



## **DRAFT SCOPING REPORT**

APPLICATION FOR ENVIRONMENTAL AUTHORISATION FOR  
THE PROPOSED ESTABLISHMENT (SERVICES OF STANDS) FOR  
THE LADYSMITH TOWNSHIP EXT 61 LOCATED ON THE  
REMAINDER OF ERF 1, ERVEN 17273 AND 3673 LADYSMITH,  
KWAZULU-NATAL

**REFERENCE NUMBER**

DEDTEA

**NOVEMBER 2019**

## **EXECUTIVE SUMMARY**

INALUK Consulting Services was appointed by Mahlori Development Consultants and Project Management Solutions to conduct an Environmental Impact Assessment for the authorization of the proposed Township development on the remainder of ERF 1 Ladysmith (proposed erven 17273 and 3673), within the Alfred Duma Local Municipality, uThukela District, Kwazulu-Natal.

### **Project description**

Alfred Duma Local Municipality is proposing to establish a new township development covering an area of approximately 203,6 Ha in Ladysmith, Kwazulu-Natal Province. The proposed development is located on the Erf 1, Erven 17273 and 3673 Ladysmith. The site can be accessed from the N11 and Klipbank Road in Ladysmith, the said property is approximately 2 km to the southwest of the Ladysmith CBD, directly south of National Route 11 (N11). The development will entail the provision of services to enable the proposed development of the Ladysmith Ext 61 Township which will consist of the following infrastructure Business stands, Residential stands, Institutional stands, Recreational, Educational, Municipal, Place of worship, Public open spaces.

The Scoping and EIA Process is being undertaken in terms of the National Environmental Management Act (Act no. 107 of 1998) (NEMA) read with the Environmental Impact Assessment Regulations, 2017 (GNR 326 of 7 April 2017).

### **Site**

According to Mucina & Rutherford (2006) most of the study site falls in the Thukela Thornveld vegetation unit with only the hills southwest of the shooting range representing the KwaZulu-Natal Highland Thornveld vegetation unit. The Thukela Thornveld vegetation unit features valley slopes to undulating hills with Acacia-dominated bushveld of variable density, ranging from wooded grassland to dense thickets with dense grassy undergrowth. The application site consists of mixed alien and indigenous vegetation, Acacia – Aloe marlothii thornveld and riparian vegetation along the Klip River.

### **Public Participation**

Public participation process is being undertaken in line with the requirements of chapter 6 of the National Environmental Management Act (act 107 of 1998) read with the EIA regulations as amended to award an opportunity to interested and or affected parties an opportunity to comment on the proposed development. Information received during this public period will be incorporated into the reports that will be submitted to the department. A database of all register parties will be kept as well as a record of all the identified issues.

## **EIA Methodology**

During this period a review of various literature as well as completed specialist input will be done in order to assess the current state of the receiving environment of the proposed development as well as potential impacts that may arise as a result of the proposed township establishment . such fatal flaws should there be any will be reported and during the impact assessment of the potential impacts be rated in order to advise the competent authority on the magnitude of the significance of the development on the environment.

### **Way forward**

The following serves as a summary of the proposed way forward:

- 1. Draft Scoping Report (DSR).** The draft scoping report will be issued for public comments to registered and affected parties
- 2. Final Scoping issued.**
- 3. Issues and Response Report.** Comments on the Draft EIR will be analysed and summarised in the final report.
- 4. Revise draft EIR.** The draft EIA report will be updated and issues and responses received during the review phase will be included and addressed accordingly.
- 5. Final EIR.** The revised final report will be printed and submitted to KZN DEDTEA for a final decision with regards to the proposed development.

**REPORT TITLE** : Draft Scoping report Report  
For the Proposed Ladysmith Ext 61 Township  
Development

**CLIENT** : Alfred Duma Local Municipality

**PROJECT NAME** : The proposed establishment of the Ladysmith  
Township Ext 61 located on the remainder of Erf 1,  
Erven 17273 and 3673 Ladysmith, Kwazulu-Natal

**REPORT STATUS** : For Public Comment

**PROJECT NUMBER** : ICS03/2019

**REPORT NUMBER** : D-SR/NOV 2019

**PLACE AND DATE** : Pretoria, November 2019

### **DECLARATION OF INTEREST**

I, K. Nkuna as authorised representative of INALUK Consulting Services hereby confirm my independence as an Environmental Assessment Practitioner and declare that neither I nor INALUK Consulting services have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which INALUK was appointed as Environmental Assessment Practitioner in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), other than fair remuneration for worked performed, specifically in connection with the Environmental Authorisation process for the Ladysmith Ext 61 Township development.

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**NAME**

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**SIGNATURE**

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**DATE**

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## **ABBREVIATIONS**

DEDTEA - Department of Economic Development, Tourism and Environmental Affairs –

DMR - Department of Minerals and Resources

EMC - Environmental Management Committee

EIA - Environmental Impact Assessment

EMP - Environmental Management Plan

I&AP - Interested and Affected Party

IAR - Impact Assessment Report

IDP - Integrated Development Plan

NEMA - National Environmental Management Act of 1998 as amended

NHRA - National Heritage Resources Act of 1999

NWA - National Water Act of 1998

PPP - Public Participation Process

SANRAL - South African National Roads Agency Limited

SDF - Spatial Development Framework

SMME - Small, Medium and Micro Enterprises

SoER - State of Environment Report

SR - Scoping Report

# 1. INTRODUCTION

## 1.1 Background

INALUK Consulting Services was appointed by Mahlori Development Consultants and Project Management Solutions to conduct an Environmental Impact Assessment for the authorization of the proposed Township development on the remainder of ERF 1 Ladysmith (proposed erven 17273 and 3673), within the Alfred Duma Local Municipality, uThukela District, Kwazulu-Natal.

Alfred Duma Local Municipality is proposing to establish a new township development covering an area of approximately 203,6 Ha in Ladysmith, Kwazulu-Natal Province. The proposed development is located on the Erf 1, Erven 17273 and 3673 Ladysmith. The site can be accessed from the N11 and Klipbank Road in Ladysmith, the said property is approximately 2 km to the southwest of the Ladysmith CBD, directly south of National Route 11 (N11). The development will entail the provision of services to enable the proposed development of the Ladysmith Ext 61 Township which will consist of the following infrastructure Business stands, Residential stands, Institutional stands, Recreational, Educational, Municipal, Place of worship, Public open spaces.

## 1.2 DETAILS OF PROJECT TEAM

The project team comprised of the following key members who will be directly involved in the project execution at various stages.

### *The Applicant*

Company/Organisation	Alfred Duma Local Municipality
Contact Person	SS Ngiba
Telephone	036 637 2231
E-mail	mmtshali@alfredduma.gov.za.

### *The Project Manager*

Company/Organisation	Alfred Duma Local Municipality
Contact Person	Mandisa Mtshali
Telephone	081 528 0384
E-mail	mmtshali@alfredduma.gov.za.

### *The Town Planner*

Company/Organisation	Mahlori Development Consultants
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Contact Person	Benny Makasani
Telephone	083 620 7078
E-mail	makasani.b@gmail.com

***The Environmental Assessment Practitioner***

Company/Organisation	Inaluk Consulting Services
Contact Person	Kulani Nkuna
Telephone	072 783 4002
E-mail	kulani@inaluk.co.za

***The Specialist***

***Heritage Impact specialist***

Company/Organisation	TBD
Contact Person	TBD
Telephone	TBD
E-mail	TBD

***Ecological and wetland specialist***

Company/Organisation	Africa Ecological and Development Services (PTY) LTD
Contact Person	Netshitungulu T. I
Telephone	082 501 9018
E-mail	africaresoures18@gmail.com

***Geotechnical***

Company/Organisation	Masana Waste and Environmental Management
Contact Person	Golden Manganyi
Telephone	078 871 2375
E-mail	golden@mwem.co.za

***Engineering Services***

Company/Organisation	Inhlakanipho Consultants
Contact Person	Mr Kgodiso Mashile
Telephone	+27 72 802 3405
E-mail	kgodisom@inhlakanipho.co.za



## **2 PROJECT DESCRIPTION**

Alfred Duma Local Municipality will propose to establish the Ladysmith Ext 61 Township by availing land and services for infrastructure for the above-mentioned mixed-use development after which Erven / Stands will be sold to interested developers in order to develop stands to meet the set-out zoning requirements. The activity to which services are required are detailed below to give effect to the development (Note that no construction will take place by the municipality):

- Special residential
- Business Sites
- Institutional
- Educational areas
- Public open spaces
- Central and local government
- Recreational

## **3 PROJECT NEED AND DESIREABILITY**

The primary motivation for the proposed Ladysmith Township Development is to provide in activities and facilities that are lacking firstly in the local municipal context and then furthermore also in the broader district municipal and provincial planning contexts. These activities and facilities furthermore need to be implemented in a manner which complements the local planning directives as discussed above and which is sustainable on an ecological, social and economic level. This will ensure that the said development fulfils the needs of the local communities whilst being sensitive to its local receiving ecological environment and on top of these earning viable economic returns for the Alfred Duma Local Municipality.

In terms of the proposed development the study focussed on three primary local planning documents. These include:

- The Kwa-Zulu Natal Provincial Growth and Development Strategy and associated Provincial Spatial Development Framework (2011);
- The uThukela District Spatial Development Framework (2008), and
- The Ladysmith Integrated Development Plan and associated Spatial Development Framework (2019/2020).

Ladysmith is furthermore accepted as the primary sub-regional centre according to the uThukela SDF, servicing the Alfred Duma municipality and beyond. It is therefore also a primary node for investment promotion in keeping with its administrative, social, and economic potential (ELM, 2013).

#### 4 LOCALITY

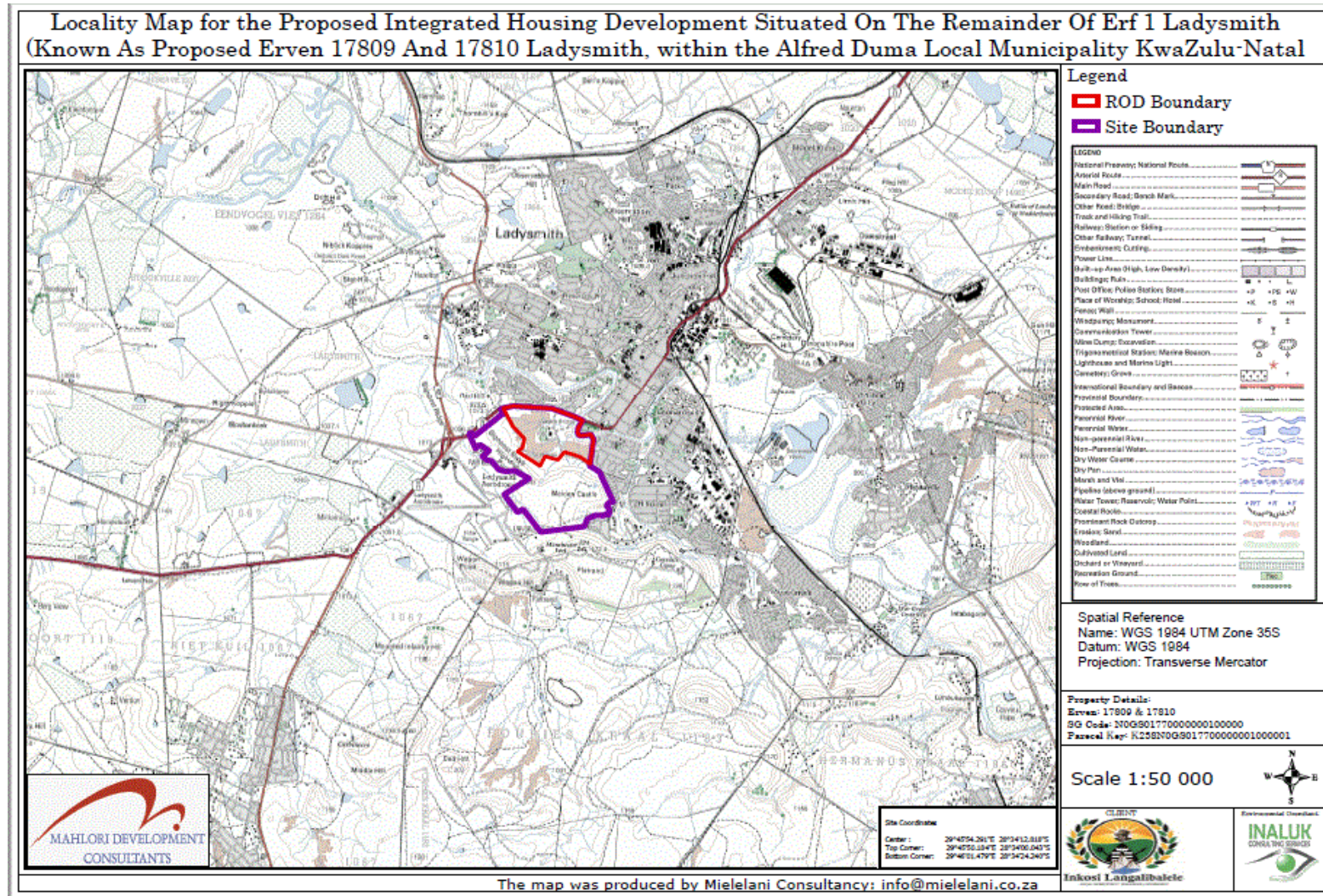
The proposed site is situated on the south western boundary of the town of Ladysmith, KwaZulu-Natal. The proposed mixed-use development will be located on the portion of Remainder of Erf 1, Erven 17273 And 3673 Ladysmith and falls within the jurisdiction of the Alfred Duma Local Municipality. The coordinates of the centre of the proposed site is 29°45'50.184"E 28°34'00.043"S. The proposed development area is approximately 203,6 ha in extent and lies to the south west of the town of Ladysmith. The table below indicated the farms portions details

	<b>Propert 1</b>	<b>Propert 2</b>
<b>Farm Name</b>	Ladysmith	Ladysmith
<b>Farm Number</b>	<b>ERVEN 17273</b>	<b>ERVEN 3673</b>
<b>Farm Portion</b>	Remainder of ERF 1	Remainder of ERF 1
<b>Size (HA)</b>	203,6	
<b>Title deed number</b>	<b>No information</b>	<b>No Information</b>
<b>Local municipality</b>	Alfred Duma Local Municipality	Alfred Duma Local Municipality
<b>Province</b>	Kwazulu-Natal	Kwazulu-Natal

This proposed project is adjacent and is an extension of the 85 hectares authorised mixed used township area with Authorisation reference number and project description listed below. this authorisation was issued in 2015 and the project area is indicated in red on the topographical map where the new project area is indicated in purple polygon:

***REF DC23/0026/2013 ENVIRONMENTAL AUTHORISATION FOR THE LADYSMITH MIXED USE TOWNSHIP DEVELOPMENT ON REMAINDER OF ERF 1 ALONG N11 AND KLIPBANK/ DRY ROAD, LOCATED TO THE SUBURBS OF ROSE/ VAN RIEBEECK PARK OF EMNAMBITHIIN UTHUKELA DISTRICT.***

Figure 1 below indicates the locality of the proposed development.



## 5 PROPERTY DESCRIPTION

### 5.1 General

The project area is located to the south of National Route N11 to the southwest of the town of Ladysmith, KwaZulu-Natal Province. The proposed project layout is indicated in the below diagram in which these activities impacts must be accessed for the receiving environment.

### 5.2 Topography

The project area is located on a gentle slope, with localized drainage channels associated with steeper slopes.

### 5.3 Geology and Soil

The underlying geology of the project area is characterized by a dolerite Dyk and shale as depicted in the map below. The site is underlain by sedimentary sequences comprising shale of the Volksrust Formation Which forms part of the Ecca Group. Partly-consolidated fine-grained sediments of the Masotcheni Formation underlie parts of the site. Jurassic aged dolerite intrusions are also indicated to traverse the project area. The soils of the project area are characterized by shallow soils of weathered rock material and soils with a pedocutanic Horizon.

### 5.4 Hydrology

The proposed development is within the V12G Catchment which is on the north eastern as well as the south eastern portion of the proposed development and the V12F where a portion of the proposed special residential area is proposed on the north western side of the property.

The area is drained by means of non-perennial streams, with storm water generally flowing eastwards to collect in the perennial Klip River that defines the eastern boundary of the project area.

Catchment Area	Quaternary Catchment	Quaternary Catchment 2
Thukela Catchment Management Area	V12G	V12F

## **5.5 Vegetation**

The project area is characterized by the Natal Central Bushveld vegetation as per the desktop study done on QGIS. There is however a contradiction to the vegetation types as those contained in the assessment done on the north and North eastern boundary of the project boundary where about 85 hectares was authorized to be developed for the Ladysmith mixed township Establishment.

The report compiled by Galago Environmental has reported that the main vegetation type of the area was characterized by the Thukela Thornveld vegetation unit with only the hills southwest of the shooting range representing the KwaZulu-Natal Highland Thornveld vegetation unit. The Thukela Thornveld vegetation unit features valley slopes to undulating hills with Acacia-dominated bushveld of variable density, ranging from wooded grassland to dense thickets with dense grassy undergrowth. This is as per the information contained in Mucina & Rutherford (2006).

## **5.6 Conservation Plan**

No protected trees listed in terms of the National Forests Act, 1998 (Act No. 84 Of 1998) are known to occur in the 2829DB quarter degree square.

Species listed in the Red List of South African plants (Raimondo, et al., 2009) as Near Threatened, Declining, Rare and Data Deficient are considered not threatened but of conservation concern. Plant species that are considered not threatened but of conservation concern are known to occur in the 2829DB q.d.s. The Acacia – Aloe marlothii thornveld study unit has suitable habitat for three of these species, but only one was found.

## **5.7 Sensitive Area**

One of the Red List plant species that is considered not threatened but of conservation concern, *Crinum macowanii* (Status Declining), and 15 species that are considered Specially protected indigenous plants in terms of the Natal Nature Conservation Ordinance (*Crinum macowanii* is also included in this list) were found on the study site. Removal and relocation of these plants are subject to a permit issued by the KZN Nature Conservation authority

## 6 PROJECT DESCRIPTION

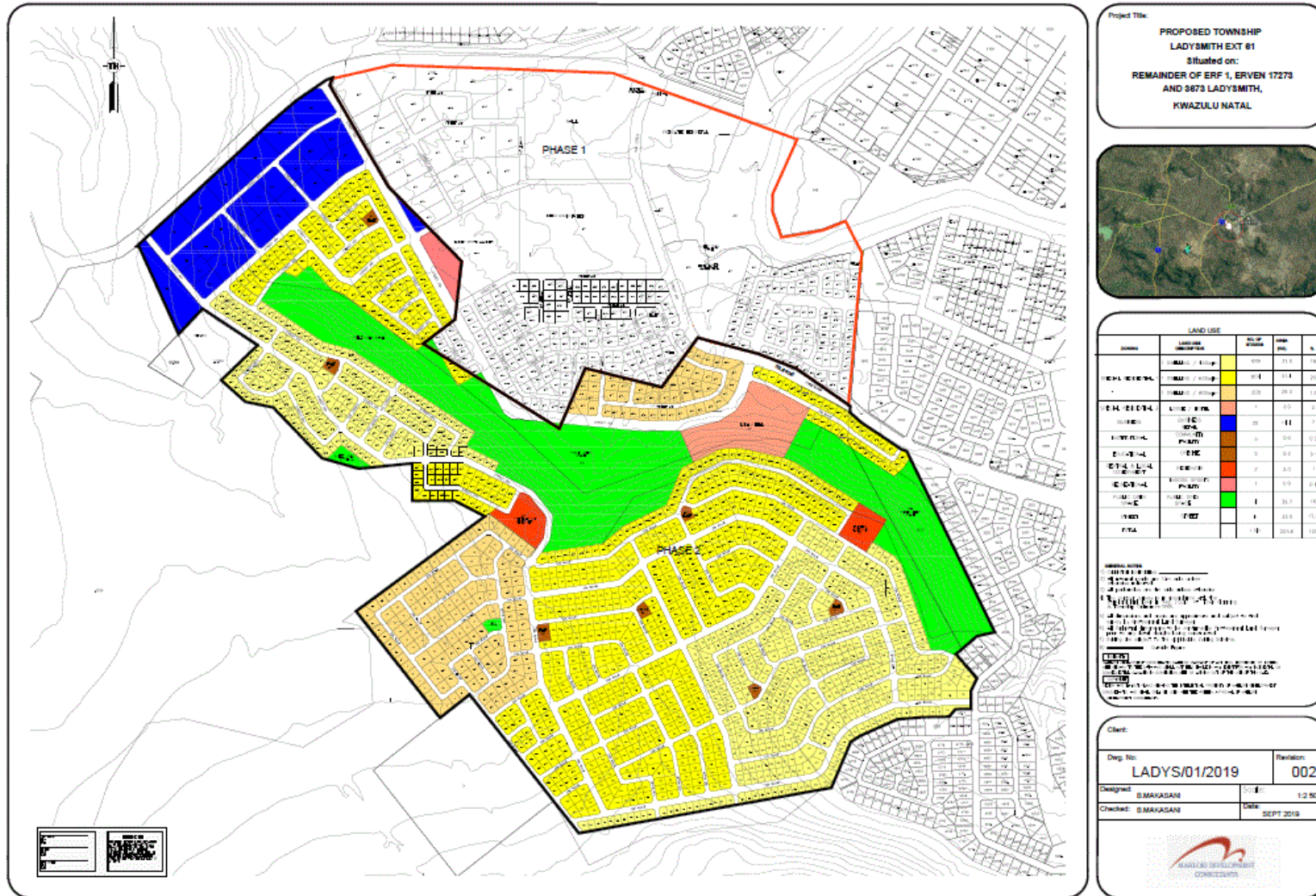
Alfred Duma Local Municipality will provide all infrastructure for the above-mentioned mixed-use development after which Erven / Stands will be sold to interested developers in order to develop stands to meet the set-out zoning requirements. The infrastructure to be developed by the Municipality will include:

- The construction of roads;
- The provision of electricity;
- The provision of water;
- The provision of sewage pipelines;
- Zoning of properties, and
- Waste management.

This mixed-use development will cover an area of approximately 203,6 Ha (hectares) and will consist of the following

Zoning/usage	Description of land use	No. of stands	Hectares	% of project area
Special residential 1	1 Dwelling/450sqm	689	37.6	18
	1 Dwelling/600sqm	804	51.4	25
	1 Dwelling/800sqm	208	26	13
Special Residential 2	Lodge/Hotel	1	3.9	2
	Business Retail	26	14.4	7
Institutional	Community Facility	5	0.6	0.3
Educational	Creche	2	0.2	0.1
Central and Local Government	Reservoir	2	2.0	1
Recreational	Indoor Sports Facility	1	0.9	0.4
Public Open space	public open space	4	32,7	16
Street	Street	-	33.9	17.2
<b>Total</b>		<b>1741</b>	<b>203.6</b>	<b>100</b>

Figure 2 below indicates the site layout plan as explained by the land use distribution table above.



## **7 PROJECT ALTERNATIVES**

In terms of Environmental Impact Assessment (EIA) regulation, the Environmental Assessment Practitioner (EAP) should investigate feasible and reasonable alternatives for the proposed project. In other words, different means of meeting the requirements for the activity.

No site or layout alternatives were identified due to the following

- The project forms part of an extension of the authorised 85 hectares of which the activities are interlinked
- The municipality together with the Town planner provided the portion on the remainder of Erf 1 Ladysmith, Erven 17273 And 3673 of Ladysmith. Reference is made to the agreement confirming availability of land.

## **8 LEGISLATIVE GUIDELINES**

This process constitutes listed activities in terms of Section 24 of the National Environmental Management Act (NEMA), 107 of 1998, as amended, requiring that an Environmental Impact Assessment be undertaken in application for environmental authorization. In addition to the NEMA listed activities, the project will also trigger the National Water Act, 1998 and the Heritage Resources Act, 1999. The proposed project constitutes the following listed activities in terms of National Environmental Management Act, 1998.

According to these regulations, an environmental authorization process is a legal requirement for these scheduled activities. The objective of this study is to determine the environmental impacts of the proposed development. The Department of Economic Development, Tourism and Environmental Affairs (DEDTEA) is the competent decision-making authority for this project and needs to be satisfied that all the impacts on the physical, biological and social characteristics of the surrounding environment are identified and appropriately addressed.



<b>LISTED ACTIVITY</b>	<b>ACTIVITY Number</b>	<b>DESCRIPTION /EXPLANATION</b>
GNR 325 of 7 April 2017	Activity 15	The clearance of 203,6 hectares of vegetation for the development of the Ladysmith Ext 61 Township on the remainder of ERF 1 Ladysmith which will consist of Specialised residential sites, Special residential (hotel/lodge and high-density housing), Industrial complex, Educational sites (crèche) public open spaces and streets Reservoir
GNR 327 of 7 April 2017	Activity 9	The development of bulk water infrastructure supply to the 1741 sites and
GNR 327 of 7 April 2017	Activity 10	The development of infrastructure for sewer reticulation from the 1741 site with an estimated daily demand of 5,39ML/day which will be serviced by a 600mm outfall line pipe
GNR 327 of 7 April 2017	Activity 24	The construction of internal roads with total area of 47,3 hectares and road width of 12m  Upgrading and widening of the existing roads and intersections and main access roads from Delhi road and the N11

This Draft Scoping Report (DSR) will be submitted to Interested and Affected Parties (I&AP's), stakeholders and organs of state to afford them an opportunity to comment in writing on the report before the Final Scoping Report (FSR) is submitted to the competent authority (DEDTEA) for their perusal and decision.

Other guidelines and documentation considered in the drafting of the Scoping Report includes

### **The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)**

The Constitution of the Republic of South Africa is the principal legal source of the Republics' legislative framework, including its environmental law. The Bill of Rights is fundamental to the Constitution of South Africa and in, section 24 of the Act, it is stated that:

Everyone has the right

- (a) to an environment that is not harmful to their health or well-being; and
- (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that
  - (i) prevent pollution and ecological degradation;

(ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

### **National Environmental Management: Biodiversity Act, 2004 (NEM:BA) (Act 10 of 2004)**

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed. In terms of the Biodiversity Act, the developer has a responsibility for:

- The conservation of endangered ecosystems and restriction of activities according to the categorisation of the area (not just by listed activity as specified in the EIA regulations),
- Application of appropriate environmental management tools in order to ensure integrated environmental management of activities thereby ensuring that all developments within the area are in line with ecological sustainable development and protection of biodiversity,
- Limit further loss of biodiversity and conserve endangered ecosystems

## **9 SCOPING PROCESS**

The main purpose of the scoping process is to identify issues that may arise during the various phases of the proposed development. Section 28, Chapter 3 of Government Notice 543 of the National Environmental Management Act, 1998 (No. 107 of 1998) sets out the requirements for the content of a scoping report. Issues were identified through:

- Desktop review of the study areas and project activities;
- Review of available literature;
- Site investigations;
- A comprehensive public participation process, and
- Professional judgement.

The above methodologies identified impacts that require specialist investigation. As described in section 4 of this report. The proposed development will lead to vegetation losses and will also include linear activities exceeding 300 meters in length. Due to the above, the following

specialist impact assessment studies will be conducted as part of the Environmental Impact Assessment report:

- Ecological Impact Assessments
- Heritage Impact Assessments
- Geotechnical Impact Assessments
- Engineering services
- Traffic Impact Assessments

The following reports will also be used as reference documents for the specialist studies conducted on the previously mention 85hectares authorised area which forms part of the extension into this project.

- Klip River 100 Year Floodline Report, dated March 2014 prepared by REDE Engineering and Management
- Hydrogeological Investigation dated January 2014 prepared by AGES
- Phase 1 Heritage studies dated December 2013 by eThembeni Cultural Heritage

## **10 PUBLIC PARTICIPATION PROCESS**

A comprehensive public participation process (PPP) is being conducted in terms of Chapter 6 of Government Notice 326 of NEMA. The PPP is undertaken in a manner that ensures that all interested and affected parties are adequately informed of the proposed development and to ensure that everyone has the opportunity to raise their concerns and/or comments.

To date, the PPP process has included an advertisement, on-site notices and the delivery of Background Information Documents to adjacent landowners and properties within 500 meters of the proposed properties.

Please find proof of the Public Participation Process attached as Appendix C.

The proposed project was brought to the attention of the public by the following means:

- An advertisement was placed in published newspapers, namely, the Ladysmith Gazette on the 21 November 2019 (Appendix C)

- On-site notices were placed on 15<sup>th</sup> November at the following locations:
  - i. Zia Street
  - ii. Delhi Road
  - iii. N11 road
  - iv. Van Der Stel Road (Board)

The following surrounding landowners were informed of the project by means of a Background Information Document, and afforded the opportunity to comment on the project by means of an Interested and Affected Parties Comment Form:

- Mr P Mc Caulum

## **11 IDENTIFICATION METHODOLOGY OF ENVIRONMENTAL IMPACTS**

The aim of the Scoping Report is to identify any potential biophysical and social impacts, associated with the proposed expansion. This took place within the framework of Enviroworks' professional assessment, as well as from the input of specialists and authorities. The Impacts were identified by means of:

- Desktop review study,
- Review of available literature,
- Site investigations,
- Specialist input,
- Geohydrological Impact Assessment
- Heritage Impact Assessment
- Professional judgement.

A broad range of potential environmental impacts that may have a significant impact on the environment have been identified during the Scoping Process, and will be subject to further investigation as part of the Impact Assessment Phase. A summary of the potential environmental impacts that were identified is provided below, with further details of those impacts that require further investigation described in Section 4.1

#### 4.1 Description of Potential Impacts to be investigated further

The following Potential Impacts will be further investigated by means of the Methodology described in section 4.2 below.

##### **Geology**

Due to construction, disturbance in surface geology may occur as result of foundations. The project area is located on the hill and some of the natural landscape will be altered with the development of the Business sites on the N11 that has boulder exposed.

##### **Topography**

Erosion during the clearing and construction phases of the project may lead to an impact on the topography. Building material may also alter the topography of the area.

##### **Topsoil and Land use**

During the construction phase of the project, soil recourses including essential top soil may be impacted on. Erosion of topsoil may occur as well as the compaction of soil.

##### **Surface Water and Groundwater**

Contamination of surface water may occur as a result of improper management of contaminants. Improper management of sanitation may result in the contamination of groundwater. The project is within the Klipriver drainage area and there is a potential of non-perennial streams that could be impacted on with the development. As observed onsite such drainages were identified that desktop reports and survey didn't not identify.

##### **Fauna**

Impact on Fauna may occur as a result of the distraction of habitats during the construction phase and clearing phase of the project.

##### **Flora**

A loss in vegetation may occur during vegetation removal prior to construction activities taking place.

##### **Noise**

During the construction phase of the project, noise will be generated by construction vehicles, construction machinery and contractors.

### **Air quality**

CO<sup>2</sup> Emissions from construction vehicles and machinery, as well as dust during the construction phase will have an impact on air quality.

### **Archaeology and Palaeontology**

The possibility occur that the construction activity may lead to an impact on Archaeology and Palaeontology aspects.

### **Visual Impacts**

The visual perspective of the property will be changed.

### **Traffic**

The development will include the construction, expansion and lengthening of roads as mentioned in the report above. This will have an impact on traffic in the area.

### **Socio Economic**

Socio Economic can be divide into the following two categories:

#### **Positive Socio-Economic Impacts:**

The proposed development will result in job creation during the construction phase of the project.

#### **Negative Socio Economic Impacts:**

- An increase in criminal activities in the local regions of the proposed activity.
- Safety impacts may occur as a result of improper safety management on site.

### **Cumulative Impacts**

Cumulative Impacts include a potential change in surface and ground water source quality.

This impact will be investigated further in the Impact Assessment Report.

### Methodology adopted in the assessment of potential impacts

The impacts will be evaluated by applying the methodology as described below. The impact is defined and the significance is rated from Low to High as indicated in the table below with an explanation of the impact magnitude and a guide that reflects the extent of the proposed mitigation measures deemed necessary.

The Nature of impact is a broad indication of what is being affected and how.

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment

Type of criteria	1	2	3	4	5
Quantitative	0-20%	21-40%	41-60%	61-80%	81-100%
Qualitative	Insignificant / Non-harmful	Small / Potentially harmful	Significant/ Harmful	Great/ Very harmful	Disastrous Extremely harmful
Social/ Community response	Acceptable / I&AP satisfied	Slightly tolerable / Possible objections	Intolerable/ Sporadic complaints	Unacceptable / Widespread complaints	Totally unacceptable / Possible legal action
Irreversibility	Very low cost to mitigate/ High potential to mitigate impacts to level of insignificance/ Easily reversible	Low cost to mitigate	Substantial cost to mitigate/ Potential to mitigate impacts/ Potential to reverse impact	High cost to mitigate	Prohibitive cost to mitigate/ Little or no mechanism to mitigate impact Irreversible
Biophysical (Air quality, water quantity and quality, waste production, fauna and flora)	Insignificant change / deterioration or disturbance	Moderate change / deterioration or disturbance	Significant change / deterioration or disturbance	Very significant change / deterioration or disturbance	Disastrous change / deterioration or disturbance

**Extent** refer to the spatial influence of an impact be local (extending only as far as the activity, or will be limited to the site and its immediate surroundings), regional (will have an impact on the region), national (will have an impact on a national scale) or international (impact across international borders);

Rating	Description
1: Low	Immediate, fully contained area
2: Low-Medium	Surrounding area
3: Medium	Within Business Unit area of responsibility
4: Medium-High	Within Mining Boundary area
5: High	Regional, National, International

**Frequency** refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

Rating	Description
1: Low	Once a year or once/more during operation/LOM
2: Low-Medium	Once/more in 6 Months
3: Medium	Once/more a Month
4: Medium-High	Once/more a Week
5: High	Daily

**Probability** considers the likelihood of an impact/incident occurring over time

Rating	Description
1: Low	Almost never / almost impossible
2: Low-Medium	Very seldom / highly unlikely
3: Medium	Infrequent / unlikely / seldom
4: Medium-High	Often / regularly / likely / possible

**Duration:** Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention e.g. remedial action takes place



Rating	Description
1: Low	Almost never / almost impossible
2: Low-Medium	Very seldom / highly unlikely
3: Medium	Infrequent / unlikely / seldom
4: Medium-High	Often / regularly / likely / possible
5: High	Daily / highly likely / definitely

After following the above criteria, the impact significance will be evaluated using the following formula:

$$\text{SP (significance points)} = (\text{magnitude} + \text{duration} + \text{extent} + \text{irreplaceable} + \text{reversibility}) \times \text{probability}$$

## **12 PLAN OF STUDY FOR ENVIRONMENTAL IMPACT ASSESSEMENT**

The following Plan of Study for EIA sets out the proposed approach to the Environmental Impact Assessment phase of the application. Description of the tasks to be undertaken during the Scoping and Environmental Impact Assessment Process as well as the tasks that have been undertaken are summarized below, with details of the tasks to be undertaken provided in more detail.

### **12.1 Scoping Phase**

- A desktop review of available literature and site visits have been undertaken for the proposed project.
- Specialists were appointed to investigate potential significant environmental impacts.
- Authorities and I&AP's will be informed about the project to identify potential significant environmental impacts associated with the proposed project.

The Draft Scoping Report will be made available for comments to I&AP's /stakeholders and relevant Departments. The comments received on the Draft Scoping Report will be incorporated into the Final Scoping Report and Impact Assessment Report.

No environmental fatal flaws have been identified during the environmental scoping study, although a number of potentially significant environmental impacts have been identified that will be further investigated in the Impact Assessment Report.

### **12.2 Environmental Impact Assessment**

An EIA will be undertaken to provide a comprehensive assessment of the identified potential significant environmental impacts and where impacts cannot be avoided altogether, appropriate mitigation measures will be proposed. The EIA will also be used to evaluate the proposed alternatives and to assist in identifying the alternative that will have the least impact on the environment. The EIA will adequately investigate and address all the significant environmental issues in order to provide the DEDTEA with sufficient information to make an informed decision regarding the proposed project.

## **12.3 PARTICULARS OF THE PUBLIC PARTICIPATION PROCESS TO BE FOLLOWED**

The following will be undertaken as part of the public participation process explained in section 3 above as follows. The following activities will be done in compliance to chapter 6 of GNR 326 of 2017 section 41 which describes the public participation process

- Placement of site notices as required by section 41 (2)(a) of the act
- Notices sent to adjacent land owners required by section 41 (2)(b)(i-vi)
- Placement of advert in local newspaper required by section 41 (2) (c)

A database has been created for the process to be followed and is attached together with the above requirements in appendixes contained in this report

## **13 Consultation with The Department Of Economic Development, Tourism And Environmental Affairs (DEDTEA)**

According to the requirements of the Act, a Plan of Study for Environmental Impact Assessment must be developed and submitted to the relevant department to be discussed and agreed upon with the consultant.

The following consultation has thus far been done with the DEDTEA:

- The Draft application for the authorization of a listed activity in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2017 was submitted April 2014 and 1 November 2019.
- The EAP presented the project to the competent authority onsite on the 15<sup>th</sup> of November 2019 based on the application submitted and specialist identified.

DEDTEA will be provided with a copy of the Draft Scoping Report as well as the Plan of Study for Impact Assessment Report for their perusal. Comments on the Draft Scoping Report as well as any additional information that may be required will be incorporated into the Final Scoping Report, and will be investigated in the Impact Assessment Report.

An Environmental Management Plan (EMP) for the Planning-, Construction-, Operational- and Decommissioning phases of the project will be submitted to DEDTEA, for approval

## 14 REFERENCES

Alfred Duma Local Municipality Integrated Development Plan 2019/2020

MUCINA, L. & RUTHERFORD, MC (eds) 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. *South African National Biodiversity Institute, Pretoria.*

## **15 APPENDICES**

Appendix A: Locality Maps

Appendix B: Photographs of the proposed area

Appendix C: Public Participation Process

- C1 Site Notice
- C2 Key Stakeholders
- C3 Comments and Responses
- C4. Authorities and Organs of State Identified as Key Stakeholders
- C5. List of Registered I&As
- C6. Correspondence and Minutes of Any Meetings

Appendix D: Facility Illustrations

Appendix E: Curriculum Vitae of the Environmental Assessment Practitioner

Appendix F: Specialist input and Declaration

Appendix G: Environmental Management Programme (EMPr)