of natural resources by maintaining the production potential of land, combating and preventing erosion, preventing the weakening or destruction of water resources, protecting natural vegetation, and preventing and/or combating invader plants and weeds. The planning and implementation processes of the proposed project therefore will take cognizance of relevant provisions of this Act.

4.5 NATIONAL WATER ACT (ACT 36 OF 1998)

Current regulations regarding discharge of surface water requires that surface water is handled with care both in terms of quality and quantity before being discharged into any natural water course, so that the quality and flow rate of natural systems are not significantly disrupted.

The development under investigation is expected to generate large quantities of stormwater, consequently an accelerated run off at the discharge points. This Act requires that stormwater control measures are satisfactorily addressed, and a maintenance programme developed to ensure that stormwater discharge points and downstream impacts are effectively mitigated.

In addition, Section 21 the act National Water Act (Act 36 of 1998) also requires that a water-use license be obtained from the competent authority prior to undertaking certain activities for developments that are within 500m of a watercourse. In this case the project site accommodates a wetland and hence a Water Use License Application may need to be made with the Department of Water and Sanitation.

4.6 NATIONAL FOREST ACT (ACT 84 OF 1998)

The National Forest Act dictates the procedures and processes required for the protection of natural forests and forest trees. The relevance of this Act to the development under investigation is that the impact of the development on trees in the riparian vegetation on the site should be minimized as much as possible. Any removal of indigenous trees has to be authorized by the Department of Forestry.

4.7 NATIONAL HERITAGE RESOURCES ACT (ACT 25 OF 1999)

The National Heritage Resources Act (NHRA), Act No. 25 of 1999) defines a heritage resource as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Reports in fulfilment of Section 38(3) of the NHRA must include the following information:

- the identification and mapping of all heritage resources in the area affected;
- an assessment of the significance of such resources in terms of the heritage assessment criteria set out in regulations;
- an assessment of the impact of the development on such heritage resources;
- an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;
- the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;
- if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and
- plans for mitigation of any adverse effects during and after completion of the proposed development.

The Heritage Impact Assessment (HIA) is limited to the actions described above, i.e. identification of heritage resources and recommendations for their management, and does not include mitigation costs. The final report will be submitted to the relevant authorities responsible for heritage for assessment and approval.

5. NEED AND DESIRABILITY

The provision of services to local communities is part of government's initiative to improve service delivery and improve the livelihoods of such communities. This is being done through many means, from improving residential infrastructure, improving of roads infrastructure and extension of other vital services such as water, electricity, sanitation, and accessibility by emergency services. The project is noted to be part of a larger development approach to formalize the entire community, in phases according to the availability of funding. This development is one of these phases where additional infrastructure is provided to cater for the additional people who might need affordable housing infrastructure.

Other positive spillover developmental effects are expected to occur with the provision of these foundational infrastructure. In this case upgrade of roads infrastructure and provision of better housing infrastructure.

uMzimkhulu is a growing town, where more people are settling for economic opportunities, and improvised livelihood. This also requires the municipality to improve on the availability of service infrastructure. However, it is noted that not many are able to afford the cost of these improvements and settlements. Also, the rising number of the population is both a sign for speedy action as well as an opportunity for the municipality to initiate economic initiatives that will generate income, since the higher population may also lead to availability of market for housing. It is in favour of these needs of the people that this CRU housing is to be developed. The proposed typology is also desired, being a rental facility, to be a mean of generating some income for the local municipalities economy.

6. MOTIVATION FOR THE PROPOSED SITE, ACTIVITY AND TECHNOLOGICAL ALTERNATIVES

The EIA Regulations in the specification of the EIA process requires suitable and feasible alternatives to be provided, if possible, to the proposed activity as part of holistic planning. Chapter 1 of NGR 982 of 2014 defines alternatives to the proposed activity to mean a different means of meeting the general purpose of the requirements of the activity. These include alternatives in terms of:

- a) Property or location at which the proposed development is to occur,
- b) Type of activity to be undertaken.
- c) Design or layout of the activity
- d) Technology to be used in the activity or
- e) Operational aspects of the activity

The alternatives are also to include the option of not carrying out the proposed activity, which is popularly referred to as the “no-go alternative”. The impact assessment then is to include not only the desired alternative but also impacts of the identified alternatives. A summary is then provided of these alternatives to have an idea which will yield the most benefits with less undesirable impacts. It is also acknowledged that in some cases, where not suitable alternatives are feasible, then the proposed activity becomes the only alternative to the no-go alternative.

SITE ALTERNATIVE

Currently, the site proposed for the development is the area is vacant but surrounded by existing communities. Initially, another site was considered for this development, but was discarded due to the existence of households who were unwilling to move. This was considered a hindrance to the development and hence the current site is chosen.

ACTIVITY ALTERNATIVE

The proposed development entails the establishing of the functional residential community. This is an upgrade from the hostel format of housing, where the individuals can rent the apartments and pay subsidized fees as rentals. This is also different from RDP Housing typologies. For the purposes of gap housing, this is the only alternative housing format considered for this development at this stage.

Also, due to budget and time constraints and the developmental needs of the community, it is indicated that the proposed activity is the most suitable means of improving the community's current

outlook. In view of this no other activity alternative is considered as this is already an integrated service delivery project.

TECHNOLOGICAL ALTERNATIVE

Technological alternatives include the current ways of constructing houses by manually laying of bricks and using human labour in digging trenches laying pipes and covering them up. Roads construction will also be according to the current technological standards as per the transport sector regulations and budget parameters. No special technologies have been considered other than the current accepted technological ways of doing things as per the accepted standards. It is noted however that details of each technology employed will be approved by the project engineer prior to use.

NO-GO ALTERNATIVE

The no-go alternative to this development implies that the settlement upgrade does not take place. The areas where access and internal roads are in poor condition will remain as such, if not deteriorate. No water installations or additions will be made to the households. The status quo will simply remain, coupled with current community dissatisfaction with the state of services, leading to potential social unrests and protests. That is the current nature of the no-go alternative. This also implies that potential disturbance to wetlands and drainage lines within the neighborhood of the site may not occur due to this project (even though they may still be degraded by other developments, natural erosion phenomena or informal encroachment).

7. DESCRIPTION OF THE RECEIVING ENVIRONMENT

7.1 PHYSICAL CHARACTERISTICS

3.1 TOPOGRAPHY AND SLOPE

The topographical character of the site consists mainly of a gentle sloping terrain. The site slopes gently and does not consist of any steep slopes of beyond 1:3 within the development footprint. In terms of the implications for the proposed development, it is noted that development cannot be undertaken on slopes greater than 1:3. However, as per general residential development principles, all areas that are not steeper than 1:3 are potentially developable as far as slope is concerned. At this stage slope is not expected to be a hindrance for the proposed development.

3.2 WETLANDS AND RIVERS AND CATCHMENTS.

The proposed site falls within the immediate catchment of the Umzimkhulu River and its tributaries. One of such tributaries flows through the valley located north about 500m from the site. The river is associated with a broad basin with functional wetlands (Map 2) and riparian zones. However, the proposed site for this development does not fall within the active or functional wetland areas. It is noted that there are no rivers within 32m of the site boundary. Other than the drainage line that extends to the north-western outskirts of the site, the remaining sensitive hydrological areas are little far from the site, at least 550m – 700m.

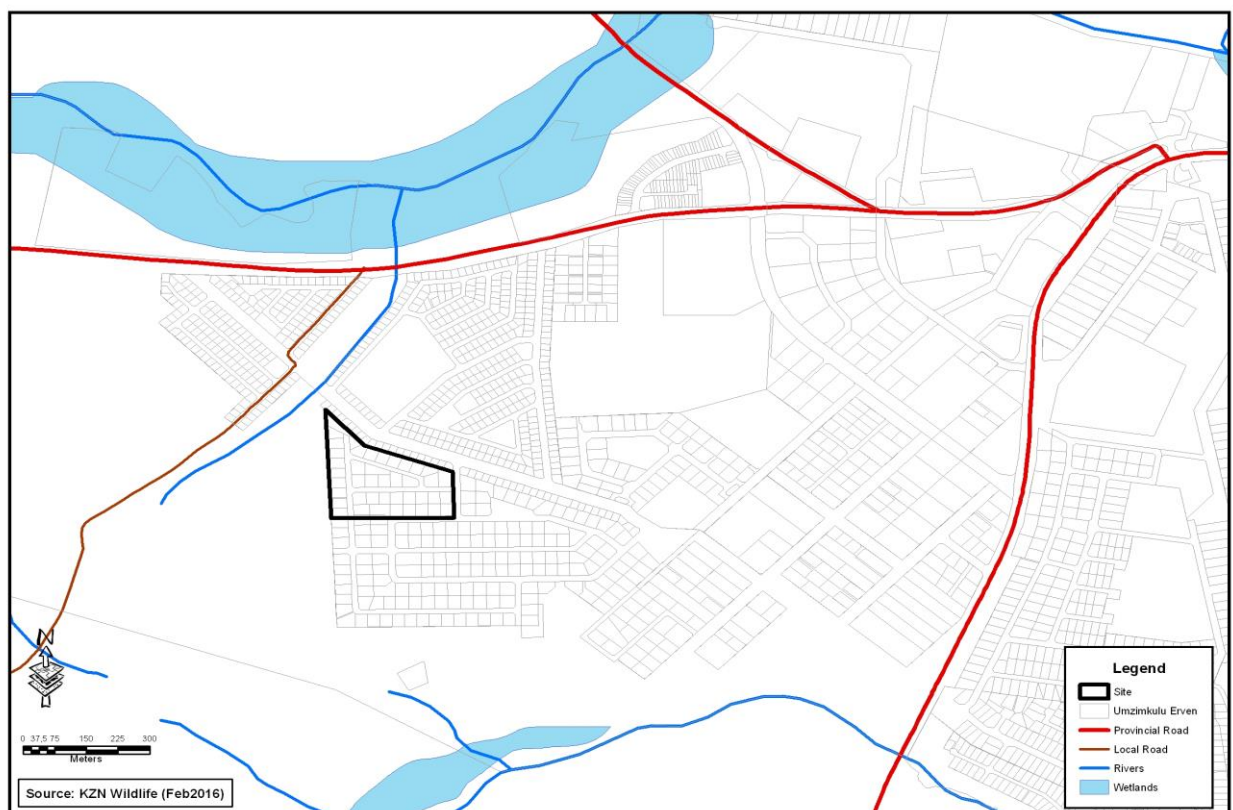


Figure 2. Map of the site and proximity to hydrological features

Implications for this development

The proposed site is outside wetland areas identified in the Environmental Management Framework prepared for the area. This was also verified through observation during site analysis. However, the principles of catchment system management require that all flood lines (1:100 year flood lines) and wetlands within the catchment need to be protected from possible degradation. In view of this, the following principles apply:

- 1:50 years, and 1:100 years flood line of all major rivers within the catchment should be established.
- No development is to occur within the 1:100 years flood line, (bearing in mind the 1:50 year floodline is a component of the 1:100 year floodline)
- No development is to occur within any wetland area or within the recommend buffers.

In the case of this development, it is observed that the site falls outside these development setback lines, hence it is likely that the site chosen is developable if necessary, precautions are observed.

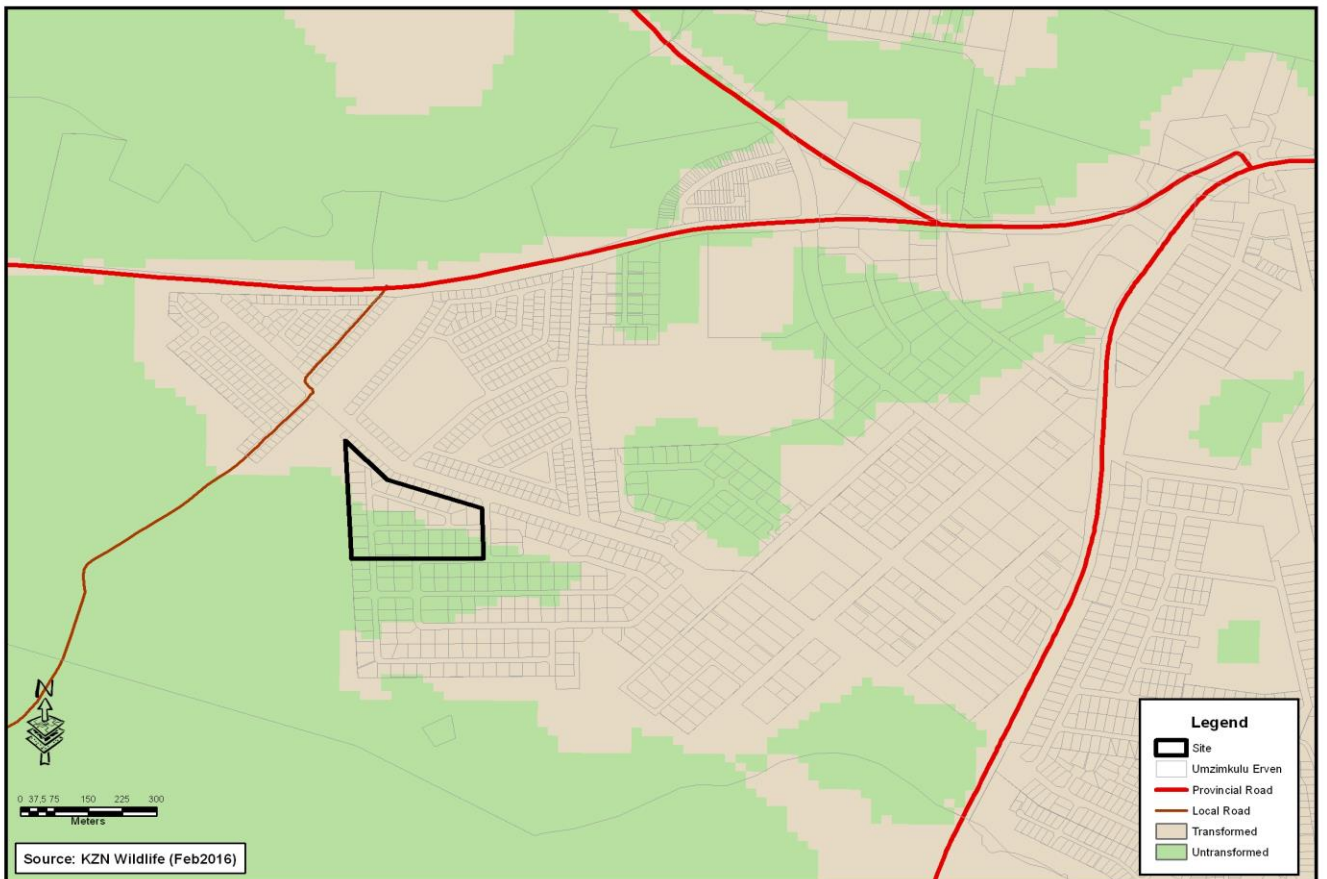
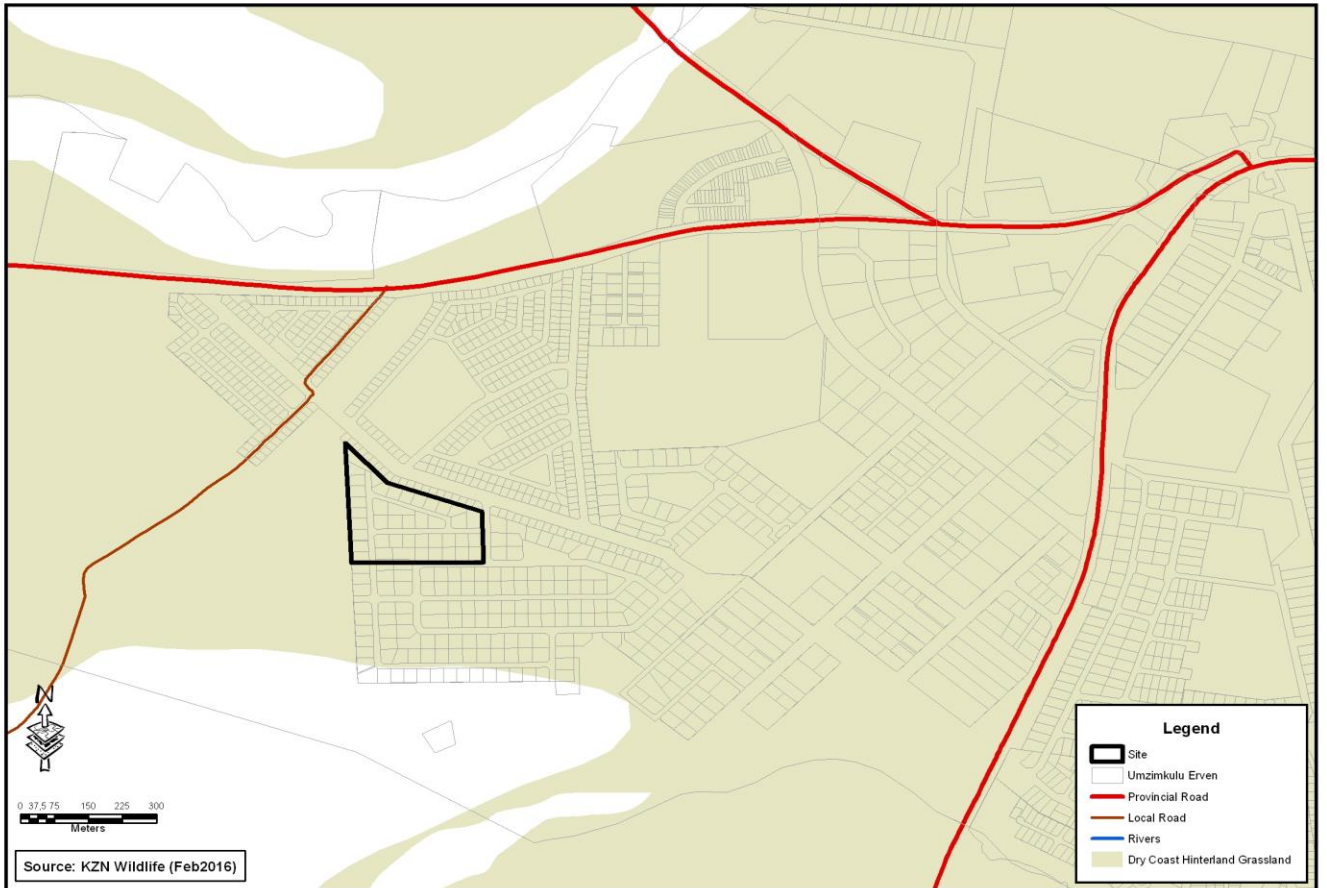
Given the proximity of the site to the watercourses (within 500m), there may be the need to apply for a Water use licence (WULA) in terms of Section 21 of the National Water Resources Act (Act 36 of 1998).

3.3 VEGETATION

The site is covered by vegetation type classified as the Dry Coast Hinterland Grassland (Ngogoni Veld), as indicated on Map 3. This vegetation type is currently listed as vulnerable in terms of conservation status. The character of this vegetation on the site is mainly grassland. The grassland was noted to be in relatively pristine and in indigenous form, with some form of disturbance, mainly from settlement activities. The internal roads for this development are already constructed, during the previous Township Establishment process. The ecological study undertaken for the EMF of the area also noted this status. Trees of are limited on the site, only few exotic trees were observed, including some eucalyptus, some of which were already felled as observed during site visit.

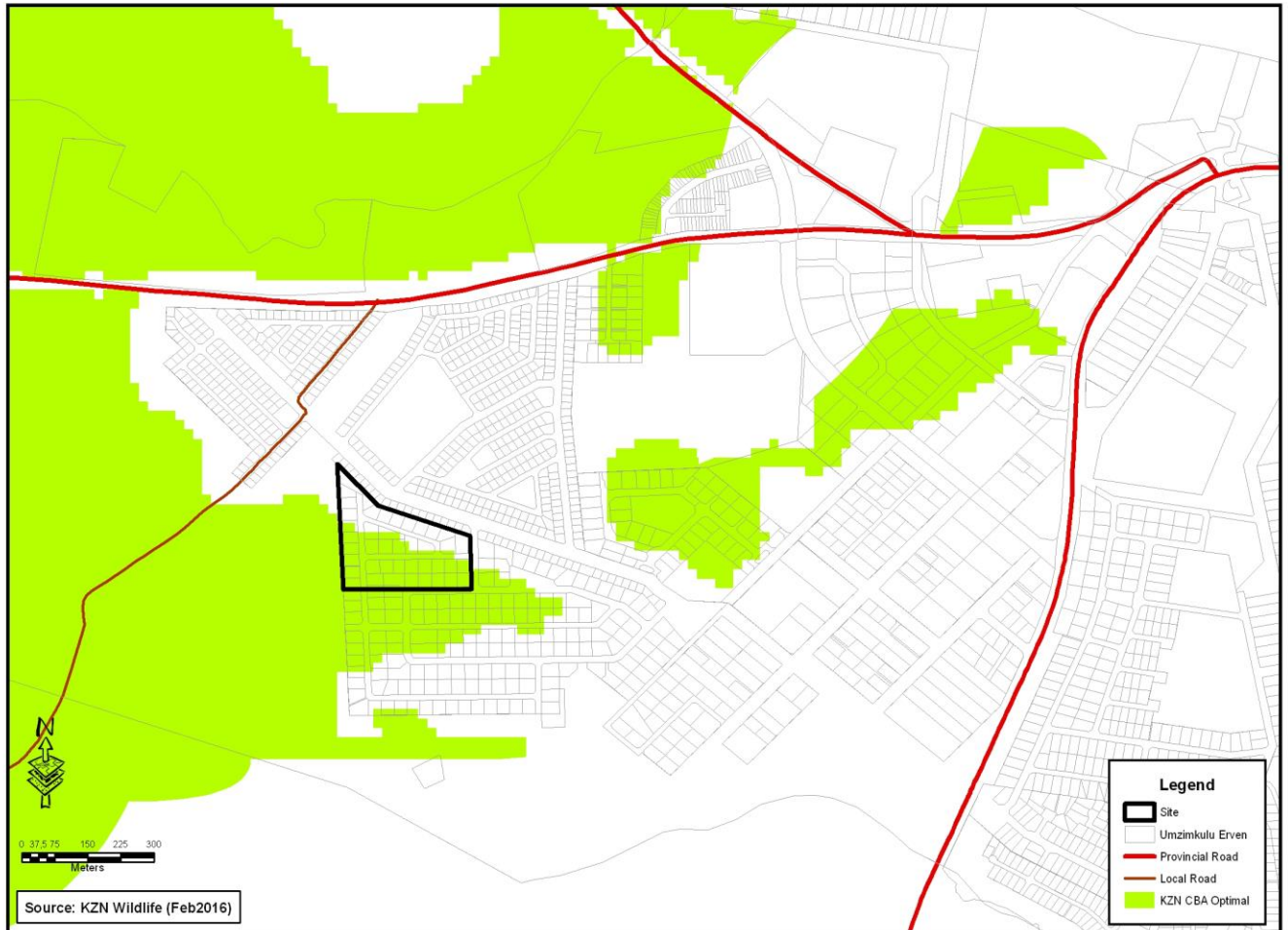


Figure 3 General Vegetation character of the site.





The general biodiversity information available on the site indicates that the most parts of the site does not fall within biodiversity priority zoning (See Map 4).



Implication for the proposed development

The proposed development will entail removal of the vegetation within the development boundary. This may have legal implications in terms of the environmental regulations. In terms of GNR 327 of NEMA, as published in December 2017, activity 27 requires an environmental authorisation is required for the clearance of more than 1 ha of indigenous vegetation for the purposes of commercial or residential development. This implies that an environmental authorisation may be required for the proposed development through an Environmental Impact Assessment process (Basic Assessment Process) in terms of Section 24 of NEMA (Act 107 of 1998), given that the development footprint is more than 1ha.

3.4 CURRENT AND POTENTIAL LAND USE

The site currently is mostly vacant land. The Environmental management Framework has zoned the area for residential, which resonates with the proposed development in terms of the planning scheme of the municipality.

Implications for the proposed Development

The proposed development appears to be in line with the planning scheme of the Municipality. Given the tendency of informal settlements to spout into vacant lands, the proposed development is perhaps a way of ensuring control and enforcing a barrier with the development boundary, to protect these surrounding sensitive environments.

3.5 MAJOR HAZARDOUS INSTALLATIONS (MHI)

This preliminary investigation did not reveal the presence of any MHI within the proposed area or within the immediate surroundings of the site.

Implications for the proposed development

No issues are expected in terms of such installations.

3.6 CULTURAL/ HERITAGE ARCHAEOLOGICAL RESOURCES

Site assessment did not readily identify any significant heritage resources in the area. However, the development of a vacant land may require input from Amafa KwaZulu Natali. It is also very likely that a Heritage Impact Study may be required, in terms of the National Heritage Resources Act (Act 35 of 1998).

Implications for the proposed development

There are no foreseeable issues relating to local cultural sites. Close collaboration between the development implementation agents and the community should be fostered in order to develop appropriate mitigation acceptable to both parties for local cultural sites. Key stakeholders such as Amafa will need to be consulted during the feasibility and packaging stages of the proposed development.

3.7 AVAILABILITY OF SUPPORT INFRASTRUCTURE /BULK SERVICES

The site currently is vacant but is located near the existing uMzimkhulu community. Electricity and Water infrastructure are located within the community. Also, the ability of the District municipality to service the site had been confirmed during the preparation of the EMF. This however was undertaken for the broader development framework of uMzimkhulu Town. Confirmation letters were obtained from the district municipality to this effect. As stated earlier, the road infrastructure on site has been put in previously in anticipation of the development. These are mostly tarred (asphalt) with only a short gravel road located along the western boundary of the site.



3.8 LEGAL BARRIERS

The proposed site is located in close proximity to very sensitive hydrological corridors, with highly significant biodiversity resources. Though the site is noted to be outside the recommended development setback lines, such as flood lines and wetland buffers, extra care or caution may be required when developing the site. It is established that the site is within at least 500m of watercourses. In addition, the site has some amount of indigenous vegetation, which if must be developed, may require environmental authorisation. The site is currently covered with derelict and untransformed vegetation.

Implications for the proposed development

The development of the site may have legal implications as it may need to comply with some key regulations. An environmental authorisation is required through an environmental impact assessment. In this case a Basic Assessment (BA) process as required by NEMA Regulations as published December 2014. This may take between 6 -12 months to complete. Also given that the site is within 500m of watercourses, a water use licence (WULA) may be required in terms of section 21 the National Water Resources Act (Act 36 of 1998).

7.4 CURRENT AND POTENTIAL LAND USE

Site is currently vacant but with road network established towards development as residential area. The proposed development thus seems the earmarked land use designated for the site.

7.5 MAJOR HAZARDOUS INSTALLATIONS (MHI)

This preliminary investigation did not reveal the presence of any MHI within the proposed area or within the immediate surroundings of the site.

Implications for the proposed development

No issues are expected in terms of such installations.

7.6 CULTURAL/ HERITAGE

An initial scan of the site did not reveal any sites or structures of historical importance. Even though the proposed site does not appear to have any significant heritage, or cultural issues, Amafa KwaZulu-Natali should be made a stakeholder any further EIA process. As per the EIA Regulations, a Heritage Impact Assessment (HIA) should be conducted for the transformation of undeveloped sites that are more than 500m² in extent. For this development, a clearance/comments from Amafa KwaZulu-Natali may be obtained from AMAFA during the public participation process.

8. IMPACT IDENTIFICATION AND ASSESSMENT

IMPACT ASSESSMENT AND RATING CRITERIA /FRAMEWORK

The impacts identified have been assessed and rated based on the rating criteria outlined by the Department of Environmental Affairs, as per the guideline documents to the EIA regulations (1998) as amended. This took into consideration the extent, duration, magnitude and probability of the impact occurring, in arriving at the overall significance of the identified impact. Below is a description the methodology utilized in ranking the identified impacts.

ASPECT	SCORE/DESCRIPTION	IMPLICATION
(a) Status		Negative impact i.e. at cost to the environment)
		Positive impact i.e. at benefit to the environment
		Neutral effect
(b) Extent	1 Site	Within the boundaries of the site
	2 Local area	Within 10km of the site
	3 Municipal Area	Within the Waterberg District Municipality and areas less than 100km
	4 Regional	Within the Province of Limpopo (or neighbouring Mpumalanga)
	5 National	South Africa
	6 international	Southern Africa
(c) Duration	1 Immediate / temporal	- < 1 year
	2 Short Term	1 – 5 years
	3 Medium term	6 -15 years
	4 Long term	The impact will cease when the operation stops

	5 Permanent	No mitigation measure will reduce the impact after construction
(d) Magnitude	0 None	Where the aspect will have no impact on the environment
	2 Minor	Where the effects of the environment is in such a way that natural, cultural and social functions or processes are not affected
	4 Low	Where the effects of the environment in such a way that natural, cultural and social functions or processes are slightly affected
	6 Moderate	Where the effects of the environment in such a way that natural, cultural and social functions or processes continue but in a modified way
	8 High	natural, cultural and social functions or processes are altered in such a way that they will temporarily cease or operate in a different way from usual for the duration of the activity
	10 Very high	natural, cultural and social functions or processes will cease or be altered permanently
(e) Possibility of resulting in Irreplaceable loss of resources	0 Very Low	Will not result in any irreversible or irreplaceable loss in resources
	1 Low	Likely to result is preventable and localized loss to resources
	2 Moderate	Most likely to cause loss if the project is implemented but can be moderately mitigated or avoided.
	3 High	Highly likely to cause long term loss as long as the project remains but can be reverted after decommissioning
	4 Very High	Will result in Permanent loss to resources
	6 Extremely High	Southern Africa and beyond (international)

(f) Probability of occurrence	0 None	Impact will not occur
	0.1 Improbable	Possibility of the impact materializing is very low as a result of design, historic experience or by virtue of implementation of adequate mitigation measures.
	0.25 Possible but unlikely	The is moderate chance that the impact will occur
	0.5 Probable	Impact may occur
	0.75 Highly probable	Occurrence is most likely
	1 Definite / unknown	The impact will occur regardless of the implementation of preventive or corrective actions, or where the probability that the impact will occur is unknown due to lack of information

(g) Significance weighting of the impact (S)

From the above descriptions, the potential impacts are assigned a significance weighting (S). This weighting is arrived at by adding the assigned scores of the extent (E), duration (D), possibility to cause Irreplaceable Loss of Resources (I) and magnitude (M) and multiplying the sum by the probability score (P).

Thus: $S = (E+D+M+I) \times P$

The overall significance weightings scores are categorized below:

SCORE	Description	Interpretation	Colour Code
≤ 2	Very Low		
2-5	Low		
5-10	Medium		
11 - ≤16	High		
	Positive		
	Negative		
	Positively High		

8.1 DESCRIPTION OF IMPACTS IDENTIFIED

IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

In terms of the criteria for identifying potential project impacts, it is important to list the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

For this proposed residential development at uMzimkhulu, the anticipated impacts associated with the proposed development have been identified and analysed using the mixed method approach. This includes site visits, consultation or interaction with key stakeholders, consultation of secondary information or literature, and independent assessment by the project environmental personnel and project officials. Direct impacts that may result from the proposed development include impacts on the biophysical environment, from construction activities such as site clearing, digging, building and installations of reticulation infrastructure.

Social impacts include employment and business opportunities that may open up to the local and neighbouring communities as well as satisfaction that may be derived from the upgrade in the community's outlook. Other impacts may result from the operational stages of the development. The list below includes the potential identified impacts of the proposed development.

Some of these impacts may occur at the various stages but with different intensities and extent, and significance. These are assessed in relation to the various stages of the development, specifically construction and operational stages. It is noted that no decommissioning is envisaged in the proposed activities of this development. From this context, no decommissioning impacts are identified.

Construction stage Impacts

Direct impacts

- 1) Potential loss of biodiversity during construction stage, due to vegetation removal
- 2) The loss of indigenous vegetation due to the removal of land cover
- 3) Impacts on Hydrological and watercourses
- 4) Noise impacts
- 5) Dust generation and Air pollution
- 6) Possible water pollution / Surface runoff /Stormwater pollution
- 7) Soil disturbance and possible erosion activities
- 8) Heritage/Cultural /historical surface sites
- 9) Visual /aesthetic view disruption
- 10) Hydrocarbon (oil) Spills
- 11) Traffic generation and disruption in normal community life
- 12) Health and Safety issues
- 13) Job Creation

Indirect / cumulative Impacts

- 14) Improvement in the livelihood of local community members
- 15) Potential impacts on local services

16) Assistance in the stimulation of local economy

17) Potential contamination from improper waste management

Operational Stage Impacts

- 1) Noise
- 2) Water pollution watercourses /
- 3) Soil disturbance and erosion activities
- 4) Dust and air pollution issues
- 5) Stormwater Management
- 6) Job creation
- 7) Visual and aesthetic impacts
- 8) Traffic issues
- 9) Health & Safety Issues
- 10) Impacts on local services
- 11) Benefits to the community

8.2 CONSTRUCTIONAL STAGE

8.2.1 SUMMARY RATING OF POTENTIAL IMPACTS AND THEIR RATINGS ALTERNATIVE A (PREFERRED ALTERNATIVE)

	Impact	Mitigation Required	Nature of Impact	Extent	Duration	Magnitude	Irreplaceable Loss of resources	Probability	Significance Score	
CONSTRUCTION STAGE										
1	Potential Loss of Biodiversity	Yes		1	5	4	4	0,25	3,5	
2	Loss of indigenous vegetation (Flora Impacts)	Yes		1	2	2	2	0,25	2,5	
3	Impact on fauna	Yes		2	5	4	0	0,25	2,75	
4	Impact on Hydrological Resources	Yes		2	4	4	0	0,5	8	
5	Noise Impacts	Yes		2	1	6	0	0,75	6,75	
6	Dust / Air Pollution	Yes		3	2	4	0	0,75	6,75	
7	Water Pollution/Surface runoff/Stormwater pollution	Yes		1	2	8	4	1	15	
8	Soil disturbances and possible degradation	None Required		3	2	6	0	1	11	
9	Cultural or historical surface sites	Yes		1	4	5	0	0,25	2,5	
10	Visual / Aesthetic impact	Yes		1	2	2	2	0,5	3,5	
11	Hydrocarbon Spills	Yes		2	1	8	2	0,5	6,5	
12	Traffic	Yes		2	2	4	0	0,5	4	
13	Health & Safety issues	Yes		2	2	6	0	0,5	5	
14	Job Creation	None required		3	2	6	0	0,75	8,25	
15	Improvement in livelihood of local community	None required		3	2	6	0	0,75	8,25	

16	Impact on Local services	Yes		3	2	4	0	0,5	4,5	
17	Benefits to local economy stimulation	None required		2	2	6	0	0,5	5	
17	Potential contamination from improper waste management	None required		2	2	6	1	0,5	5,5	
								93,5		
Mean Significance Rating								5,84375	0	

8.2.2 DETAIL SIGNIFICANCE RATING OF IDENTIFIED IMPACTS

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>Loss of critical biodiversity/habitat</p> <p>The existence of areas of high biodiversity integrity to accommodate critical habitats is very limited.</p> <p>No significant impact is expected on critical biodiversity from this proposed development given the site is relatively transformed, with only some regrown alien vegetation from previous settlement activities ..</p>	3.5 =Low	<p>Though the site has undergone some form of transformation, the grassland on the site still constitutes a good land cover. The removal of these without mitigation may lead to accelerated stormwater.</p> <p>Vegetation removal should only be as much as needed for the development</p>	Low	<p>Unnecessary encroachment on the areas on outskirts, may lead to degradation of the drainage line and disturbance of micro aquatic life within the catchment.</p> <p>These can be avoided by restricting development activity to the development footprint only and removing only the among of vegetation needed to contain the</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>the areas where vegetation exist, are not being included in the development hence no impact is expected. However, given the proximity of the shallow drainage to the development, care need to be taken not to disturb the neighbouring vegetation areas.</p>		<p>Appropriate stormwater management strategy needs to be implemented, to reduce stormwater velocity.</p> <p>During construction period, it is important to demarcate these areas off, to reduce any incidents of encroachment.</p> <p>No dumping of materials or turning of vehicles should be allowed.</p> <p>Any activity that will degrade the wetland area should be avoided.</p>		<p>development, while managing stormwater flow.</p>
<p>Loss of indigenous vegetation</p> <p>Most of the areas of indigenous vegetation in the site has been degraded.</p> <p>Disturbance of these surface cover may pave the ways for alien vegetation encroachment</p>	<p>2,5 Low</p>	<p>All areas that may be left bare during construction should be rehabilitated immediately with suitable vegetation (and approved by ECO and site Engineer) to avoid any alien species encroachment. This must be</p>	<p>Low</p>	<p>If all recommendations are adhered to, and monitoring of construction is strictly done, these issues should be avoided, bringing the potential impact to moderate to low. Vegetation in natural form is quite</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>and hardened surfaces as result of loss of landcover. Given that the development is to occur only within the existing or settled areas, no significant impact is expected on the indigenous vegetation.</p> <p>The only possibility of disturbance will be encroaching onto the neighbouring vegetation area due during construction.</p>		<p>monitored during construction and post construction.</p> <p>These the wetland areas need to be incorporated in the open space plan of the community and considered no-development zones.</p> <p>During construction period, it is important to demarcate these areas off, to reduce any incidents of encroachment.</p> <p>No dumping of materials or turning of vehicles should be allowed.</p> <p>Any activity that will degrade the wetland area should be avoided.</p>		<p>low in extent due to degradation, but the few areas of good grassland for domestic grazing could be lost or reduced.</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>Impact on fauna</p> <p>The proposed site is next to a settled community and is relatively transformed. There is only grassland on the site. Site visit and walkthrough does not reveal any significant fauna species, other than normal bird species that perch in the areas eating from illegal waste dumping.</p> <p>In view of this, impact on fauna is expected to be very minimal. Limited impacts may occur in the form of noise from machinery, but this is not expected to significantly disturb any fauna in the area.</p>	2,75 = Low	<p>Machinery with low noise levels to be used.</p> <p>Site activities should be conducted during daytime hours to avoid nighttime noise disturbances when people come home and want to rest.</p>	Low	<p>This impact is expected to be limited, given that the community is an existing one, and with the current density, so significant fauna is expected other than occasional birds and domestic animals such as dogs and goats.</p>
<p>Noise</p> <p>Construction stage noise will consist of noise and vibrations by vehicles moving materials and also construction workers. This is likely to cause some irritation to nearby households.</p>	6,75 = Medium	<p>Machinery should be kept in good working order to reduce noise emission. Noise reduction mechanisms should be equipped if necessary.</p>	Low	<p>Should the mitigation not be implemented, for instance where work is carried out into the night, then the nearby households may get irritated. This may be a source of</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>This is likely to last during the construction stage and daytime if all activities are restricted to day working hours.</p>		<p>The construction activities should be restricted to normal working hours and during the day, between 8 to 5pm.</p>		<p>nuisance to the community itself.</p>
<p>Dust / Air pollution</p> <p>Air pollution during the construction stage is likely to stem from dust and perhaps fumes and noise from vehicles.</p> <p>The air pollution will affect the employees and surrounding community. However this can be controlled or mitigated</p>	<p>6.75 = medium</p>	<p>Clearance of the site should be kept to a minimum, and uncovered soil should be kept moist to avoid dust generation.</p> <p>Construction vehicles and machinery utilised on site should be maintained and always be kept in good working order.</p> <p>Protective construction gears should be worn by workers on dusty days, and watering should be applied where necessary keep the ground moist.</p>	<p>Low</p>	<p>Polluted air, from dust and fumes or other sources is likely to be a nuisance to the community members. This may also pose a health risk if not mitigated.</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>Possible disturbance to hydrological resources:</p> <p>The site is largely devoid of rivers and major wetlands. However, it is bordered by shallow drainage lines and seepage areas. These have been identified. These have become the main channels for drainage and aquatic corridor into the river systems outside the site boundary. It is equally important to protect these areas from degradation.</p>	8	<p>Wetlands and watercourses are major hydrological systems that perform functions of flood attenuation and also serve as habitat for some aquatic microorganisms within the broader catchment. Appropriate protection is necessary for all valley systems and water-logged areas in the catchment. It is therefore recommended that a buffer of 30m be established along the open valley system identified along the western boundary of the proposed site.</p> <ul style="list-style-type: none"> It is further recommended that in order to augment the catchment efficiency of the area, at detailed planning level, buffers of between 20 m and 15 m be established along the other drainage lines to protect important or sensitive natural communities that are 	Low to moderate	Should the recommendations not be adhered to, possibility of encroaching on the wetland areas next to the site may result in wetland degradation. Cumulative impacts on these may be localized flooding, as these systems have become good channels for surface water management.

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		<p>specific to certain localities.</p> <p>No development should be allowed within the valley no-go areas.</p>		
<p>Underground water</p> <p>There is also the possibility of contamination of underground water as a result of soil pollution due to the usage of hazardous substance on the site.</p> <p>Mixing of cement and striped soils may pave the way for siltation into underground water, especially on rainy days during the construction phase.</p> <p>Surface runoff pollution</p> <p>Impact on surface water may be as a result of uncontrolled waste handling, including</p>	<p>15 = High</p>	<p>Equipment or tools with oil or grease is not allowed to be placed on bare ground.</p> <p>These must always be placed on a lined surface. Cement mixing will take place on a lined surface. No Cement should be mixed on a bare surface.</p> <p>Stockpiles of rubble and topsoil should not be left piled for more than a reasonable time, as may be stipulated in the EMP, but generally not more than 14 days on site. These should be</p>	<p>Low</p> <p>Low</p>	<p>Inappropriate handling of waste and hazardous substance on the site can reduce the quality of underground water</p> <p>Should there be no mitigation measures, possibility of storm water pollution during construction is likely to result. This however, is likely to be localized.</p>

POTENTIAL IMPACTS	SIGNIFICANC E RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICAN CE RATING OF IMPACTS AFTER MITIGATIO N:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>stockpiles.</p> <p>Storm water management</p> <p>Given the proposed development regards the removal of land cover in some cases, the potential to create more hardened surfaces is eminent. Storm water acceleration and localised ponding/flooding is likely to occur.</p> <p>In addition, spillage and waste could be other sources of pollution of storm water. This may lead to contamination of water bodies and underground water within the catchment system.</p>		<p>recycled where possible.</p> <p>A storm water management system, in terms of the National Building regulations needs to be implemented by the contracture in the building of the structures.</p> <p>Onsite, drainage systems to be provided. In addition, a stormwater management plan be designed and approved by the engineer prior to the commencement of construction works on the site.</p>	<p>Very Low</p>	<p>Should no mitigation be implemented, this may constitute poor stormwater management which may result in Issues such as localized ponding, sedimentation, erosion and pollution among other things.</p>
<p>Soil disturbance/erosion</p> <p>The proposed activity will result in further surface clearance, soil removal, which decreases soil stability and lead to loss of soil resources by erosion, contamination and</p> <p>Soil degradation will also cause an indirect</p>	<p>11=High</p>	<p>Cleared areas will be mostly occupied by residential units.</p> <p>In the case of areas cleared for pipes and other reticulation work, these need to be revegetated with indigenous vegetation following construction activities, and all</p>	<p>medium</p>	<p>Should the mitigation measures not be implemented, and then there is possibility of the impacts discussed occurring. There will also be additional impacts including air pollution by dust as results of diggings and top soil removal, and soil erosion will be high given the fact</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>impact on the loss of micro habitats.</p> <p>Soils that are left bare and rehabilitated, may become susceptible to erosion activities. It is noted that some areas within the drainage already shows signs of severe erosion occurring. Further removal of land cover without any</p>		<p>excavations will be backfilled with sub soil and topsoil in the reverse order to which the soil profiles were removed.</p> <p>All visible weeds should be removed from topsoil and placement area before replacing topsoil.</p> <p>Contaminated soil by spills should be removed and disposed of as hazardous waste at a licensed hazardous landfill facility.</p>		<p>that soil will be left bare exposed to wind and rain.</p>
<p>Cultural and Historical surface sites</p> <p>From this assessment, no significant heritage resources were identified. The site is currently bare, but with evidence of previous human activities, such farming and related activities.</p>	2=Low	<p>If any cultural or historical features discovered during the construction, the construction must stop immediately, and the remaining must be reported to the AMAFA KwaZulu-Natali and Research Institute.</p>	Very low	<p>Recommended level of</p>
<p>Visual / Aesthetic Impacts</p> <p>Visual impacts are likely to emanate from construction activities such as storage of</p>	3.5=Medium	<p>Material storage during operations should be done at designated areas, in order not to constitute any aesthetic</p>	low	<p>Visual Impacts is most likely to occur if mitigations are not considered which will disturb the eyes and mind</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>materials, and neglected excavations.</p> <p>Construction of roads may also result in considerable altering of the current looks of the areas along such footprints.</p>		<p>nuisance.</p> <p>Soil stockpiling and excavations should be worked on and the areas restored within reasonable time frames, to reduce the length of visual impacts.</p> <p>Roadworks should be undertaken according to construction standards, and no unnecessary blockings and erecting of structures should occur. Where such are necessary, they should be removed as soon as work is complete in that area. Visual friendly materials should be used in all cases.</p>		<p>of the community. This may cause nuisance also to road users etc.</p>
<p>Hydrocarbon spill/fuel</p> <p>Oil and fuel leaks and spills from construction vehicles is highly possible during construction phase. This is likely to contaminate storm water and also source possible contamination</p>	<p>6.5 = medium</p>	<p>Mitigation measures for this kind of risk includes prevention and management. Ideally, the spillage of such oils and fuels should be prevented at all cost.</p>	<p>low</p>	<p>If all the mitigation measures are implemented, the impact should remain low. However should this not be the case the risk of potential contamination is high. This may lead to contamination of underground</p>

POTENTIAL IMPACTS	SIGNIFICANC E RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICAN CE RATING OF IMPACTS AFTER MITIGATIO N:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>or pollution of the soil, if not properly managed or prevented.</p>		<p>But where any of such incidents occur, prompt remedial actions should be taken. Examples of which include cutting the site and disposing appropriately, say in a registered landfill.</p> <p>Where necessary all vehicles suspected with leakages should be undersealed with drip pans.</p> <p>Fuels and petroleum product storage should be undertaken and sealed hard surfaces, which are possibly lined, to prevent any dripping into the soil and grass.</p> <p>All foremen of operators of such vehicles should be educated on this, and the vehicles should be well maintained and checked regularly for any such leakages. The health and safety rules as stipulated by the department of health should be well</p>		<p>water, soil pollution and disturbance of the bio-equilibrium among other negative effects</p>

POTENTIAL IMPACTS	SIGNIFICANC E RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICAN CE RATING OF IMPACTS AFTER MITIGATIO N:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		enforced during the construction and operational faces.		
<p>Traffic</p> <p>Traffic during construction stage is likely to stem from the construction vehicles moving materials to and from the site, via the existing road networks and also the blocking of some roads, of lanes for construction work on such roads.</p> <p>This may cause some inconvenience to local residents. However, this is likely to be minimal given that the site can be accessed via different routes.</p>	<p>4=Low</p>	<p>Traffic control officers should be appointed to control the flow of traffic on the road to avoid such inconvenience.</p> <p>This kind of inconvenience can also be avoided by using alternative routes and proper planning of road diversions is necessary.</p> <p>Road closures and diversions and traffic disruption should be avoided as much as possible, and where such are necessary, should be within minimal durations to allow normal flow of traffic.</p> <p>Proper signage should accompany any planned roadworks, and disruption of traffic</p>	<p>Very low</p>	<p>If the mitigation measures are not implemented, there will be a high chance of unnecessary traffic disruption.</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>Health & Safety</p> <p>The movement of machinery, storage of materials, and excavations are possible sources of safety issues during construction stage.</p> <p>Neglect to any health and safety measures may result in injury to both workers and any other persons who may find themselves on this site. This requires a strict enforcement of the national health and safety regulations pertaining to construction sites.</p>	<p>5 =Low</p>	<p>The risks of accidents and injury can be minimized by the implementation of safety procedures. Proper health and safety measures should be put in place during the implementation of the proposed development.</p> <p>Health and safety plan should be prepared and approved by the engineer prior to construction. The Occupational health and safety procedures as outlined by the department of Health should be put in place prior to the commencement of work. Safety equipment such as fire extinguishers,</p> <p>First Aid boxes, and other safety appliances should be readily available and administered by a trained safety officer.</p> <p>Proper safety measures also need to</p>	<p>Very low</p>	<p>Should these mitigation measures not put in place, these may constitute violation of the health and safety regulations. This may also leave workers exposed to all kinds of risks. Should any incident occur, this may lead to prolonged waiting for help, which may lead to loss of property for, instance in the case of fire.</p>

POTENTIAL IMPACTS	SIGNIFICANC E RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICAN CE RATING OF IMPACTS AFTER MITIGATIO N:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		be implemented with areas of dug trenches barricaded off.		
<p>Job creation</p> <p>The construction phase of the proposed development is likely to create temporary additional jobs for the local area. Jobs will be created during construction as labours, masons and other workers may be required.</p> <p>This is likely to impact positively on the local economy as more people getting employment may spiral some level of livelihood improvement</p> <p>Layout 1: All the above employment will be generated. About 35 – 50 labourers may be employed for the duration of the proposed development.</p> <p>For Layout Alternative two:</p> <p>This layout proposed more units to be built,</p>	<p>8.5 =medium</p>	<p>No mitigation is required</p>	<p>High</p>	<p>N/A</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>to be about 480 or more. This will mean that the embayment duration will be longer compared to the preferred layout, where only 300 units are proposed.</p>				
<p>Improvement in livelihood of local community</p> <p>The temporal income generated may contribute to household life improvement in the short term.</p> <p>In the long term however, local people will gain skills that will help them on their future and they will stand a better chance of being hired when the development of this kind happens again.</p>	<p>8,5=Medium</p>	<p>None required</p>	<p>Medium</p>	<p>N/A</p>

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>Impact on Local services</p> <p>Given that the development includes an upgrade of the existing community, most of the local services such as water and electricity resources are expected to aid the development process.</p> <p>Also some services such as road usage and water connections may be disrupted temporarily during construction.</p>	4.5 = Low	<p>Given the proposed technology that involve mostly manual or human labour and auto-powered machines and construction vehicles, the impact is expected to be low.</p> <p>Any disruption in services, should be preceded with ample and adequate notifications of the affected areas.</p> <p>Services should be restored within the shortest possible time.</p>	Low	Disruption in services without adequate notification may be a source of irritation for affected community. However, with proper mitigation measures, these should be mitigated.
<p>Benefits to local Economy</p> <p>The spill over of the construction stage employment and sourcing of materials from local suppliers will go a long way in providing socio-economic benefit to the community as a whole.</p> <p>More income in the pocket of community</p>	5=Medium	None required	Medium	N/A

POTENTIAL IMPACTS	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE)	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>members means, more purchasing power, leading to the stirring of economic activity in the local economy.</p> <p>In addition, access and improvement of bus routes will also empower easy movements within the community making people go about their daily business with much ease, thereby improving efficiency of any existing economic activities.</p>				

8.3 OPERATIONAL STAGE

8.3.1 SUMMARY OF POTENTIAL IMPACTS AND THEIR RATINGS

	OPERATIONAL STAGE								
	Impact	Mitigation Required	Nature of Impact	Extent	Duration	Magnitude	Irreplaceable Loss of resources	Probability	Significance Score
1	Noise	Yes		1	1	2	0	0,25	1
2	Water pollution (water courses)	Yes		3	4	4	1	0,25	3
3	Soil disturbance /Erosion	Yes		1	1	4	1	0,5	3,5
4	Air Pollution	Yes		2	3	2	1	0,5	4
5	Stormwater management	Yes		3	2	6	1	0,25	3
6	Job Creation	None Required		3	4	6	0	0,5	6,5
7	Visual / Aesthetic impact	Yes		1	4	0	0	0,5	2,5
8	Traffic	Yes		2	1	4	0	0,5	3,5
9	Safety	Yes		1	2	4	0	0,5	3,5
10	Impact on Local services	Yes		3	4	4	0	0,5	5,5
11	Benefits to local economy	None Required		4	4	8	0	1	7,84
									47
	Mean impact rating								3,3079

8.3.2 DETAILS OF IMPACT ASSESSMENTS AT OPERATIONAL PHASE PROPOSAL (PREFERRED ALTERNATIVE)

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>1. Noise</p> <p>Noise levels are likely to be back to normal during the operational stage.</p> <p>The people who are to benefit from the proposed development are members of the community, hence it is expected that they will live in the same harmony and lifestyle as would now come to exist in the new development. It is therefore not expected that noise levels should increase beyond normal residential levels. However, should there not be management put in place, some radical behaviours may develop overtime.</p>	<p>Score 1 = Low</p>	<p>No mitigation required for noise during operational stage as life would have returned to normal as construction machines would have been withdrawn.</p> <p>During operational levels, there should be a proper management put in place to manage the facility.</p> <p>Security company should be engaged to maintain security in the area,</p> <p>Simple rules of occupancy should be developed and made available to each person on rental, and should be</p>	<p>Low</p>	<p>Proper lay and order should be kept in the facility and enforced. A management company (preferably private) should be engaged to maintain the rentals of the facility and also manage the security.</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		enforced through various punitive measures if not adhered to, including expulsion from the residential facility.		
<p>2. Water pollution (water courses)</p> <ul style="list-style-type: none"> • During operational stage, the handling of waste and other chemicals such as disinfectants could be possible sources of surface water pollutions. • Improper stormwater management may result in contamination of surface water and siltation and subsequent blocking of drains and disturbances of watercourses. 	<p>Score 3 Low</p>	<ul style="list-style-type: none"> • Waste management should be included in the responsibilities of the local authority and carried out regularly to avoid any contamination of the environment. . • Given the improvement in road network, it is expected that waste management services will also improve. 	<p>Low</p>	<p>Should there be no mitigation measures; possibility of stormwater pollution during the operation is likely to result. This is likely to be localized. Local water systems and drainage systems may be contaminated if not properly managed.</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>3. Soil disturbance /Erosion</p> <p>At operational stages, potential disturbances to the soil are likely to stem from the areas left bare from construction stage, not rehabilitated. These if not properly monitored and attended to may be prone to erosion activities. Soil erosion activities may cause degradation in the land if not checked in time.</p>	<p>Moderate 3.5</p>	<p>Striped surfaces should be utilized immediately. Stormwater management mechanisms need to be put in place to reduce or attenuate the possible effects of surface runoff. Land cover within the open spaces and riparian zones should be maintained to serve as a reduction mechanism for surface runoff.</p>	<p>Low</p>	<p>Should the mitigation measures not be implemented, and then there is possibility of the impacts discussed occurring. What could happen will be ponding and also or stagnation if the bare land is left for a longer time without any mitigation measures. Erosion may also occur as a result of improper discharge of stormwater.</p>
<p>4. Air Pollution</p> <p>Possible pollution sources during the operational phase may stem from waste left uncollected and on any unpaved roads within the area, generating dust.</p>	<p>Low 4</p>	<p>Speed regulating mechanisms should be applied on any unpaved roads, in such a way that reduces any potential dust generation.</p> <p>Waste collection as emphasised in the previous sections, should be regularly</p>	<p>Low 5</p>	<p>The identified impacts may occur, should no long-term mitigation measures not be put in place. People may have unrests and discomfort from such impacts.</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		carried out by the local authority.		
<p>5. Storm water management</p> <ul style="list-style-type: none"> Given the proposed development regards the removal the land cover, the potential to create more hardened surfaces is eminent. Stormwater acceleration and localised ponding is likely to occur. In addition, spillage and waste could be other sources of pollution of storm water. This may lead to contamination of water surface bodies and underground water. 	<p>Score 3 Medium</p>	<ul style="list-style-type: none"> A stormwater management system, in terms of the National Building regulations needs to be implemented. Onsite, drainage systems will be provided. In addition, a stormwater management plan should be designed and approved by the engineer prior to the commencement of construction works on the site. Proper stormwater discharge points should 	<p>Low 6</p>	<ul style="list-style-type: none"> Should no mitigation be implemented, this may constitute poor stormwater management which may result in Issues such as localized ponding, sedimentation, erosion and pollution among other things.

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		<p>be identified and implemented as part of the stormwater channelling mechanism.</p> <ul style="list-style-type: none"> Onsite water harvesting infrastructure should be installed to the buildings, where possible to reduce the amount of stormwater flow. 		
<p>6. Job Creation</p> <p>Both the construction and operational phases of the proposed development are likely to create additional jobs for the local community. Jobs will be created during construction as labours, masons and other workers may be required.</p> <p>Operational phase of the development may however see fewer jobs. Potential jobs may include</p>	<p>6.5Medium</p>	<p>N/A</p>		<p>Should the development not be implemented, then the iterated or envisaged positive impacts are not likely to occur.</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>maintenance staff and skilled labour work such as engineers overseeing and monitoring operation of services.</p> <p>Waste collection is also likely to generate some form of job avenues for some local community members.</p> <p>Also if a Security company is appointed, many security personnel may get employment within the management of the CRU.</p>				
<p>7. Visual impact</p> <p>At operational stage, visual impacts are expected to normalise. The new structures should have interested into the new view of the area and become the new reality.</p> <ul style="list-style-type: none"> Aesthetic view or the new view of the community is rather expected to improve, as new residential structures are put in, and roads are well structured and well formalised. The housing typology is 	<p>2.5 = Low Ext</p>	<p>Any materials left during construction should be cleared, as part of site closure, before contractors leave site.</p> <p>Waste should be organised in such a way to reduce any aesthetic nuisance. Waste storage sites should be properly designated during</p>	<p>Very low</p>	<p>Aesthetic or visual impacts are expected to normalize drastically during operation if all care is taken during stockpiling of materials and waste.</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>improved, to suite blend into the settlement types within the area. This is the reason, of using story buildings in a normal flat setting.</p> <ul style="list-style-type: none"> • During conduction living of stockpiles for too long may be nuisance to passers-by- people and also to the neighbouring community. 		<p>operation to ensure minimal aesthetic discomfort to community members.</p> <ul style="list-style-type: none"> • Once construction is complete, it is expected that site clearance should remove all stockpiles. 		
<p>8. Traffic</p> <ul style="list-style-type: none"> • Traffic should return to normal and rather improved, with additional and improved road network systems. The traffic is expected to normalise into the community, as there are different alternative routs around the facility. 	<p>3.5 = Moderate</p>	<ul style="list-style-type: none"> • Proper signage should be applied, to ensure most efficient traffic situation during operational stage of the development. Traffic calming measures should be implemented on road networks, accompanied by proper signage. 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Improper signage and traffic control measures such as speed limits may result in traffic situations, inconvenience and in some cases possible accidents.

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>9. Safety</p> <p>Safety during operation concerns communal leaving in a complex setting. This may require some level of security and law enforcement to maintain law and order within the facility.</p>	<p>3.5 Low</p>	<p>As recommended earlier, the CRU should be fenced and proper security features should be installed.</p> <p>A management company, including and security company should be engaged to management facility on contract bases. This way if they are not performing properly, they can be replaced with better ones.</p> <p>The municipality non-the-less if the custodial of the facility and should ensure that there is optimum security in the place, and the facility should be properly managed, and well kept to make life better</p>	<p>4 Very Low</p>	

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
		for occupants.		
<p>10. Impact on Local services</p> <p>Local services, should improve significantly during operational stages. Residential unites would've been upgraded, and water and sanitation services provided. Road networks would have improved also. The area being used is part of the original township establishment hence it is envisaged that the existing facilities and infrastructure should be able to accommodate the proposed development.</p> <p>Waste collection should be managed by the municipality.</p>	5.5 = Medium	Potential impacts on local services during operation are expected to be rather positive, if services such as waste and stormwater management are handled efficiently.		
<p>11. Improvement in livelihood of local Economy</p> <ul style="list-style-type: none"> At operational stage, the improvement in the local economy would stem from the improvement in services to the community. for instance, water connection will be readily available for domestic and 	8 = High	None required	NA	NA

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>commercial activities.</p> <ul style="list-style-type: none"> • The population that may not be able to afford rent, will gain accommodation through these subsidised rental programmes. • Also, the municipality will also gain income from the rentals which may improve the municipalities financial stand, and also the local economy if used to improve further service delivery. • Improvement in road networks, mean people can go about their daily duties with much easy. Cumulative effect of all these improvements is expected to stimulate the local economy, though indirectly. 				

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
--------------------	--	----------------------	--	---

8.4 NO GO ALTERNATIVE

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
<p>The impacts of no go alternative are most likely to be felt from a socio economic development perspective.</p> <p>No go alternative, may imply that the community remain with the current issues of poor services.</p> <p>The envisaged job creations and economic stimulation may also not occur.</p>	<p>Moderately High</p>	<p>Mitigation for this impact, is to find ways of implementing this development as planned, in an environmentally friendly and responsible manner, adhering to all legislations and guidelines as well as recommendations of this</p>	<p>Low</p>	<p>Should the mitigation not be implemented, then the issues described in the impacts section will continue as they currently are. More service delivery protests may rather occur. Also there may be dissatisfaction and conflict within the community as some residential unit hopefuls would have been denied houses,</p>

POTENTIAL IMPACTS:	SIGNIFICANCE RATING OF IMPACTS (POSITIVE OR NEGATIVE):	PROPOSED MITIGATION:	SIGNIFICANCE RATING OF IMPACTS AFTER MITIGATION:	RISK OF THE IMPACT AND MITIGATION NOT BEING IMPLEMENTED
<p>All possible employment opportunities that are likely to arise from the proposed development construction and operational stages will be lost, or at least stunted.</p> <p>Socio economic benefits of the proposed development to the community are also likely to be lost.</p> <p>A no go alternative; however, will keep the environment the way it currently is. Possible construction stage impacts as well may be avoided. Production levels will remain same or increase gradually. Possibilities of informal occupancy of the site may also rise. The proposed development, if properly managed after establishment should lead to proper and formal settlement, where people can build a livelihood.</p>		<p>assessment.</p>		<p>leading to social conflicts.</p>

The purpose of this is to detail the assessment undertaken, taking the assessment of potential impacts into account, to give an environmental impact statement that summarises the impact that the proposed activities and alternatives may have on the environment prior to and after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

The impact assessment and significance rating show that the construction stage impacts, and operational stage impacts are largely of medium significance, given the fact that the site is largely an already settled community. Construction stage impacts at an overall mean of 5,84375, which is Medium, while operational stage impacts have a mean of 3,039, out of 10, which are considered low. If all the proposed mitigations are implemented, these impacts should be reduced further. This is also attributed to the fact that other than the heritage sensitive areas identified, most of the hydrological and terrestrial impacts are located outside the development footprint.

Alternative A (preferred alternative), The Proposal

Biophysical environment

The site slopes gently, and a slope steepness of about 1:10 gradient. The site mostly It is noted that the development is mainly an in-situ upgrade within the existing community. Most of the vegetation on the site is already largely transformed and therefore the removal may not have significant, impact as if the vegetation were still pristine and of critical biodiversity. No red-data species were identified, and the vegetation is only noted to be largely vulnerable and not endangered.

The land cover however, act as flood attenuation mechanisms and protection against erosion. The proposed development will result in minimal clearing of vegetation on the proposed sites for the construction of houses and service infrastructure such as roads and stormwater infrastructure. The clearing of the site is likely to result in further exposing the land and possible surface runoff pollution. This can be mitigated by implementing appropriate stormwater management strategies, including proper channelling of the stormwater during construction and operational phases.

- **Riparian habitat impact**

No direct development is envisaged on the wetland areas, as they are more than 500m from the development footprint. The shallow drainage identified on the western outskirts of the site is taken into consideration in development the layout according to the scope of the development footprint. These can be impacted on encroached on during construction if care is not taken. Therefore, the duty of care and adherence to the recommendations in this report are crucial.

- **Other Construction Stage impacts** that were identified, for the construction phase are noted to be mitigatable. Noise and dust, and oil spillage can be mitigated by avoiding and managing the occurrences. Impacts during the construction stage may be short term and may end when construction is completed.

- **Operational stage impacts** on the natural environment can also be mitigated if proper strategies are put in place. The possibility of mitigating these impacts reduces their significant levels considerably, to low significance once the proper infrastructure is put in place especially in terms of roads and stormwater systems. The neglect of mitigation measures, such as waste management could result in severe health hazards. This therefore infers the need to take the recommendations made herein and in all applicable regulations and guidelines seriously.
- Another most significant impact that need to be taken care of during operation is the management and maintenance of the facility. These facilities if not properly managed have the tendency of degenerating into deplorable states over time. The municipality therefore need to develop and enforce strict security and safety rules in managing these complexes.

Socio economic impacts during the construction stage will include employment opportunities, for both skilled and unskilled labour and suppliers of construction materials. The spiral effect of these will contribute to the improvement of economic activities during this period.

- During operational stage, few people are likely to be employed on permanent basis, like in waste collection and maintenance services of the municipality. This may reduce the unemployment in the area further and bring improvement in livelihoods of the local community. Above all, it is the **level of social satisfaction** from better service delivery may also be a tangible social and economic impact from the proposed development.

From this assessment, it is observed that most of the negative impacts can be readily mitigated. Also, the positive socio economic impacts from the proposed development outweigh the identified negatives (if properly mitigated). A no-go alternative may therefore be unwarranted, given the absence of fatal flaws with the proposed upgrade of uMzimkhulu community and infrastructure.

No-go alternative (compulsory)

The No-development option will mean that the anticipated effects of impacts of the development will not occur. All the envisaged construction stage impacts, such as dust, noise and so forth will not occur because of the proposed development.

In addition, even though much removal of land cover may not occur as a result of development, a no-go alternation in this case, may still pave the way for some form of degradation as the community expands in an uncontrolled manner, without proper infrastructure to manage potential impacts.

- Road networks may still be an issue and some parts of the community may not have

proper access. Emergency services may not have access to vital areas of the community.

- From a socio-economic perspective, the no-development option may rather hinder the potential biophysical and socio-economic benefits that were envisaged. From this perspective, it can be asserted that the potential positive impacts outweigh the envisaged negative impacts, hence a no-go alternative may not be necessary.

10 RECOMMENDATIONS

From this assessment of the biophysical and socio-economic environment, given that there are no fatal flaws that will hinder the proposed development it is concluded that the proposed development is feasible. The proposed development is thus possible provided all impacts are duly mitigated as proposed.

In addition, the following recommendations are provided:

- It is recommended that the mitigation measures suggested in this report herein be taken seriously and considered during the implementation of the proposed development to minimize any unwarranted effects of the identified impacts.
- The development must be restricted to the current development footprint as per the layout included in this assessment.
- The drainage area bordering the site, should be fenced off during construction stage as no development zones, and no activity whatsoever must be undertaken within the riparian space.
- It is important that an independent environmental control officer be appointed to monitor the construction activities, in terms of the EIA regulations requirements, and to ensure that the EMP is fully implemented.
- Project implementation monitoring and audit report must be regularly submitted to the competent authority to ensure all conditions and mitigation measures and proper due diligence is being applied.
- During implementation, the municipality must appoint a proper management company to management operation of the facility, including the rental management, security and maintenance.
- From the information gathered and based on this Basic Assessment Process, given that no fatal flaws were identified, and given the development is likely to rather improve the settlement, it is our opinion and recommendation that the development may be allowed to proceed given the socio-economic benefits it may yield to the community and the environment. This may also add to the service delivery progress of the Local Municipality.

REFERENCES

- Aucamp, P J. (2010). *Environmental Impact Assessment: a practical guide for the discerning practitioner*. Van Shaik Publishers.
- Mucina, L., & Rutherford, M. C. (2006). The Vegetation of South Africa, Lsotho and Swaziland. *Strelizia, South African National Biodiversity Institute, 19*.
- SANBI. (2016). KwaZulu-Natal Systematic Conservation Plan (KZNSCP) : KZNSCP Vegetation types. Retrieved April 30, 2016, from <http://bgis.sanbi.org/Projects/Detail/39>
- Shaw, C. S., & Escott, B. (2011). KwaZulu–Natal Vegetation Type Description Document for Vegetation Map 2011: kznveg05v2_1_11_wll. shp. Retrieved from http://cpu.uwc.ac.za/KZN/KZN_vegetationtypes_descriptionsVer2_1.pdf

REFERENCES

- Aucamp, P. J. (2010). *Environmental Impact Assessment: a practical guide for the discerning practitioner*. Van Shaik Publishers.
- Mucina, L., & Rutherford, M. C. (2006). The Vegetation of South Africa, Lesotho and Swaziland. *Strelizia, South African National Biodiversity Institute, 19*.
- SANBI. (2016). KwaZulu-Natal Systematic Conservation Plan (KZNSCP): KZNSCP Vegetation types. Retrieved April 30, 2016, from <http://bgis.sanbi.org/Projects/Detail/39>
- Shaw, C. S., & Escott, B. (2011). KwaZulu–Natal Vegetation Type Description Document for Vegetation Map 2011: kznveg05v2_1_11_wll. shp. Retrieved from http://cpu.uwc.ac.za/KZN/KZN_vegetationtypes_descriptionsVer2_1.pdf

11 APPENDIXES

Appendix 1. Locality Mapping

Appendix 2 Proposed Development Layouts

Appendix 3 Public Participation report

Appendix 4 Specialists Studies (Added as attachments)

4.1 Geotech report

4.2 Bulk Services Report Rev 4

4.3 Socio Economic Assessment Report

Appendix 5 EMPr

APPENDIX 1 PROJECT LOCATION



Locality Map

LEGEND

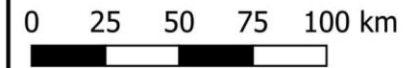
- Main Towns
- Development Area

Study Site

- Local Municipalities**
- uMzimkhulu Municipality
 - Other Municipalities

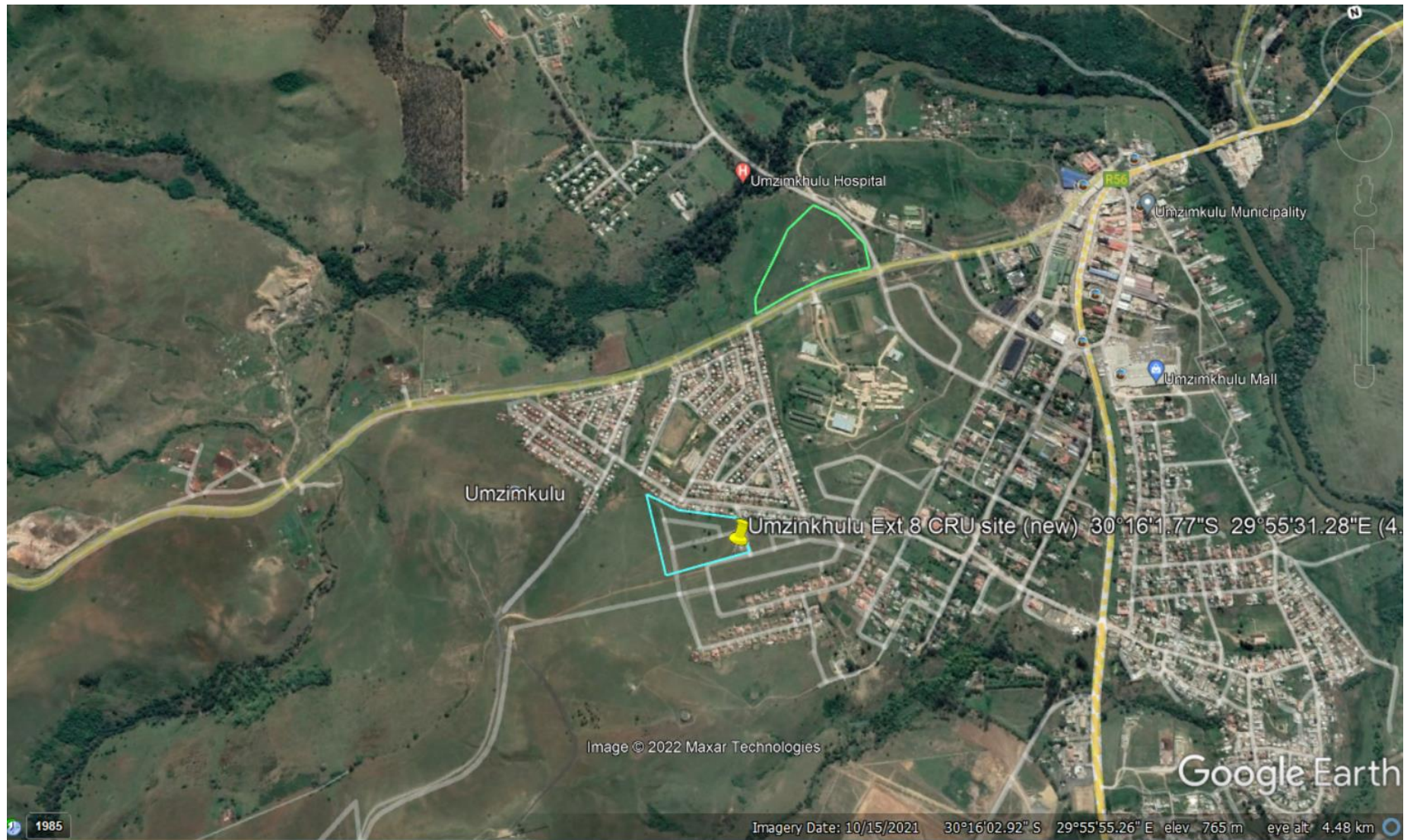
Provinces

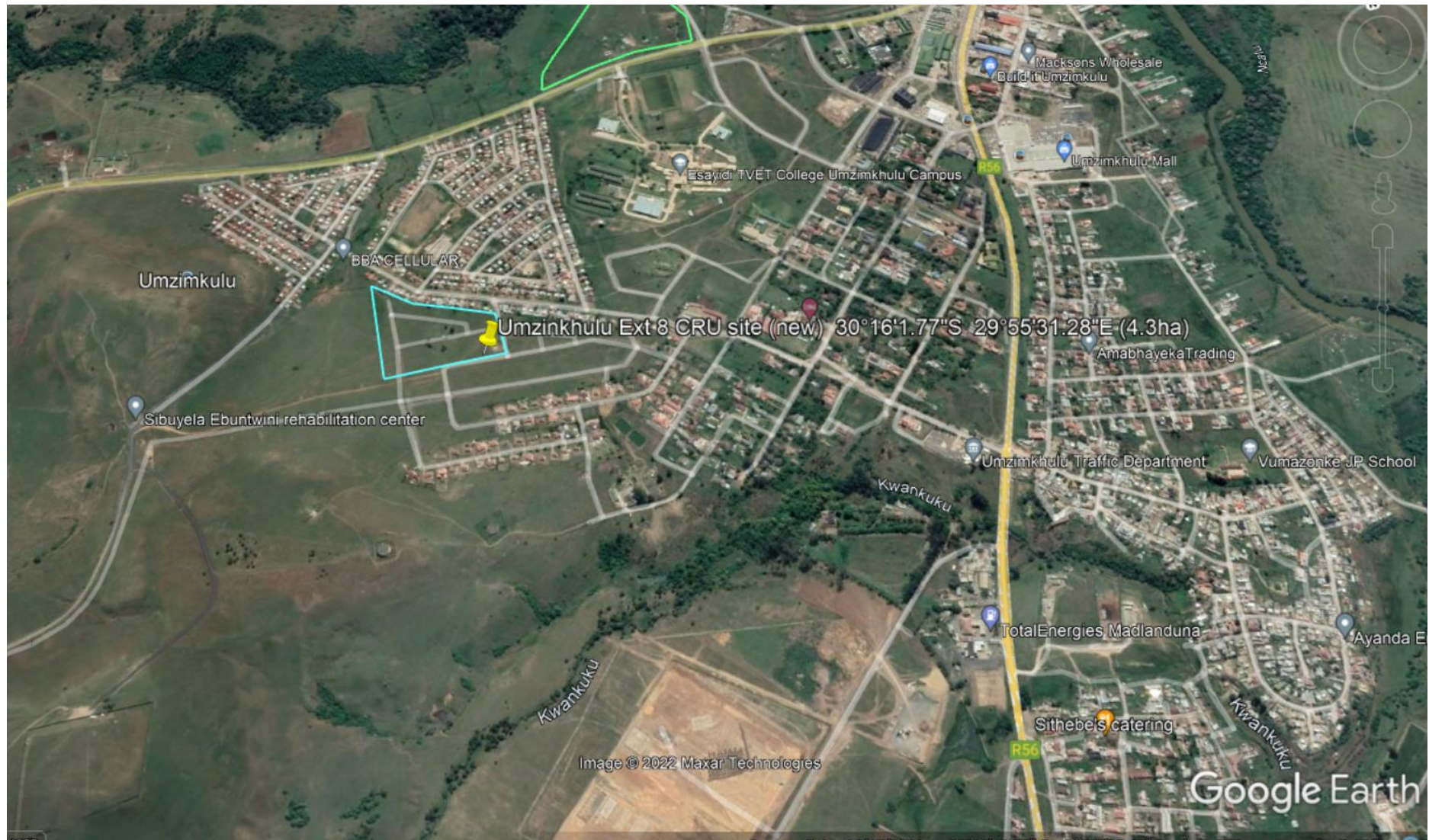
- ▭ KwaZulu-Natal
- ▭ Other Provinces



Datum: WGS 84
 Date: 27/01/2021
 Drawn by: Brian Mafela







UMZIMKULU

SCHEDULE OF RIGHTS RESIDENTIAL 1

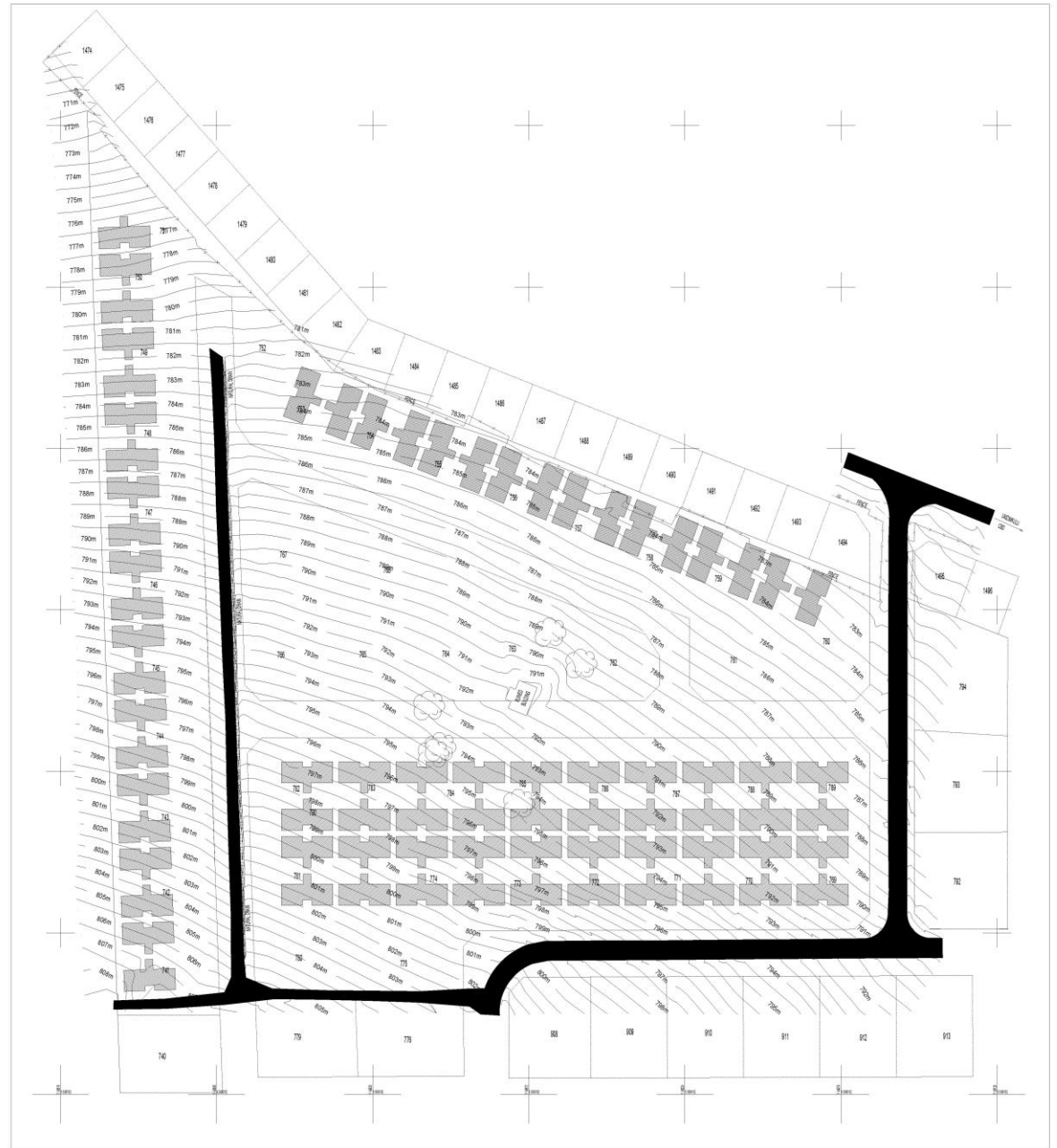
ZONE USE	RESIDENTIAL 1
AREA OF LAND	38836 m ²
LAND USE	NEW RESIDENTIAL
FLOOR AREA	TOTAL BLOCK AREA(TYPE A) = 13449m ² TOTAL AREA = 13449m ²
F.A.R	TOTAL BUILDING AREA = 13449m ² (0.35)
COVERAGE	TOTAL COVERAGE = 8969.25m ² (22.70%)

NUMBER OF UNITS

2 BEDROOM UNIT TYPE A:300
TOTAL NUMBER OF UNITS = 300

BLOCK TYPE A : 4 UNITS

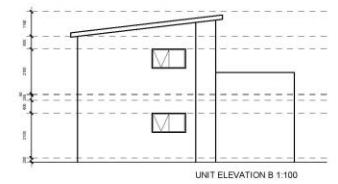
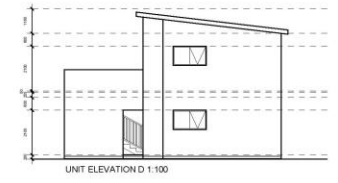
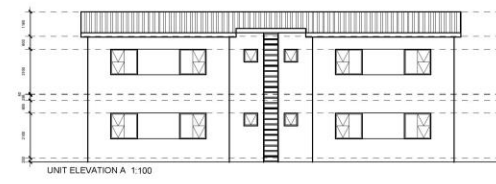
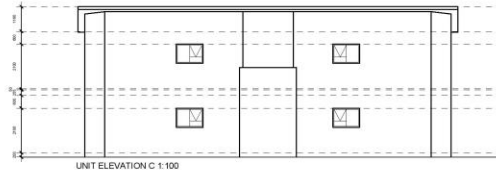
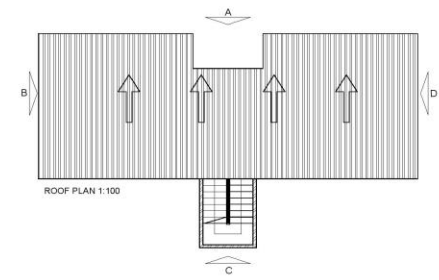
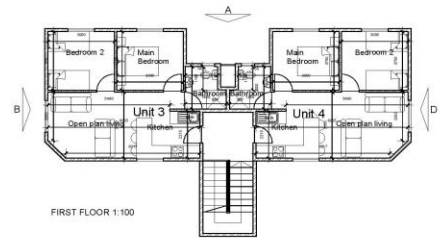
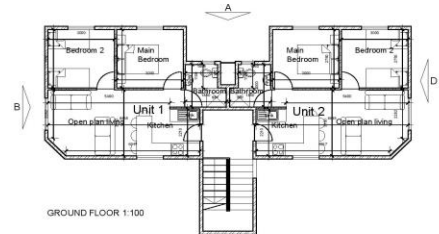
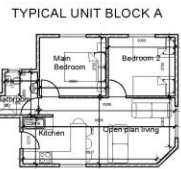
FLOOR AREA	TYPICAL UNIT (44.83m ²) TOTAL BLOCK (179.32m ²) TOTAL BLOCK X 75 = (13449m ²)
COVERAGE	TOTAL BLOCK (119.59m ²) TOTAL BLOCK X 75 = (8969.25m ²)



UMZIMKHULU SCHEDULE OF RIGHTS RESIDENTIAL 1	
ZONE USE	RESIDENTIAL 1
AREA OF LAND	38836 m ²
LAND USE	NEW RESIDENTIAL
FLOOR AREA	TOTAL BLOCK AREA (TYPE A) = 13449m ² TOTAL AREA = 13449m ²
F.A.R	TOTAL BUILDING AREA = 13449m ² (0.35)
COVERAGE	TOTAL COVERAGE = 8969.25m ² (22.70%)

NUMBER OF UNITS	
2 BEDROOM UNIT TYPE A	300
TOTAL NUMBER OF UNITS	300

BLOCK TYPE A : 4 UNITS	
FLOOR AREA	TYPICAL UNIT (44.63m ²) TOTAL BLOCK (178.30m ²) TOTAL BLOCK X 75 = (13449m ²)
COVERAGE	TOTAL BLOCK X 75 = (8969.25m ²)



PUBLIC PARTICIPATION REPORT

uMzimkhulu Ext 8 CRU Housing development

BIZYCON PTY LTD

KZN: 15 Eugene Marais Road, Napierville, Pietermaritzburg 3200P O Box 1978 Pietermaritzburg 3200

GAUTENG: Unit 77, Block 4, Riversands Business Hub, Ext4 Fourways, Midrand

Tel +27 (0)776 ♦ Cell +27 (0) 719212618 ♦ Fax+27- 86 776 33 25 ♦

Email maccarthy@developmentimpact.co.za www.developmentimpact.co.za

TABLE OF CONTENTS

CONTENTS

Appendix 2 Public Participation report Public Participation report.....	92
1. INTRODUCTION	95
2. PUBLIC ADVERTISEMENT	95
3. BACKGROUND INFORMATION DOCUMENT (BID).....	95
4. PUBLIC MEETINGS	95
5. COMMENTS FROM STAKEHOLDERS.....	95
Site Notice.....	97
Newspaper advertisement	99
Background information Document (BID) and Distribution List	100
BID Distribution List	106
STAKEHOLDER COMMENTS AND REPOSES	113

1. INTRODUCTION

This report is a summary of the public participation process and activities being or that have been so far for the assessment process carried out for the uMzimkhulu Ext 8 CRU Project. Public participation is done with the assistance of the Ward Councillors and also Ward Committee Members within the community to ensure the community is provided sufficient opportunity to participate. This report details the activities carried out and outcomes to date. Generally, the community is happy and anxiously waiting for the project to be executed and completed., as was indicated from interactions with them.

2. PUBLIC ADVERTISEMENT

2.1 Site notices

Site notices were laced within the community in places that are mostly assessable by the community members, under the guidance of the Development Committee members. Photographs of some of the Site Notices are attached in Appendix 2(i).

2.2 Newspaper advertisement

A newspaper advertisement is being placed in a local newspaper. This is to further give notice to the public and invite comments on the Basic assessment report. Copy of the advert is included in this public participation report Appendix 2(ii).

3. BACKGROUND INFORMATION DOCUMENT (BID)

Background Information was prepared and distributed within the community surrounding the development footprint. This was done with the assistance of the local councillor/ ward committee members. All those who received such information were encouraged to register as interested and affected parties if they so wish. A copy of the BID and list of people to whom it was distributed are attached in Appendix 2.

4. PUBLIC MEETINGS

A public engagement was initially planned to be the distribution of BIDs to neighbouring residents. The possibility of public meeting is not ruled out. Once the community is mobilised, then the development will be again presented. Should there be any comments that warrant this, it will be held, and those issues addressed. As at now, no significant issues have been received from the community, other than their support for the proposed development as expressed by some residents during interaction during site visit.

5. COMMENTS FROM STAKEHOLDERS

The draft basic assessment report (BAR) has been distributed to key stakeholders between the 1st of November to the 30th, as part of the 30 day normal 30 day comment window, this is being distributed to relevant government departments and municipalities) for comments. These include, AMAFA, KZN Wildlife, EDTEA and

DWS. Comments received are inculcated into this final report to be competent authority. The report submitted was not commented on within the comment period. Report has also been loaded unto SAHRIS for AMAFA, but no comments were provided. A screen shot of the status is included in this report. Given the development is in-situ upgrade of the already degraded areas no critical issues are expected in terms of heritage resources. Biodiversity Comments from DWS and EDTEA are responded to and integrated into the finalisation of this report.

SITE NOTICE (TO BE ADDED)

NEWSPAPER ADVERTISEMENT (TO BE ADDED)

BACKGROUND INFORMATION DOCUMENT (BID) AND DISTRIBUTION LIST

COMMUNITY RESIDENTIAL UNITS (CRU) DEVELOPMENT ON EXT 8, UMZIMKHULU LOCAL MUNICIPALITY

BASIC ASSESSMENT PROCESS 14 oct 2022

BACKGROUND INFORMATION DOCUMENT (BID)

BACKGROUND

uMzimkhulu Local Municipality in collaboration with the KZN Department of Human Settlements intends to undertake a Community Residential Unit Development (CRU) on Ext 8 of uMzimkhulu. This would include the construction of about 300 units of houses, on phase 1, and if funding is made available, to be increased to about 480 units. The internal roads have been put in as part of the previous township establishment.

The development will entail vegetation removal of about 4ha which is more than the 1ha threshold. This triggers activities within Listing Notice 1 of GNR 327 of 2017 under the National Environmental Management Act (Act 107 of 1998). An environmental Application is being submitted towards obtaining authorisation for the proposed development

An environmental impact assessment is being conducted towards getting authorisation for the activity of removing more than 4 ha of vegetation on the site. The possible impacts include the removal of vegetation and possible erosion from improper stormwater discharge, dust and noise, and positive impacts such as employment and making housing available for affordable rentals.

DESCRIPTION OF THE PROPOSED PROJECT SITE



The project site is the located on the outskirts of the community as per the boundary lines shown in Figure 1. The portions of the community where the development will take place as per the layout below.

Environmental Process & Considerations

This triggers activities within Listing Notice 1 and 3 of GNR 983, of the National Environmental Management Act (Act 107 of 1998) for which environmental authorisation is required.

A Basic Assessment (EIA) process is being undertaken by Bizycon (PTY) LTD and an application for authorisation for this has been submitted to the KZN Department of Economic Development, Tourism & Environmental Affairs (EDTEA).

All Interested and Affected Parties (I&APs) may submit their names, contact details and written interests or comments relating to the above development to the contact persons given below within 30 days of the date of publication of this advertisement

Your involvement

Environmental Assessment plays a vital role to ensure that it provides the necessary and adequate information on which to base the decision of whether to grant environmental authorisation on the anticipated project. This environmental approval will also give information on whether and if yes under which conditions the authorisation will be granted. There are numerous stakeholders that are involved from entirely different sectors, and each contributes towards a desirable conclusion. Your remarks, if any, will enhance all appropriate concerns or appraisals that are assessed in the EIA. You are therefore encouraged to fill in the enclosed registration/comment form or write a letter, call, and email or send a fax to the EAP on the following contacts **in case you want to comment** on the proposed development. If you have no comments, then you do not need to do anything. After 30 days, if no comments are received, we shall take it you do not have any.

ISIZULU

Isaziso Somphakathi

IMVELAPHI

UMasipala waseMzimkhulu ngokubambisana noMnyango wezokuHlaliswa kwaBantu KwaZulu-Natal uhlose ukwenza i-Community Residential Unit Development (CRU) ku-Ext 8 yaseMzimkhulu. Lokhu kuzobandakanya ukwakhiwa kwezindlu ezingaba ngu-300. Imigwaqo yangaphakathi isifakwe njengengxenywe yokusungulwa kwelokishi phambilini.

Ukuthuthukiswa kuzobandakanya ukususwa kwezitshalo cishe kwe-4ha okungaphezu kwe-1ha threshold. Lokhu kuvusa imisebenzi ngaphakathi kweSaziso soHlu 1 sika-GNR 327 ka-2017 ngaphansi koMthetho Wokuphathwa Kwemvelo Kazwelonke (uMthetho we-107 ka-1998). Isicelo sezemvelo siyathunyelwa ukuze kutholwe ukugunyazwa kwentuthuko ehlongozwayo.

INCAZELO YESIKHUNGO SOMSEBENZI OPHAKANYISIWEYO

Isiza sephrojekthi sitholakala emaphethelweni omphakathi. Izingxenywe zomphakathi lapho intuthuko izokwenzeka khona njengokwesakhiwo esingezansi. Inqubo Yezemvelo Nokucatshangelwa

Lokhu kudala imisebenzi ngaphakathi koHlu Lokufakwa Kuhlu 1 luka-GNR 983, loMthetho Kazwelonke Wokuphathwa Kwezemvelo (uMthetho 107 ka-1998) okudingeka kuwo ukugunyazwa kwemvelo.

Inqubo ye-Basic Assessment (EIA) yenziwa yi-Bizycon (PTY) LTD futhi isicelo sokugunyazwa kwalokhu sesithunyelwe eMnyangweni Wezokuthuthukiswa Komnotho, Ezokuvakasha Nezemvelo e-KZN (EDTEA).

Bonke Abathintekayo Nabathintekayo (I & APs) bangaletsa amagama abo, imininingwane yokuxhumana kanye nezintshisekelo ezibhalwe phansi noma ukuphawula okuphathelele nalokhu kuthuthukiswa okungenhla kubantu okuxhunyanwa nabo abanikezwe ngezansi zingakapheli izinsuku ezingama-30 kusukela ngosuku lokushicilelwa kwalesi sikhangiso.

Ukubandakanyeka kwakho

UkuHlolisiswa Kwezemvelo kudlala indima ebalulekile ukuqinisekisa ukuthi kunikeza ulwazi oludingekayo nolwanele okungasekelwa kulo isinqumo sokuthi ngabe kuyakhishwa yini ukugunyazwa kwezemvelo kulowo msebenzi olindelekile. Lokhu kuvunyelwa kwemvelo kuzophinde kunikeze imininingwane yokuthi ngabe imvume izonikezwa ngaphansi kwaziphi izimo. Bangingi ababambiqhaza ababandakanyekayo abavela emikhakheni ehluke ngokuphelele, futhi ngamunye ubamba iqhaza ekufinyeleleni esiphethweni esihle. Ukuphawula kwakho, uma kukhona, kuzothuthukisa konke ukukhathazeka okufanele noma ukuhlolwa kwamanani okuhlolwa ku-EIA. Ngakho-ke uyakhuthazwa ukuthi ugcwalise ifomu lokubhalisa / lokuphawula elifakiwe noma ubhale incwadi, ushaye, uthumele i-imeyili noma uthumele ifeksi ku-EAP kulaba oxhumana nabo abalandelayo uma kwenzeka ufuna ukuphawula ngentuthuko ehlongozwayo. Uma ungenakho ukuphawula, awudingi ukwenza lutho. Ngemuva kwezinsuku ezingama-30, uma kungekho okutholakele okutholakele, sizokuthatha awunakho.

REGISTRATION AND COMMENT FORM

Accompanying Background Information Document

Should you have any comments regarding the proposed project, please complete and send the attached comments sheet to either of the following contact person:

Mr Maccarthy Honu-Siabi

Tel: Cell: 0724641197, Fax: 086 776 33 25

TITLE		FIRST NAME	
INITIALS		SURNAME	
ORGANISATION/TOWN		E MAIL	
POSTAL ADDRESS			
TEL NO.		POSTAL CODE	
CELL		FAX NO.	

REGISTRATION AS AN INTERESTED OR AFFECTED PARTY (I&AP) (Please circle applicable box)

Please formally register me as an interested and affected party so that I may receive further information and notifications during the EIA process	YES	NO
I would like my notification by	Letter (mail)	
	E Mail	
	Fax	
	Telephone	
In terms of the GNR 327 (EIA process regulations) I disclose below any direct business, financial, personal or other interest that I may have in the approval or refusal of the application.		

COMMENTS (you may use a separate sheet if you so wish)

I have no objections to the proposed development. My reasons are

.....
.....
.....
.....
.....
.....
.....
.....

I support the proposed development. My reasons are:

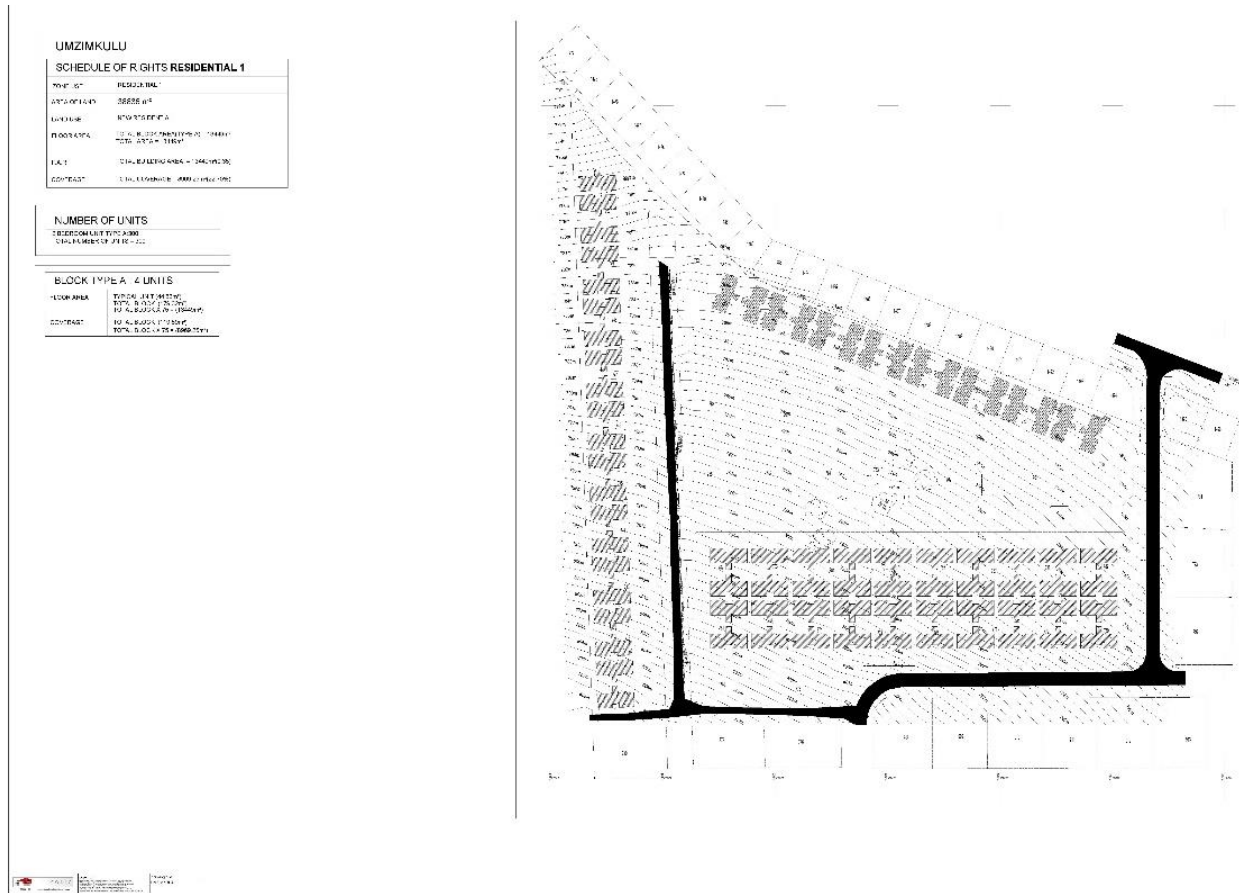
.....
.....
.....
.....
.....
.....
.....

I object to the proposed development. My reasons are:

.....
.....
.....
.....
.....
.....
.....

.....
Other I&APs to be contacted are:

.....
.....
.....



BID DISTRIBUTION LIST

FORMALISATION OF UMZIMKHULU EXT 9 & 10, UMZIMKHULU LOCAL MUNICIPALITY

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

(Basic Assessment)

BACKGROUND INFORMATION DOCUMENT (BID)

Email: bizycon@live.co.za Cell 0724641197

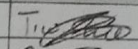

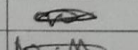
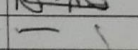
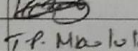
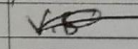
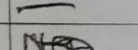
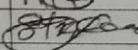
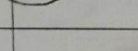
BID DISTRIBUTION LIST

NAME & SURNAME	ORGANISATION / TOWN ADDRESS	CELL PHONE	EMAIL	SIGN
CYNTHIA N. MAKANYA	B114 SISULU loc.	078 210 9552	nomgomo.makanya@gmail.com	
Duma - Thembelani	B114 S. Subela	078 9844330		TOUMBA
MIAJ ZINA - SINDISI	B114 S. Subela	0631849904		Mjingsi
Mjingsi ZINA				
Chelokhele - Mpendo	B114	0718234926		
Sinde Ph - Mpozi	B114	081 0075903		
MZimkhulu - Xolha	B114	063 66 33 958		
Lizo - Mqithi	B114	083 473 1432		
Pholele Chiga	B114	0761023770		
nziKangise - Mtsabi	B114	083 3894678		
Uhungile - NONJOJO	B114	071 2563672		A. NONJOJO
NONCEKA - NINZELA	B114	082 83 00183		
Ayola - NKOTHA	B114	082 3271994		
Zwelenkosi - MB - Tsoze	B114	072 1342365		
Zine - MJOQU	B114	066 2787228		
Zukiswa - G. G. G. G.	B114	0781997839		
MBulele - NGALA	B114	0781997839		
NONTHANIGA - DLAMINI	B114	071 0251338		



NAME & SURNAME	ORGANISATION / TOWN ADDRESS	CELL PHONE	EMAIL	SIGN
Ahekisi Zwe - Zulu	B114	0794912734		
Dlamini, Thandwe	B114	0782269074		
ZaneKhanyo - Tshangiso	B114	0719503656		
Dlamini - PhasKhetis	B114	0761013477		
Nomfando - JokaZi	B114	0739320664		
Lindile - Ngqibhena	B114	0767588179		
Nicola - Vula	B114	0797823101		
NoSiSa! DZANI BE	B114	0784352198		
SKhumbuzo Nguane	B114	0763770498		
Nomabongo - Guagwa	B114	0630862689		
BONGEKI LUTHULI	B114	0730702539		
Ilan - VA - MARWE	B114	0838596314		
Mnyamezele. Mphahle	B114	073220588		
ONwabe - Makinyane	B114	0717604513		
Nonsa. SoSiBa.	B114	0825841538		
Lilly - Mjelo -	B114	0606392736		
Sbonelo. Boyana	B114	0784033379		
Zoleka - Dlamini	B114	0734420866		
Vuyisile - Dlamini -	B114			



NAME & SURNAME	ORGANISATION / TOWN ADDRESS	CELL PHONE	EMAIL	SIGN
Thobani - Zulu.	B.	0837629215.		
Phumile - Mhlophe.	B.	0716191370 -		
NTombi - Mkhini -	B.	0635606053		—
Monwab. S. - Nxumazi	B.	071 7872070		—
Mbekizeli - Khuboni	B.	0734470074		—
S. Duma.	B.	0735514527.		
Maple - Inutsile.	B.	079 5819618		
Nokulama - Phiso	B.	073 8942533.		—
Khawuleza - Zungu	B.	0663455487.		
Thembisa - Mbululu.	B.	0626265223.		T.P. Masole 
NTombi - Zulu	B.	079 7823101		
B. S. S. - Njika	B.	0636301024.		—
Nasisa Dzanibe.	B.	0784352199		
S. P. Magani	B.	0668152742.		



NAME & SURNAME	ORGANISATION / TOWN ADDRESS	CELL PHONE	EMAIL	SIGN
Mosipho- Msole	B114 -	078 5254128		—
Sipho - Mngomeni	B114	064 747358		—
Vusumzi Njikelana	B114	078 652608		—
OCTAVIA -ncobela	B114	0712301803		—
Noskwintu - Cynthia	B114	0810075903		—
Nike Zibe - Njase	B114	073 9856899		—



FORMALISATION OF UMZIMKHULU EXT 9 & 10, UMZIMKHULU LOCAL MUNICIPALITY

ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

(Basic Assessment)

BACKGROUND INFORMATION DOCUMENT (BID)

Email: bizycon@live.co.za Cell 0724641197

A

BID DISTRIBUTION LIST

NAME & SURNAME	ORGANISATION / TOWN ADDRESS	CELL PHONE	EMAIL	SIGN
Nanceba Mkunzelo	Sisulu A	082 8300183		
Mzi Kayise Mtsal	A. no 44	0835894678		
Mbewana Zulethu	Sisulu A 44	0117981358		Z. Mbewana
Jansen Zulu	Sisulu A 29	0739864367		
Bukelani Zulu	Sisulu A 64	0794242435		
Nomaliro Tshobeni	A 59	0740213810		MT
Vuyisile Ambotwe	A 100	0783536906		
Nokhantla Dlamini	A 79	0710251338		
Ngobile Gumede	A 49	0847543751	ngobegumede@gmail.com	
Zano SHALUYO SHANGASE	A 66	0827439162		ZB



STAKEHOLDER COMMENTS AND REPOSSES

To be added when received

AMAFA Proof of submission online

APPENDIX4 SPECIALISTS STUDIES

Appendix 4 Specialists Studies (Added as attachments)

4.1 Geotech report

4.2 Bulk Services Report Rev 4

4.3 Socio Economic Assessment Report

uMzimkhulu Local Municipality
uMzimkhulu Ext 8 CRU Housing Project

Construction & Operational Stage

ENVIRONMENTAL MANAGEMENT PROGRAMME
(EMPr)



MASEKO HLONGWA & ASSOCIATES CC
DEVELOPMENT PLANNING CONSULTANTS
77 HOWICK ROAD, PIETERMARITZBURG
TEL: 033 394 5723 FAX: 033 394 5715

PREPARED BY:

BIZYCON PTY LTD

KZN: 15 Eugene Murrays Road, P O Box 1978 Pietermaritzburg 3200

GP: Unit 77, Block 4, Riversands Incubation Hub. 8 Incubation Drive, Riverside View Ext 15, Fourways, Midrand 2021

Tel: 0724641197 Fax 086 776 3325, Email: bizycon@live.co.za Contact: [McCarthy Honu-Siabi](#)



Table of Contents

I. Glossary of Terms and Abbreviations (See Annexure A).....	119
II. Key to Acronyms	119
EMP: SECTION 1: INTRODUCTION	120
1.1. Background.....	120
1.2 Aims and objectives of the EMPr.....	120
1.2.1 Aim.....	120
1.2.2 Objectives.....	120
SECTION 2: REGULATORY / LEGISLATIVE CONTEXT	121
DEALING WITH NON-COMPLIANCE WITH THE EMPr (Penalties/ Incentives).....	121
2.1 Key Legislation and Regulatory Requirements	121
2.1.1 National Environmental Management Act No. 107 of 1998	121
2.1.1.1 Penalties for non-compliance	121
2.1.2 National Heritage Resources Act No. 25 of 1999.....	122
2.1.2.1 Penalties for noncompliance	122
2.1.3 Occupational Health and Safety Act No. 85 of 1993.....	122
2.1.3.1 Penalties for noncompliance.....	122
2.1.4 Other necessary legislations but not limited to:.....	122
2.2 KEY ROLE PLAYERS AND THEIR RESPONSIBILITIES.....	122
SECTION 3: SENSITIVE AREAS OF THE PROJECT AREA.....	123
3.1 The Development site	123
3.2 Protecting the Integrity of the Ecosystem of the project site.....	123
3.4 Ensuring Health and safety.....	125
5. EMP CONCLUSIONS AND RECOMMENTATIONS	144
Annex A: Glossary	145

I. Glossary of Terms and Abbreviations (See Annexure A)

II. Key to Acronyms

- EDTEA Economic Development Tourism and Environmental Affairs
- DME Department of Mineral and Energy
- ECO Environmental Control Officer
- EMPr Environmental Management Programme
- EA Environmental Authorisation
- ARC Agriculture Research Council
- BA Basic Assessment
- BAR Basic Assessment Report
- BID Background Information Document
- DEA Department of Environmental Affairs
- DWS Department of Water & Sanitation
- EIA Environmental Impact Assessment
- EIR Environmental Impact Report
- EAP Environmental Assessment Practitioner
- I&APs Interested and/or Affected Parties
- LRAD Land Reform for Agricultural Development
- NEMA National Environmental Management Act, 1998(Act 107 of 1998)
- NHRA National Heritage Resources Act
- SAHRA South African Heritage Resource Agency
- SANBI South African National Biodiversity Institute

EMP: SECTION 1: INTRODUCTION

1.1. Background

The National Environmental legislation requires that an assessment of potential environmental issues is undertaken as an important component of development projects. The Environmental Impact Assessment process identifies potential impacts that may arise at various stages of the development process and how these impacts can be mitigated. An Environmental Management Plan serves as a guideline.

Bizycon Pty Ltd (PTY) LTD conducted a Basic Assessment environmental investigation regarding the uMzimkhulu Ext 8 CRU settlement establishment. This process identified potential environmental impacts that may arise and made recommendations in the report on how these impacts can be managed, especially during construction stages of the development. It also identified issues that should be considered during the operational phase of the development.

This EMP is a key environmental document, the content of which the line contractor must comply with during the construction process with the assistance of an environmental control officer and the site engineer and all relevant role players. This is to include any post construction rehabilitation work, which may be needed, and which would be carried out by the contractor or specialist subcontractor who he may appoint to do such rehabilitation when needed.

This EMP is also developed in accordance with the requirements of the National Environmental Management Act (NEMA, Act 107 of 1998).

1.2 Aims and objectives of the EMP

1.2.1 Aim

This EMP outlines measures to be implemented in order to minimize the potential environmental impacts associated with construction works along the drainage lines, rivers and associated wetlands. It serves as a guide for the contractor and the construction workforce on their roles and responsibilities concerning environmental management on site, and it provides a framework for environmental monitoring throughout the construction period.

1.2.2 Objectives

The EMP becomes a legally binding document upon granting of an environmental authorisation. The objectives of this EMP include:

- Encourage good management practices through implementation of the proposed development and ensure commitment to environmental issues;
- Define how the management of the environment is reported and performance evaluated;
- To point out necessary mitigation measures to be carried out

- Develop waste management practices based on prevention, minimization, recycling, treatment or disposal of wastes;
- Follow all monitoring procedures required to identify impacts on the environment; and;
- Provide guidance to the employees and contractors regarding their environmental and legislative obligations.

SECTION 2: REGULATORY / LEGISLATIVE CONTEXT

The EPMr is prepared taking into cognizance relevant legislative instruments that relate to the proposed development. The on us lies on the applicant to ensure adherence to all necessary regulations. Contractors must be alerted of the existence of the EMPr and its legislative implications and the need to comply and **a copy of the EMPr must always be kept on site.**

DEALING WITH NON-COMPLIANCE WITH THE EMPr (Penalties/ Incentives)

The contractor shall put in place procedures to motivate his staff to comply with the EMPr and to ensure that the work force is sufficiently aware and understand all necessary legal requirements related to the construction process. It is also important for the contractor to ensure that the workforce understands the implications of acts of non-compliance, or deliberate and malicious damage to the environment by any staff member.

2.1 Key Legislation and Regulatory Requirements

The following legislations are instrument for the construction process of the poultry houses. Noncompliance will lead to the penalties as set by the relevant sections of the related legislations:

2.1.1 National Environmental Management Act No. 107 of 1998

The National Environmental Management Act of 1998, Chapter 7 Part 1 Section 28 States that:

- Every person who causes, has caused, or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, and is responsible for the costs and repair of the environment.

2.1.1.1 Penalties for non-compliance

Chapter 7 of the National Environmental Management Act of 1998 indicates explicitly under subsections 8, 9, and 10 the steps that may be taken to recover environmental protection costs from any manager, agent or employee who omits or goes against this Act.

2.1.2 National Heritage Resources Act No. 25 of 1999

Chapter II Part 1 Section 27 (18) on Protection and Management of Heritage Resources provides guidelines that state that;

- No person will be allowed to destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage sites without a permit issued by the heritage resources authority responsible for the protection of such site.

2.1.2.1 Penalties for noncompliance

Section 51 of National Heritage Resources Act of 1999, set penalties to non-compliance as follows:

- A fine or imprisonment for a period not exceeding five years or to both such fine and imprisonment.
- A fine or imprisonment for a period not exceeding three years or to both such fine and imprisonment.
- A fine or imprisonment for a period not exceeding two years or to both such fine and imprisonment.

2.1.3 Occupational Health and Safety Act No. 85 of 1993

Section 14 (a) of the Occupational Health and Safety Act of 1993 makes the contractor responsible for the health and safety of persons who may be affected by any acts of omissions and the safety of the working environment under his jurisdiction.

2.1.3.1 Penalties for noncompliance

Section 38 (1)(2) (3) and (4) of this Act explicitly explain the offence and penalties to any employer who does or omits an act thereby causing any person to be injured at workplace.

2.1.4 Other necessary legislations but not limited to:

Environmental safety requirements in other legislative instruments such as the National Veld and Forest Fire Act, (No.101 of 1998), National water Act, (No.36 of 1998) and Hazardous Substances Act, 1973, the National Air Quality Act, 39 of 2004, need to be taken into consideration and conditions observed during the implementation of his development.

2.2 KEY ROLE PLAYERS AND THEIR RESPONSIBILITIES

The successful implementation if the EMPr hinges heavily on the proper identification, definition, and allocation of roles to responsible persons or role players.

SECTION 3: SENSITIVE AREAS OF THE PROJECT AREA

Although the broad environment within and around the proposed development area is important in general consideration of construction impacts, the contractor shall ensure that his workforce are aware of the key sensitive sites within the project area and that they understand how their activities could impact directly or indirectly on environmental resources of these areas. The following descriptions need to be particularly understood and adhered to in the implementation of this EMP.

3.1 The Development site

The most likely activities that may impact on sensitive areas is the roadworks and construction of houses near to the wetland areas on the boundary of the site as shown in Figure 2 below. These areas



require extra care during the construction period. These should be fenced off as no-development zones.

Figure 3 Site layout with sensitive areas that may be impacted (work across watercourses).

3.2 Protecting the Integrity of the Ecosystem of the project site

- As part of conserving biological diversity and protecting the integrity of the ecosystem within development areas, sites that are typically rich in species diversity, contain the presence of rare or endangered species, function as a unique or intriguing habitat, or are heritage sites, are often mapped as “sensitive sites”. The

sensitivity refers broadly to sites being sensitive to the activities of man, and therefore, qualifying for additional protection over and above that of the surrounding areas.

- In the case of the site for the proposed community upgrade such sensitive areas such as wetlands and associated buffer areas are noted and mapped out. As shown in Figure 7 and work around these areas should be planned to avoid or at least reduce any negative impacts.

3.3 Potential development activities

- Potential development activities that may impact on receiving environment include:
 - a. Clearing of the site unto surrounding areas and into the river systems or working within watercourses, such as road upgrades and pipe laying across rivers,
 - b. Storage of equipment and material unto surrounding areas
 - c. Driving and turning of construction vehicles outside the designated area of construction
 - d. Indiscriminate location of construction camp
 - e. Excavations for foundations for buildings
 - f. Mixing of mortar and concrete
 - g. Structure assembly and erecting
 - h. Transport of materials /supplies
 - i. Waste generation and management
 - j.

As a general principle to observe in conducting activities:

- In order to make it easier to avoid, minimize or contain, the occurrence of the above impacts, all construction activities should be restricted to within the boundary of the development footprint.
- Though the vegetation on the site is severely transformed, the site is surrounded by river systems and which could be the receiver of any environmental malpractices on the site. Thus the buffer zones between the site development footprint and the river should be strictly maintained as no-development zones as mapped on the layout.

3.4 Ensuring Health and safety

- Although development in whatever form it takes is expected to benefit mankind, it in the process, could also cause disruptions to the established livelihood system and the general day-to-day operations of affected beneficiary communities or as in this case the surrounding houses, road users, and also workers/construction staff.
- The purpose of this EMPr in this regard is to provide guidelines that would ensure that the health and safety needs of residents are taken into consideration during the construction and operation period and that, every necessary and possible step is taken to ensure that the normal social life of the community is not disrupted significantly during the period of construction and operation but rather improved in a positive manner.

SECTION 4: IMPACTS, MITIGATION MEASURES, AND MONITORING

- This section covers the core of the EMPr detailing potential environmental impacts, impacts sources and objectives are described, and environmental management mitigation measures to be implemented during construction are specified. **The contractor shall always adhere to these measures.** A checklist that may be used for internal monitoring of environmental performance is contained in Appendix 1.

The table below details the potential impacts, management objectives and proposed management actions required for mitigation.

Table 2 EMPr Impacts and Management Actions (Template adapted from CSIR, 2016).

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
Site Clearing and Vegetation Removal						
Clearing of vegetation through dining of trenches or working within watercourses	To ensure safety of the surrounding environment and the River systems are not disturbed	<ul style="list-style-type: none"> Vegetation removal within the drainage lines and buffer zones should be strictly avoided, as this will serve as storm water control mechanism for the river systems. All areas where vegetation is tripped off, for any reason, should be re-vegetation immediately after construction in that section or spot is complete. 	<ul style="list-style-type: none"> Site visit monitoring of construction period and before handover to ensure environment is properly taken care of. 	Visual Observations	Continuous	Constructor, Site Engineer and ECO
Clearing of the vegetation during site establishment fencing and construction.	To ensure safety of the surrounding environment and the River systems are not disturbed	<ul style="list-style-type: none"> Vegetation removal within the buffer zones should be strictly avoided, as this will serve as storm water control mechanism for the river systems. All areas where vegetation is tripped off, such as camp site etc, should re-vegetation immediately after construction is complete. 	<ul style="list-style-type: none"> Site visit monitoring of construction period and before handover to ensure environment is properly taken care of. 	Visual Observations	Continuous	Constructor, Site Engineer and ECO

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
Noise Impacts						
Noise is likely to be generated from the use of equipment and from construction workers on site.	Ensure that noise does not become nuisance to surrounding environment and neighbours	<ul style="list-style-type: none"> Construction activities should be limited to daytime hours (i.e. 07:00- 17:00, as defined in South African National Standards (SANS) 10103). The noise generated during construction and operational phases must adhere to the relevant SANS standards. 	Construction times to be monitored and managed (as well as included in the tender contract).	Records of complaints register and visual observations	Continuous	Contractor and ECO /EHS Officer
Traffic Impacts						
Traffic, congestion and potential for collisions during the construction phase.	Prevent unnecessary impacts on the surroundings road network by supplying parking for construction vehicles on site.	<ul style="list-style-type: none"> Road barricading should be undertaken where required and road safety signs should be adequately installed at strategic points within the construction and operational vehicles site must be adhered to During the construction phase, suitable parking area should be created and designated for construction trucks and vehicles. A construction supervisor should be 	Monitor, Record and report non-compliance.	Records of complaints register and visual observations	Continuous	Contractor EHS Manager

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
	Managing the flow of traffic at critical areas where necessary.	appointed to coordinate construction traffic during the construction phase (by drawing up a traffic plan prior to construction).				
Safety, Health and Environment						
Potential impact on the safety of construction workers due to construction activities (such as welding cutting, use of hot metals, working at heights, lifting of heavy items etc.).	Prevention of injuries to and fatalities of construction personnel during the construction phase.	<ul style="list-style-type: none"> Ensure that skilled, licensed and competent Contractors, riggers and crane operators are appointed during the construction phase, along with the use of certified. Equipment and scaffolding. Ensure that roads are not closed during construction, which may restrict access for emergency services. Ensure that construction and operational staff members adhere to the relevant health and safety standards of the Occupational Health and Safety Act 181 of 1993 	Monitors activities and record and report non-compliance by undertaking inspections.	Records of complaints register and visual observations	Continuous	Health and Safety Officer /contractor /ECO
Pollution caused by	Prevention unnecessary	<ul style="list-style-type: none"> No mixing of cement directly on the ground. 	Monitor activities and record and	Incident registers	Continuous	Project Developer, ECO and

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
spillage or discharge of construction wastewater into the surrounding environment	pollution impacts on the surrounding environment	<ul style="list-style-type: none"> All spills to be reported to the ECO. Ensure that adequate containment structures are provided for the storage of construction materials on site. Ensure the adequate removal and disposal of construction waste and material. Oil containers must be stored on lined platform covered by disposable sand. 	report non-compliance by undertaking inspections.			contractor
Heritage Resources (Archaeology and Palaeontology)						
Impact on Archaeology and Palaeontology	Prevent damage and destruction to fossil, artefacts and material of heritage significance	<ul style="list-style-type: none"> Carry out general monitoring of excavations for potential fossil heritage, artefacts and material of heritage importance as per the Chance Find Protocol (Refer to Heritage Report in BAR) All work must cease immediately, if any human remains and /or other Archaeology, Paleontology and historical material are uncovered. Such material, if exposed, must be reported to the nearest museum, archaeologist/ palaeontologist and to 	Monitor excavations and construction activities for archaeological and paleontological material. Contact AMAFA/SAHRA and identified paleontological/ Archaeology if any	Visual observation	Daily during excavation work. As required/ necessary during construction.	Contractor and ECO.

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
		AMAFA (or the South African Police Service), so that a systematic and professional investigation can be undertaken. Enough time should be allowed to remove/collect such material before construction recommences.	heritage features are uncovered.			
Groundwater Management						
Contamination of soil and ground water through spillage of concrete and cement	To control concrete and cement batching activities to prevent spillages and contamination of soil, groundwater and the marine environment.	<ul style="list-style-type: none"> Concrete mixing must be carried out on an impermeable surface (such as on boards or plastic sheeting and/or within a banded (lined) area with an impermeable surface). Concrete mixing areas must be fitted with a containment facility for the collection of cement-laden water. This facility must be impervious to prevent soil groundwater contamination. A washout facility must be provided for washing of concrete associated equipment. Empty cement bags must be secured with adequate binding material if these will be temporarily stored on site. Sand and aggregates containing 	Monitor the handling and storage of sand, stone and cement as instructed	Register of incident	Daily	Project Developer, Contractor and EHS Manager.

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
		<p>cement must be kept damp to prevent the generation of dust.</p> <ul style="list-style-type: none"> Any excess sand, stone and cement must be removed from site at the completion of the construction period and disposed at a registered disposal facility. 				
Wastewater Management						
Pollution caused by spillage or discharge of construction wastewater into the surrounding environment	Reduce construction wastewater discharge into the environment and the resulting impact	<ul style="list-style-type: none"> Implement proper construction site management actions such as the installation of containment structures, good on-site housekeeping (regular sweeping of roadway and work areas, reporting system and environmental awareness training), and spillage management 	Monitor via site audits and records non-compliance and incidents.	Register incidents Visual observation	of Monthly	EHS Manager
Storm water Management						
Pollution of the surrounding environment	Reduce the contamination of	<ul style="list-style-type: none"> The appointed Contractor should compile a Method Statement for Storm Water Management during the 	Compile Method Statement	Register incidents	of Once off (and thereafter updated as	Contractor ECO/ EHS Manager

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
because of contamination of storm water. Contamination could result from chemicals, oil, fuels, sewage, solid waste, litter etc.	storm water	<p>construction phase.</p> <ul style="list-style-type: none"> • Provide secure storage for oil, chemicals and other waste materials to prevent contamination of storm water runoff. • Regular inspections of storm water infrastructure should be undertaken to ensure that it is kept clear of all debris and weeds. • Erosion prevention structures should be placed to reduce water velocity within the drainage system. • Only essential (what cannot be avoided) vegetation should be removed and no disturbance to surrounding vegetation should be permitted. • Accumulation of water on the surface must be avoided always. 	<p>Monitor the banding and containment structures.</p> <p>Monitors via site audits and record non-compliance and incidents (i.e. by implementing walk through inspections.)</p>	Visual observation	<p>required). Weekly Weekly</p>	Contractor
Waste Management						
Pollution of the surrounding environment	Reduce soil and groundwater and river	<ul style="list-style-type: none"> • General waste and hazardous waste should be sorted temporarily on site in suitable (and correctly labelled) waste collection bins and skips (or similar). 	Inspection of the temporary waste storage area.	Register of incidents	Daily	ECO & EHS Manager

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
because of the handling, temporary storage and disposal of solid waste (general and hazardous).	contaminations because of incorrect storage, handling and disposal of general and hazardous waste.	<p>Waste collection bins and skips should be covered with suitable material, where appropriate.</p> <ul style="list-style-type: none"> Should on-site storage of general waste and hazardous waste exceed 100m³ and 80m³ respectively, then the National Norms and Standards for the Storage of Waste (published on 29 November 2013 under Government Notice 926) must be adhered to. Ensure that the construction site is kept clean always and that construction personnel are made aware of correct waste disposal methods. No solid waste may be burned or buried on site. 	Monitor waste generation and collection throughout the construction phase	Visual observation		
Air Quality Management						
Increased dust level and Air Quality Impact: Emissions from construction vehicles and	Reduce dust emissions during construction activities.	<ul style="list-style-type: none"> Ensure that cleared (excavated) areas and unpaved surfaces are sprayed with water (obtained from an approved source) to minimise dust generation. Ensure that construction vehicles travelling on unpaved roads do not 	Monitor dust suppression mechanisms and record non-compliances.	Register of incidents Visual	During complaints/incidents	EHS Manager, ECO and Contractor

Impact	Management Objectives	Management /Mitigation Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
generations of dust because of earthworks, as well as the delivery and mixing of construction material.		<p>exceed a speed limit of 40km/hour.</p> <ul style="list-style-type: none"> Limit construction activities to daytime hours. 		observation		
Socio-Economic Impacts Management						
Employment creation and skills development opportunist during the construction	Maximise local employment and local business opportunities to promote and improve the local economy.	<ul style="list-style-type: none"> Enhance the use of local labour and local skills as far as reasonably possible. The project will employ approximately 20 people from the area. Where the required skills do not occur locally, and where appropriate and applicable ensure that relevant local individuals are recruited. Ensure that goods and services are sources from the local and regional economy as far as reasonably possible. 	<p>Maximize local employment for unskilled labour and provincial/national skilled labour.</p> <p>Visual observation</p> <p>Procurement source documents</p>	<p>Records of staff members</p> <p>Number of Local people employed</p>	During the construction phase	Contractor and ECO.

MANAGEMENT PLAN FOR OPERATIONAL PHASE

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
Alien Vegetation Management						
Potential re-establishment of alien plants on site	Ensure the removal of alien invasive vegetation from the proposed projects area and prevent the establishment and spread of alien invasive plants.	<ul style="list-style-type: none"> Ensure that any alien invasive plants that become re-established on site are removed promptly. The removal of these species must have carried out in line with relevant municipal and provincial procedures, guidelines and recommendations. The removed species should be immediately disposed of correctly and should not be kept on site for prolonged periods of time, as this will enhance the spread of these species. 	<p>Monitor the removal of the alien invasive vegetation</p> <p>Visual observation</p>		During the removal process	EHS Manager / Municipal Environmental Officer in Charge

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
Land rehabilitation	Ensure land (neighbours) impacted during construction phase is sufficiently rehabilitated.	<ul style="list-style-type: none"> • Infilling of all excavation work. • Remove all rubble from construction site and disposal of it at a registered landfill site. 	<p>Infill of excavation ensuring sub soil is filled first.</p> <p>Removal rubble to a registered</p>	Visual observation	When /If complaints are received.	Project Developer
Safety, Health and Environment						
Soil and Water pollution	Prevent unnecessary pollution impacts on the surrounding environment	<ul style="list-style-type: none"> • Storm water should not be allowed to encounter effluent. • Monitoring water quality of onsite borehole should be conducted. • Ensure that excrement, carcasses, feed and other operational waste and hazardous materials are appropriately and effectively contained and disposed of without detriment to the environment 	<p>Carry out thorough inspection of piping, loading hoses, and banding for leaks, using a checklist.</p> <p>Proof of attendance to training sessions to be kept on file at the terminal.</p>	<p>Incident reports</p> <p>Visual observation</p>	Daily	Project Applicant (municipal Environmental Officers)

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
Air Pollution Environmental contamination of the surrounding environment from organic waste and Operation of Crematorium	Prevent unnecessary air pollution impacts because of the improper / inadequate / negligent operational procedures.	<ul style="list-style-type: none"> Ensure that operational waste are appropriately and effectively contained and disposed without detriment to the environment. Adhere to the best practice guidelines for managing farm operations. Ensure that the development is designated and lined with impermeable substances (concrete) in accordance with advice from international best practice norms. Establish appropriate emergency producers for accidental contamination of the surroundings. Waste recycling should be incorporated into the facility's operations as far as possible. The relevant standards for air quality must be adhered to. 	<p>Assurance of functionally of fire extinguishers via inspections and certification by an accredited fire service company.</p> <p>Regularly check and record Air quality , and functionality of furnace strappers</p> <p>Regular records of crematorium, as per facility specifications</p>	<p>Complaints report</p> <p>Maintenance register /Signed by operating engineer and Municipality environmental Officer /Inspector</p>	As needed	Project Applicant
Potential impact on the health of operating	To ensure that there are no adverse	<ul style="list-style-type: none"> Operational personnel must wear basic (i.e. gloves) are necessary during the 	Medical investigations or surveillance to be undertaken for the	Visual observation	As necessary	EHS Manager and Project

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
personnel, especially in the crematorium resulting in potential health injuries.	effects on the health of operating personnel	operational phase. <ul style="list-style-type: none"> Fire extinguishers should be easily accessible on site. 	operating personnel. Keep a register of the medical records for the operating personnel.			Developer.
Increase in vertebrate and invertebrate pests.	Highly localized pest invertebrate control that does not affect non-target populations or taxa	<ul style="list-style-type: none"> Detect and control pest infestations before they become a problem through frequent and careful cleaning, monitoring and control. Poultry legislation guidelines should be adhered to. Applicant to adhere to Best Practice Guild lines and Animal Disease Act (Act 35 of 1984) 		Visual observation	As necessary	EHS Manager and Project Developer
Storm water Management						
Increased storm water discharge into the surrounding environment which	Reduce the impacts of increased storm water discharge to	<ul style="list-style-type: none"> Regular monitoring of stormwater quality and river health 	Implement surface water quality monitoring programme, based on consultation with the	Incident reports	As agreed during the operational phase.	Project ECO Project Applicant (Municipal

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
may end up in the rivers	the environment		landowner			Environmental Officer)
		<ul style="list-style-type: none"> Regular inspections of storm water infrastructure should be undertaken to ensure that it is kept clear of all debris and weeds. Accumulation of water on the surface must be avoided. Waste traps in storm water system should be cleaned at regular intervals. Run off to roads must avoided. 	Undertake regular inspections of the storm water infrastructure (i.e. by implementation walk through inspections).		Weekly	Site Manager and EHS Manager
Socio-Economic Management						
Additional employment opportunities	Maximise local employment and local business opportunities to promote and improve	<ul style="list-style-type: none"> Enhance the use of local labour and local skills as far as reasonably possible. Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individual are trained. Ensure that goods and 	Maximise local employment for unskilled labour and provincial/national skilled labour		During the operational phase	Project Developer

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
	local economy	services are sourced from the local and regional economy as far as reasonably possible.				
Boost in the economy of Region 2	Maximise positive impacts through ensuring produce is sold to local markets	<ul style="list-style-type: none"> Ensure that the proposed project has secured local buyers 	Seek out local markets and secure formal trade agreement	Monthly supplier reports	Monthly	Project developer
Environmental Awareness`						
Increased energy consumption during the operational phase	Reduce energy consumption where possible	<ul style="list-style-type: none"> Encourage the use of energy saving equipment (such low voltage light and low-pressure taps) and promote recycling. Operational personnel must be made aware of energy conservation practices as part of the environmental awareness training programme. 	<p>Monitor energy usage via site investigations.</p> <p>Conduct training for all operational personnel</p>		Monthly	EHS Manager / Municipality

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
		<ul style="list-style-type: none"> Firefighting equipment must be made available at various appropriate locations 				
Safety, Health and Environment						
Pollution of the surrounding environment as a result of the handling, temporary storage and disposal of solid waste	Prevent unnecessary pollution impacts on the surrounding environment	<ul style="list-style-type: none"> General waste (i.e. building rubble, demolition waste, discarded concrete, bricks, tiles, woods, glass, plastic, metal, excavated material, packaging material, paper and domestic waste etc.) and hazardous waste (i.e. empty tins, paint and paint cleaning liquids, oils, fuel spillage and chemicals etc.) generated during the decommissioning phase should be stored temporarily on site in suitable (and correctly labelled waste collection bins and skips (or similar). Ensure that enough general waste disposal bins are provided for all personnel throughout the site. These bins must be emptied on a 	Monitor activities and record and report non-compliance by undertaking inspections.	Compliance reports Visual observations	Throughout the decommissioning phase	Project applicant, ECO and Contractor

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
		regular basis.				
Spill contingency, Management and Handling of Chemicals/Dangerous Goods						
Potential spillage of effluent to the surrounding environment from chemicals used in crematorium and ablution facilities of the cemetery	Reduce the spillage of domestic effluent and the impact thereof on the environment.	<ul style="list-style-type: none"> Ensure that normal sewage management practices are implemented during usage 	EHS Manager to monitor via site audits and record non-compliance and incidents	Incident reports Visual observations	Monthly	EHS Manager and Environmentalist
		<ul style="list-style-type: none"> Ensure that the toilet/sanitation facilities are maintained in a clean, orderly a sanitary condition. 	Monitor via site audits and record non-compliance and incidents	Incident reports Visual observations	Daily	EHS Manager and Contractor
Waste Management						
Pollution of the surrounding environment as a result of the handling, temporary storage and disposal of	Reduce soil and ground water contamination as a result of incorrect storage. Handling and	<ul style="list-style-type: none"> Include regular waste collection from the facility into the municipal waste stream. 	Carry out monitoring throughout the operational phase	Compliance reports Visual observations	Continuously thought-out life of project	Project Developer and EHS Manager

Impact	Management Objectives	Management Actions	Monitoring			
			Indicator	Methodology	Frequency	Responsibility
solid waste	disposal of general and hazardous waste					
		•	•			

5. EMP CONCLUSIONS AND RECOMMENDATIONS

The significance of most of the issues identified may be effectively reduced after mitigation should this environmental management plan be carefully followed. The proposed development will be undertaken as part of the in-situ upgrade which requires that care be taken to not unnecessarily inconvenience the community during construction. The concluding recommendations are:

- Contractors need to follow the environmental management plan;
- A copy of the EMP should always be placed on site, and the contractor and team should be workshopped on the requirements of the EMP.
- The development needs to benefit the community in a tangible manner, and therefore, attempts need to be made to integrate community needs and aspirations into the implementation processes of the development.
- Where appropriate, the contractor must use local labour as much as possible;
- The contractor needs to show concerns for health in general and the health safety of the employees in particular;
- In terms of the National Environmental Management Act 107 of 1989 everybody is required to take reasonable measures to ensure that they do not pollute the environment. Reasonable measures include informing and educating employees about the environmental risks of their work and training them to operate in an environmentally acceptable manner;
- Furthermore, in terms of the Nation Environmental Management Act 107 of 1998 the cost of repair for any environmental damage shall be borne by the person responsible for the damage.
- Operational stage recommendations should be also implemented and the onus is on the applicant to ensure adherence to the mitigation measures proposed. Regular maintenance and monitoring is required from the municipality and to ensure smooth operations.
- The competent authority may also pay random visits to the facility to monitor compliance during construction and operation stages.

Annex A: Glossary

- **1.3.1 General**

- The contractor shall actively engage himself and workers (if necessary) on this project to knowing and understanding of relevant terms, descriptions, and abbreviations in this EMP as indicated below:
- **Contractor (CT)**
 - For the purpose of this EMP: “CT” refers to the main contractor(s) appointed for the construction activities of the project or portion of the project. The main contractor(s) are required to adhere to the EMP and are responsible for ensuring that all subcontractors, suppliers and staff appointed by them, also adhere to the EMP.
- **All Staff**
 - This is the entire workforce. Workers employed by the contractor or persons involved with activities related to the project, or persons present or visiting the construction area, including permanent, contract, or casual labour and informal traders.
- **Environmental Control Officer (ECO)**
 - An individual or representative of an organization appointed to act on matters concerning the day-to-day implementation of the EMP, and for liaison with the DAEA&RD, and the public affected by construction.
- **EDTEA**
 - Department of Economic Development, Tourism, and Environmental Affairs – who is the competent authority in the case of this application.
- **Local Community**
 - People residing in the region and near the construction activities, including the owners and/or managers of land affected by construction, small holdings, workers on the land, and the people in nearby towns and villages.
- **Public**
 - Any individual or group of individuals concerned with or affected by the project and its consequences, - including the local community, local, regional, and national authorities, investors, workforce, customers, consumers, environmental interest groups, and the general public.
- **Relevant Authority**
 - This refers to the environmental authority on national, provincial or local level with the responsibility for granting approval to a proposal or allocating resources.

- **1.3.2 About the Construction Activities**

- **Alternatives**

- A possible course of action, in place of another, that would meet the same purpose and need (of proposal). Alternative can refer to any of the following but are not limited to hereto: alternative sites for development, alternative site layouts, alternative design, alternative process and materials.

- **Construction Areas/Site:**

- This is land area on which the project is to be located. It includes the sites of individual stands, construction campsites, access roads and tracks, as well as any other area affected or disturbed by construction activities. The EMP (particularly) the specifications for rehabilitation) is relevant for all areas disturbed during construction.

- **Development**

- This is the act of altering or modifying resources in order to obtain potential benefits.

- **Access Roads and Tracks**

- Access Roads and Tracks refers exiting and newly established roads and tracks, and areas cleared or driven over to provide access to/from the construction areas, and for the transportation of the construction workforce, equipment and materials.

- **1.3.3 About the Environment**

- **Receiving / Affected environment**

- Those parts of the socio-economic and biophysical environment impacted on by the development.

- **Assessment**

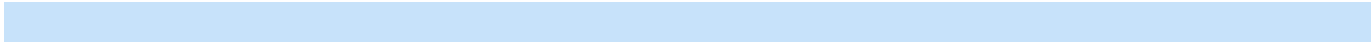
- The process of collecting, organizing, analysing, interpreting, and communicating data that is relevant to some decision.

- **Environment**

- The surrounding within which humans exist that are made up of: - the land, water and atmosphere, fauna and flora, including any part, combination or interrelationships among these; and all the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human wellbeing.

- **Environmental Impact**

- This is the degree of change in an environment resulting from effect of an activity whether desirable or undesirable. Impacts may be direct consequences of an organization's activities or may be indirectly caused by them.
- **Environmental Impact Report**
- A report describing the process of examining the environmental effects of a development proposal, the expected impacts and the proposed mitigation measures.
- **Evaluation**
- The process of weighing information, the act of making value judgments or ascribing values to data in order to reach a decision.
- **Hazards**
- Hazardous substances in this regard are anything that constitutes a source of, or exposure to danger. Some examples of hazardous sources or materials are:
 - Diesel, petroleum, oil, bituminous products;
 - Cement;
 - Solvent based paints;
 - Lubricants;
 - Explosives;
 - Drilling fluids;
 - Pesticides, herbicides.
- **Hydrological Features**
- Hydrological features include, but not limited to:
 - Rivers and Wetlands;
 - Open water;
 - Vegetated drainage channels;
 - Subterranean water;
- **Life Support Systems**
- Life support systems include, but are not limited to:

- An ecological system in which its outputs are vital for sustaining specialized habitats;
 - An ecological system in which its outputs are vital for sustaining human life (e.g. water purification).
 - **Mitigation**
 - Measures designed to avoid, reduce or remedy adverse impacts.
 - **Monitoring**
 - This is the repetitive and continued observation, measurement and evaluation of environmental data to follow changes over a period to assess the efficiency of control measures.
 - **Negative Impact**
 - A change that reduces the quality of the environment (for example, by reducing species diversity and the reproductive capacity of the ecosystem, by damaging health, property or by causing nuisance.
 - **Rehabilitation**
 - Measures implemented to restore a damaged Environment to an acceptable level.
 - **Significant impact**
 - This is an impact that, by its magnitude, duration or intensity alters an important aspect of the environment.
- 

DETAILED CV OF EAP

Curriculum Vitae

Of

Honu-Siabi MacCarthy

Cell: +27 (0) 719212618 Fax: +27(0)86 776 33 25 E-mail: macsiabi@gmail.com
[/maccarthy@developmentimpact.co.za](mailto:maccarthy@developmentimpact.co.za)

PERSONAL INFORMATION

Surname : Honu-Siabi
 First Names : MacCarthy
 Gender : Male
 Current residence : South Africa (Pietermaritzburg / Johannesburg)

Profile summary:

Having been working in the development sector for a while, I have acquired more than 12 years experience in critically assessing the environmental, economic and social impacts of development interventions, in Africa. I have worked with both the public and private sector on diverse developmental initiatives and mostly work across sectors, and in collaborate with other individuals, teams and institutions in ensuring collective efforts towards sustainable and people-centered development and growth in South Africa and in on the continent of Africa as a whole.

EDUCATION

Name of Institution	Degree/Qualification obtained	Year Obtained
University of the Witwatersrand	PGD in Public and Development Sector Monitoring and Evaluation	2015
University of KwaZulu-Natal -RSA	Master of Social Sciences (MS Sc.) – Policy and Development Studies	2014
North West University - RSA	Environmental Impact Assessment (Cert)	2013
North West University - RSA	Post Decision Environmental Monitoring and Enforcement (Cert)	2013
University of Kwazulu-Natal GSB -RSA	Project Management (Cert)	2012
University of Cape Coast - Ghana	Bachelor of Management Studies – (Honours)	2007
International School Of Aviation - Ghana	Tourism Management (Diploma)	2001

Skills and Competencies

- Good Programme implementation and management skills
- Ability to use MS Projects in scheduling, executing and managing complex projects
- Conversant with all Microsoft Office End User Applications (Word, Excel, PowerPoint, Access, Publisher etc), Corel Draw, SPSS etc
- General Knowledge in computer Hardware and Software.
- Excellent verbal and written communication skills all levels
- Research, workshop, organisation, facilitation and Presentation skills
- Attention to details and strong result oriented thinking and innovation ability
- Ability to work under pressure with less or no supervision
- Design and implementation of monitoring systems
- Data collection (multiple methods/tools), data analysis and reporting skills
- Ability to search, using search protocols, and write up high quality academic/professional output

RESEARCH ACTIVITIES / CONFERENCES /WORKSHOPS

Research

Theses

An Analysis of the Implementation of a Monitoring & Evaluation System at the NGO sector: The Case of the NGO SaveAct, 2013

(Paper on this is being edited for publication)

Market research

Commercialization Goat meat in the KZN Province
Department of Finance & Economic Development (Funder)
2011

Conferences /Presentations

Conference

Presenter: Unpacking diagnostics as a key component in public policy making process: The need for evidence in diagnosing societal problems

5th SAMEA Biennial Conference

Sandton, Johannesburg, RSA

12-16 October 2015

Capacity-Building Workshop

Research synthesis and Systematic Reviews (3IE training)
African Evidence network Colloquium on Research evidence use
University of Johannesburg
November 2014

Workshop and conference

Participant - Workshop on Systematic Reviews and Impact Evaluations

Presenter: *The critical role of monitoring and evaluation systems in impact evaluation: Lessons from a case study*

	<p>3IE, Asian Development Bank Conference: Making Impact Evaluations Matter; Better evidence for Effective Policies and Programmes. Asian Development Bank Manila, Philippines 1-5 September, 2014</p>
Conference	<p>Presenter- An Analysis of the Implementation of a Monitoring and Evaluation System: The Case of the NGO SaveAct SAMEA, DPME Conference on: Policy Research: Do findings make a difference 16 to 20 September 2013</p>
Capacity-Building Workshop	<p>Participant-Developing Monitoring and Evaluation Systems SAMEA and DPME <i>workshop Series</i> 25-27 September, 2013, Durban</p>
AWARDS AND RECOGNITIONS	
Conference Scholarship	<p>3IE Sponsorship to attend and present poster at workshop and conference dubbed Making Impact Evaluations Matter. Manila, Philippines, Sept 1-7, 2014</p>
Best Poster Presentation Award	<p>1st Position, Best poster presentation, Making Impact Evaluation Matter Conference, Manila, Philippines, 2014</p>
Emerging Evaluator Award (Scholarship)	<p>South African Monitoring and Evaluation Association (SAMEA) 4th Biennial Conference, Sandton, Johannesburg, Sept 2013</p>
Runner up (2 nd Position) – National	<p>Millennium Essay Competition (Organized for all Secondary Schools Nationwide) Ghana Millennium Commission, Nov 2000</p>

EMPLOYMENT HISTORY

Employer	Bizycon Pty Ltd / Development Impact Group
Position	Snr EAP – EIAs, Research & Evaluations
Duties	Managing projects and consulting -
Duration	2011 to date
Employer	Quest Research Services (QRS)

Position	Snr Consultant – Monitoring and Evaluation
Duties	Project consultancy
Duration	2016 - 2019
Employer	University of the Witwatersrand
Position	MOOC Community Teaching /Facilitating (short consultancy)
Duties	Assisting with student issues, monitoring and moderating online discussion forums and helping plan and review new modules and online courses.
Duration	September 2016 – November 2016
Employer	Anglophone Centre for learning on Evaluation and Results (CLEAR-AA), Wits School of Governance
Position	Researcher
Duties	Rendering support to Snr M&E technical expert Managing projects and offering support on key projects of CLEAR-AA, assisting institutions develop M&E systems and capacity, Undertaking research, conducting surveys, collecting and analyzing data and report writing, in addition to conducting presentations and meetings, and also organizing workshops and other interactive events.
Duration	November 2015 – April 2016
Employer	Nature & Development Group of Africa
Position	Project Manager (consulting) Project Manager – Environmental Consulting and Research
Duration	2009 – 2012, 2012 to 2015
Name of employer	Nisis Engineering Designs Co. Ltd (Project Management/Civil Engineering/Construction)
Position held	Assist. Manager (Projects and Administration)
Duties	Management of Projects and Procurement (For Construction of Public Water and Sanitation Facilities), Managing personnel and preparing of quarterly reports, General administration
Duration	Feb, 2006—November, 2007.
Name of company	Thembaletu Community Education Centre
Position	Trainer/ Facilitator
Duties	Training participants in Basic Business Skills, Reviewing Training material, preparing and conducting assessments and Evaluation, and reporting at meetings

DEVELOPMENTAL WORK EXPERIENCE /PROJECTS

RECENT MONITORING AND EVALUATION PROJECTS

<p>Jan 2017 –July 2017</p> <p>Client Project Leader (QRS) My role /Position</p>	<p>Diagnostic Evaluation of the implementation process of Pomfret Relocation and Rehabilitation intervention. –A project to evaluate the implementation process and also diagnose socio economic conditions of Pomfret community for redesigning of new intervention and provide cabinet with sufficient evidence for decision making.</p> <p>DPME Mr C Dube Principal Evaluator</p>
<p>Nov 2016</p> <p>Implementer /Employer Project Leader (QRS) My role /Position</p>	<p>Design and Facilitation of (2 Workshops): Dialogue among Higher Educational Institutions across Sub-Sahara Africa on the Professionalization of Monitoring and Evaluation in Africa, including curriculum structuring and delivery. Held in Nairobi (for Eastern and Southern Africa) and Accra (for Western Africa).</p> <p>CLEAR AA (Wits School of Governance) Ms H Robertson Organiser and Co Facilitator</p>
<p>Oct 2015 –April 2016</p> <p>Implementer /Employer Project Leader (QRS) My role /Position</p>	<p>Strengthening the Monitoring and Evaluation Framework of City Of Johannesburg: Institutional Support from CLEAR AA: Diagnostic assessment of the current monitoring & Evaluation system, programme design, curriculum development and training</p> <p>CLEAR AA (Wits School of Governance) Ms H Robertson / Dr Laila Smith Programme Coordinator</p>
<p>Nov 2016</p> <p>Implementer /Employer Project Leader (QRS) My role /Position</p>	<p>Workshop Design and Facilitation: Monitoring and Measuring the effect of Human Settlement interventions: A re-look at the human settlement mandate and evaluation frameworks of various sectors of government as related to Outcome 8 of the National Development Plan. The workshops sort to find a dialogue on integration and aligning of the evaluations frameworks related to various legislative instruments such as the IUF, SPLUMA, MTSF, and MEIA Etc.</p> <p>DPME /CLEAR-AA Dr Laila Smith /Ms M Amisi Programme Design and Co-Facilitation.</p>

2. ENVIRONMENTAL IMPACT ASSESSMENT PROJECTS:

Some Selected Projects worked on in this regard include:

Environmental Impact Assessment (BAR) for Residential development on Erf 1087 Posmasburg, Northern Cape

Project Implementing Agent	:	Thuso Enviro and Developments
Project Leader	:	Mr R Themeli
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	In progress 2020

Environmental Impact Assessment (BAR) for Residential development on 15 Strathcona Drive, Clansthal, Durban

Project Implementing Agent	:	
Project Leader	:	Mr H P Rayes
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	In progress 2020

Environmental Impact Assessment (BAR) for Greater Kokstad Cemetery Establishment

Project Implementing Agent	:	Inzuzo Yesizwe Development Planners
Project Leader	:	Mr Mxolisi Ndlovu
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	Completed July 2020

Environmental Impact Assessment for Umzimkhulu Housing Project, Umzimkhulu

Project Implementing Agent	:	Isibuko Development Planners
Project Leader	:	Ms Sithokoza Cele
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	Completed Aug 2020

Environmental Impact Assessment for Greenco Poultry Farm, Bela Bela, Limpopo

Project Implementing Agent	:	Development Impact Group (DIG)
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	Completed June 2020

Environmental Analysis for Town Planning Scheme: Nquthu Local Municipality

Project Implementing Agent	:	NANGA Projects
Project Leader	:	Mr Suleiman Mwajuzuu
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	Completed 2019

Environmental Analysis for Town Planning Scheme: Umlalazi Local Municipality

Project Implementing Agent	:	NANGA Projects
Project Leader	:	Mr Suleiman Mwajuzuu
Project Consultant (Environmental)	:	MacCarthy Honu-Siabi
Project status	:	Completed 2018

Environmental Analysis for Town Planning Scheme: Emfuleni Local Municipality, Mpumalanga

Project Implementing Agent : Isibuko Development Planners
 Project Leader : Mr M Maseko
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : 2018

Project identification and Township Establishments Nkangala District – Strategic Development Framework (SDF)

Project Implementing Agent : Isibuko Development Planners
 Project Leader : Mr M Maseko
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : 2016

Middlebuilt Housing Project, Delmas – Environmental Impact Assessment (Scoping)

Project Implementing Agent : Isibuko Development Planners
 Project Leader : Mr M Maseko
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : 2016

West Rand Poultry Value Chain – Environmental Impact Assessment

Project Implementing Agent : DRDLR, through Nkwele Agribusiness & Investments
 Project Leader : Mr Thati Tladi
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2016

Environmental Impact Assessment Groutville Priority 2 Sanitation Project

Project Implementing Agent : Linda Masinga & Associates, Durban
 Project Leader : Patrick Addo
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2015

Environmental Impact Assessment Namani Shopping Mall Ekuvukeni – near Ladysmith

Project Implementing Agent : Isineke Developments
 Project Leader : Dr Nelson Mwanyama
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2015

Environmental Impact Assessment (Basic Assessment) Mkhuze Waste Water Treatment Works

Project manager : RCR Collaborative, Durban
 Project Leader : Patrick Addo
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2015

Environmental Impact Assessment (Environmental Scoping & EIA) for Redcliff Housing Project

Project manager : RCR Collaborative, Durban

Project Leader : Patrick Addo
 Project Consultant (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2012

Environmental Impact Assessment for the Rehabilitation of Storm-Damaged Roads in Hibiscus Coast Municipality

Project manager : Liquid Platinum
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 Project status : Completed 2009

Environmental Impact Assessment for Kenville Housing Project (Durban)

Project manager : Project Preparation Trust of KZN
 Project leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully 2009

Environmental Impact Assessment for the Vulamehlo Ward 5 Housing Project

Project manager : TMS Properties
 Project leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed 2010

Environmental Scoping for the Emapeleni Housing Project (Emapeleni)

Project manager : eThekweni Municipality
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : In progress

Environmental Scoping for the Kwadinabakubo Housing Project

Project manager : eThekweni Municipality
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Completed 2008

Environmental Scoping for the Cottonlands Housing Project (Cottonlands, Ndwedwe)

Project manager : eThekweni Municipality
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, public participation and report preparation
 Project status : In progress

Wetland Assessment for the Copesville Housing Project (Copesville, Pietermaritzburg)

Project manager : Mr. M. Marareni (UmpHEME Development Services)
 Project leader : Dr. Nelson Mwanyama/Patric Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My Duties : Wetland Delineation and Report preparation
 Project status : Successfully completed 2009

Environmental Impact Assessment for the Umlasi AA and Chicago Housing Project (Umlaasi, Durban)

Project manager : Chris Calitz (Terraplan Associates)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed 2009

Environmental Impact Assessment for the Umlasi - Isimbini Housing Project (Umlasi, Durban)

Project manager : Chris Calitz (Terraplan Associates)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed 2009

Environmental Impact Assessment for the Zanzibari Housing Project (Bluff, Durban)

Project manager : Project Preparation Trust of KZN
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Completed

Environmental Screening/Assessment for the Chartsworth Bulk and Infill Housing Project

Project manager : Nelson Allopi and Associates
 Project Leader : Patrick Addo
 Project Manager (Environmental) : Dr. Nelson Mwanyama
 MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed 2009

Environmental Impact Assessment for the Valley View Special Residential Housing Project (Valley-View Road, Marrianhill)

Project manager : eThekwini Housing
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed 2010

Environmental Impact Assessment for the Rehabilitation and Upgrade of Roads in Inanda Project (Inanda, Durban)

Project manager : Sigh Govender and Associates
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Completed 2010

Environmental Impact Assessment for the Sandton Phase 2 Housing Project (Kwandengezi, Pine Town)

Project manager : Sakum Housing Cc
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for a Helicopter Landing Facility in Darnell

Project manager : Silvermoon Investment 364 Cc
 Project Leader : Patrick Addo
 Project Manager : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation

Environmental Impact Assessment for the Fredville Phase 2 Housing Project (Fredville, Hamasdale)

Project manager : Chris Calitz (Terraplan Associates)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Bhubhubhu Housing Project (Mfolozi Municipality)

Project manager : Chris Calitz (Terraplan Associates)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Iutval Rural Housing Project (Indaka Local Municipality)

Project manager : Mr. Graham (Siyamthanda Development)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Cato Crest Housing Project

Project manager : Bernd Rothaug (RCR Collaborative)
 Project Leader : Patrick Addo

Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : In Progress.

Environmental Impact Assessment for the Waterfall Ext. 4 Housing Development

Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : In Progress

Other Housing Development Projects

Projects worked on in this regard include:

Environmental Impact Assessment for the Zidweni Rural Housing Project (Zedweni, Ingwe Municipality)

Project manager : Mr. M. Marareni (Umpheme Developments)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Manzamnyama Rural Housing Project (Centocow, Ingwe Municipality)

Project manager : Mr. Ray Doherty
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Qiniselani-Manyuswa Rural Housing Project (Qiniselani near Hillcrest)

Project manager : Chris Calitz (Terraplan Associates)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Vukuzithathe Rural Housing Project (Ezinqoleni)

Project manager : Mr. M. Marareni (Umpheme Developments)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the Zidweni Rural Housing Project (Zidweni, Creighton)

Project manager : Mr. M. Marareni (Umpheme Developments)
 Project Leader : Patrick Addo

Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the KwaMashabane Rural Housing Project (Mbazwana)
 Project manager : Mr. M. Marareni (UmpHEME Developments)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Environmental Impact Assessment for the KwaMashabane Rural Housing Project (Mbazwana)
 Project manager : Mr. M. Marareni (UmpHEME Developments)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Strategic Planning and Environmental Assessment (SEA) Developments

Projects worked on in this regard include:

Strategic Environmental Impact Assessment for the Groutville, Adinville, Melville and Dube Village Township Regeneration Strategy (Groutville)

Project manager : S'bongiseni Maseko (Isibuko se Africa)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Strategic Environmental Impact Assessment for the Shakaskraal, Woodmead, Shayamoya and Nkobongo Township Regeneration Strategy (Shakaskraal)

Project manager : S'bongiseni Maseko (Isibuko se Africa)
 Project leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Strategic Environmental Assessment for preparation of a Strategic Development Framework for Phelandaba Township

Project manager : S'bongiseni Maseko (Isibuko se Africa)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi

My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Strategic Environmental Assessment for preparation of a Strategic Development Framework for Ndumo Township

Project manager : S'bongiseni Maseko (Isibuko se Africa)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Strategic Environmental Assessment for the preparation of a Strategic Development Framework for Bhambanana Township (Jozini)

Project manager : S'bongiseni Maseko (Isibuko se Africa)
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 My duties : Field work, data collection and report preparation
 Project status : Successfully completed

Other Work on EIAs and Environmental Management

Rehabilitation of Storm-Damaged Roads in Hibiscus Coast Municipality

Project manager : Liquid Platinum
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 Duties : ECO (Monitoring and preparation of monthly reports)
 Project status : Completed

Kwaxolo Low Cost Housing Project, Kwaxolo, Bushy Vales, Marburg

Project manager : Malusi Zwane Dept. Of Human Settlement
 Project Leader : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi
 Duties : Sales Administration
 Project status : Completed

Environmental Scoping for Ekwandeni Housing Project

Project manager : eThekwini Housing
 Project Leader : Patrick Addo
 My duties : Public Participation – Information Distribution
 Project status : Completed

Preparation of Business Plan for the Commercialisation of the Goat Industry in Kwazulu-Natal

Prepared for : Department of Economic development
 Project manager : Patrick Addo
 Project Manager (Environmental) : MacCarthy Honu-Siabi

My duties : Market research - data collection and analysis report preparation
Project status : Completed

Empangweni Housing Development

Project manager : Patrick Addo
Project Manager (Environmental) : MacCarthy Honu-Siabi
My duties : Beneficiary Data Collection and processing

REFERENCES

1 Name : Dr. Nelson Mwanyama
Position : Director of Projects /CEO
Organisation : Isineke Developments / Bizycon Pty Ltd
Contact Number : nelson@isineke.co.za

2. Name : Mr. P. K. Addo
Position : Managing Director
Organisation : Nature and Development Group of Africa CC
Pietermaritzburg
Contact Number : +27(0)83 555 22 88



IAIAsa Secretariat
Tel +27(0)11 655 7183
Fax 086 662 9849

Address:
43 Birchwood Court, Montrose
Street, Vorna Valley, Midrand,
1618

Postal address:
PO Box 11666, Vorna Valley,
1686
Email: operations@iaiasa.co.za
Website: www.iaiasa.co.za

IAIAsa Confirmation of Membership: 2022/2023
MacCarthy Honu-Siabi Membership Number: 6819

19 Oct 2022

TO WHOM IT MAY CONCERN

Mr MacCarthy Honu-Siabi, Bizycon (Pty) Ltd (Development Impact Group) (IAIAsa membership Number **6819**) is a paid-up Full Member in good standing of International Association for Impact Assessment, South Africa and has been a member of IAIAsa since 01 Mar 2021.

Membership has been continuous from 01 Mar 2021 to date.

This membership is valid from 01 Mar 2022 to 28 Feb 2023.

IAIAsa is a voluntary organisation and is not a statutory body regulating the profession. Its members are however expected to abide by the organisation's code of ethics which is available on our website.

IAIAsa is an Affiliate of IAIA which is an international body through a memorandum of understanding. IAIA is not responsible or liable for the actions or activities of the Affiliates. Membership of one does not imply membership of the other.

Any enquiries regarding this membership may be directed to the Secretariat at the above contact details.

Yours sincerely

Rethabile Mbokodi
President 2021/2022

President: R Mbokodi, Past President: A. Adams, President Elect: M. Sham, Treasurer: S Nkosi, Secretary: M. Sham, Members: F. Fortune, R. Kruger, R. Mellett, R. Patak. Branch Chairs: N. Amott, G. Beyers, Z. Dlamini, Z. Mkhize, H. Moolman.