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Environmental Authorisation for the proposed Musina-Makhado Special Economic Zone Development Project, Limpopo Province

Notification of Intent to Develop

Project Number:

LEA5514

Prepared for:

Limpopo Economic Development Agency

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1 Introduction

The Limpopo Economic Development Agency (LEDA) is proposing to develop a Special Economic Zone (SEZ) within the Musina and Makhado Local Municipalities of the Limpopo Province (“the Project”). The Project requires Environmental Authorisation (EA) through an Environmental Impact Assessment (EIA) process to comply with the National Environmental Management Act, 1999 (Act No. 107 of 1998) (NEMA). To this end, LEDA appointed Delta Built Environment Consultants (Pty) Ltd (hereinafter Delta BEC¹) to undertake the required EIA process.

LEDA subsequently issued tender advertisements for consultancies to undertake individual specialist studies in support of the EIA process. LEDA appointed Digby Wells Environmental (hereinafter Digby Wells) to undertake the Heritage Resources Management (HRM) process, inclusive of a Palaeontological Impact Assessment (PIA).

Digby Wells undertook the HRM process in compliance with Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA). This report constitutes the Notification of Intent to Develop (NID) for submission to the relevant Heritage Resource Authorities (HRAs).

2 Project Details

2.1 Project Background

The Department of Trade and Industry (DTI) requested the Limpopo Provincial Government submit areas for evaluation in terms of the development of the economy of Limpopo through industrialisation. The DTI approved Musina and Tubatse as two locations for further study and the provincial government subsequently motivated for Musina to serve as the area for SEZ Development.

The Musina SEZ will include two components: a light industrial and agro-processing component to the north and the Project, which will focus on metallurgical and mineral beneficiation activities, to the south. These will complement each other in terms of logistics and their product value chains. Additionally, the Musina Logistics SEZ is also in the planning stages, which will complement both these developments. These additional SEZ developments are not within the Scope of this HRM process and will not be discussed further within this document.

¹ Delta BEC Project Number: P.17102.

2.2 Project Description

The Project area is adjacent to the National Route 1 (N1) national highway, between the towns of Musina and Makhado². The Project covers 8 000 hectares (ha) over eight farms, of which 6 000 ha will be used. Presently, the SEZ includes mixed land uses, several smaller projects and 11 energy and metallurgical plants, comprising:

- Calcium carbide plant (50 ha);
- Carbon steel plant (200 ha);
- Coke plant (500 ha);
- Ferrochromium plant (500 ha);
- Ferromanganese plant (100 ha);
- Lime plant (500 ha);
- Metal silicon plant (50 ha);
- Pig Iron plant (600 ha);
- Power plant (300 ha);
- Stainless steel plant (500 ha);
- Silicon-manganese plant (100 ha); and
- Additional and ancillary infrastructure required for these developments (2 600 ha).

At the time of compilation, LEDA has not finalised the infrastructure layout plan and will, in part, be informed by the results of the heritage assessment.

Table 1 presents the Project location detail where Table 2 summarises the landowner information of the affected properties. Plan 1 and Plan 2 presents the regional setting within which the Project is located and the proposed infrastructure areas respectively.

Table 1: Project location details

Name of property/ies	Musina-Makhado SEZ Project Area
Street address or location (e.g.: Off R44)	Adjacent to the N1 between Mopane, Huntleigh, Musina and Makhado. The R525 intersects the Project area.

² Previously known as Louis Trichard.



Erf or farm number/s	Antrobus 566 Battle 585 Dreyer 526 Portion 1 of Joffre 584 Lekkerlag 580 Somme 611 Steenbok 565 Van der Bijl 528
Coordinates of approximate centre of project area	22°41'8.30"S
	29°53'17.77"E
Town or District	Makhado (31 km south of the Project) Musina (36 km north of the Project)
Responsible Municipality	Musina and Makhado LMs within the VDM
Extent of property	8 000 ha
Maximum extent of proposed development	6 000 ha
Current use	Agricultural (grazing)
Predominant land use/s of surrounding properties	Urban, agricultural (game farming, grazing) and mining.

Table 2: Landowner details

Name	Property	Notified
Republic of South Africa	Antrobus 566	N/A
	Battle 585	
	Dreyer 526	
	Portion 1 of Joffre 584	
	Lekkerlag 580	
	Somme 611	
	Steenbok 565	
	Van der Bijl 528	

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Plan 1: Regional setting of the Project

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Plan 2: Proposed infrastructure area

3 Assessment Process

Table 3 summarises the impact assessment processes that are currently being conducted for the proposed project.

Table 3: Current assessment processes

Legislation (e.g. NEMA, MPRDA, etc.)	Current phase of assessment process (e.g. Scoping, EIA, etc.)	Authorities who has / will receive information	Capacity of Authorities
NEMA	EIA	Limpopo Department of Economic Development, Environment and Tourism (LEDET)	Competent
NHRA	EIA	South African Heritage Resources Agency (SAHRA)	Commenting
	EIA	Limpopo Heritage Resources Authority (LIHRA)	Noting

These assessments are required in terms of legislated and / or regulated activities outlined in Sections 3.1 to 3.3 below.

3.1 NHRA Section 38(1) activities

The proposed development will include the following activities listed in Section 38(1) of the NHRA, which generally require heritage assessments be undertaken.

Table 4: NHRA Section 38 triggers

	NHRA Section 38 (1) Activities / Triggers		Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
<input checked="" type="checkbox"/>	a	Any linear development or barrier >300 m	The Project will likely include roads greater than 300 m. However, these have not been finalised.
<input type="checkbox"/>	b	Any bridge or similar structure >50 m	

		NHRA Section 38 (1) Activities / Triggers		Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
<input checked="" type="checkbox"/>	c	Any development or activity that will change the character of a site:		
	<input checked="" type="checkbox"/>	i	≥5 000m ² in extent	The SEZ development will alter the character of the site from a semi-rural, agricultural area to a built-up, industrial landscape.
	<input type="checkbox"/>	ii	Involving ≥3 existing erven/ subdivisions	
	<input type="checkbox"/>	iii	Involving ≥3 or more erven/ divisions consolidated within past 5 years.	
<input checked="" type="checkbox"/>	d	Rezoning of a site ≥10 000m ² in extent.		The Project will cover approximately 600 ha and will need to be rezoned for a Special Integrated Industrial Economic Development Zone.
<input checked="" type="checkbox"/>	e	Other triggers, e.g.: in terms of other legislation, (i.e.: National Environment Management Act, etc.)		NEMA

3.2 EIA Regulations listed activities

The proposed development will trigger a number of activities listed in the EIA Regulations, 2014, as amended (Government Notice Regulation [GN R] 982 of December 2014 as amended by GN R 326 of 7 April 2017). Table 5 presents a list of the triggered activities, which generally require impact assessments:

Table 5: Identified Listed Activities

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 1 Activity 9	38(1)(e)	The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0.36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	Construction
Listing Notice 1 Activity 10	38(1)(e)	The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes — (i) with an internal diameter of 0.36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where— (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	Construction Operation

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 1 Activity 11	38(1)(e)	The development of facilities or infrastructure for the transmission and distribution of electricity— (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more; excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is — (a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometres or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development.	Construction
Listing Notice 1 Activity 13	38(1)(e)	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.	Construction
Listing Notice 1 Activity 14	38(1)(e)	The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.	Construction Operation

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 1 Activity 24	38(1)(e)	The development of a road— (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road— (a) which is identified and included in activity 27 in Listing Notice 2 of 2014; (b) where the entire road falls within an urban area; or (c) which is 1 kilometre or shorter.	Construction
Listing Notice 1 Activity 25	38(1)(e)	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.	Construction Operation
Listing Notice 1 Activity 28	38(1)(e)	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare; excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.	Construction

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 2 Activity 6	38(1)(e)	<p>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding –</p> <ul style="list-style-type: none"> (i) activities which are identified and included in Listing Notice 1 of 2014; (ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies; (iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or (iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day. 	Construction
Listing Notice 2 Activity 9	38(1)(e)	<p>The development of facilities or infrastructure for the transmission and distribution of electricity with a capacity of 275 kilovolts or more, outside an urban area or industrial complex excluding the development of bypass infrastructure for the transmission and distribution of electricity where such bypass infrastructure is —</p> <ul style="list-style-type: none"> (a) temporarily required to allow for maintenance of existing infrastructure; (b) 2 kilometres or shorter in length; (c) within an existing transmission line servitude; and (d) will be removed within 18 months of the commencement of development. 	Construction

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 2 11	38(1)(e)	The development of facilities or infrastructure for the transfer of 50 000 cubic metres or more water per day, from and to or between any combination of the following — (i) water catchments; (ii) water treatment works; or (iii) impoundments; excluding treatment works where water is to be treated for drinking purposes.	Construction
Listing Notice 2 Activity 15	38(1)(e)	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding 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.	Construction
Listing Notice 2 Activity 25	38(1)(e)	The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15 000 cubic metres or more.	Construction Operation

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 2 Activity 27	38(1)(e)	The development of a road— (iii) with a reserve wider than 30 metres; or (iv) catering for more than one lane of traffic in both directions; but excluding a road— (a) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010, in which case activity 24 in Listing Notice 1 of 2014 applies; (b) which is 1 kilometre or shorter; or (c) where the entire road falls within an urban area.	Construction

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 3 Activity 2	38(1)(e)	<p>The development of reservoirs excluding dams, with a capacity of more than 250 cubic metres.</p> <p>e. Limpopo</p> <ul style="list-style-type: none"> i. In a protected area identified in terms of NEMPAA, excluding conservancies; ii. Outside urban areas: <ul style="list-style-type: none"> (aa) National Protected Area Expansion Strategy Focus areas; (bb) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (cc) Sites or areas identified in terms of an international convention; (dd) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ee) Core areas in biosphere reserves; or (ff) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or iii. Inside urban areas: <ul style="list-style-type: none"> (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, or zoned for a conservation purpose; or (cc) Areas within urban protected areas. 	Construction

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 3 Activity 4	38(1)(e)	<p>The development of a road wider than 4 metres with a reserve less than 13.5 metres.</p> <p>e. Limpopo</p> <p>i. Outside urban areas:</p> <ul style="list-style-type: none"> (aa) A protected area identified in terms of NEMPAA, excluding disturbed areas; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an international convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; or (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve, excluding disturbed areas; or <p>ii. Inside urban areas:</p> <ul style="list-style-type: none"> (aa) Areas zoned for use as public open space; (bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; or (cc) Areas within urban protected areas. 	Construction

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Listing Notice 3 Activity 10	38(1)(e)	<p>The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.</p> <p>e. Limpopo</p> <p>i. All areas.</p>	Construction Operation
Listing Notice 3 Activity 12	38(1)(e)	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>e. Limpopo</p> <p>i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans; or</p> <p>iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.</p>	Construction

3.3 Identified and known heritage resources and potential impacts

Certain categories of heritage resource, if existing and identified, generally require heritage assessments to be completed before any development may take place. These categories may be formally or generally protected in terms of the NHRA. Table 6 presents an overview of such heritage resources identified within the Project area.

Table 6: Identified heritage resources in terms of Section 3 of the NHRA

	Section	Description
<input checked="" type="checkbox"/>	3(2)(a)	<p>Places, buildings, structures and equipment of cultural significance</p> <p>Description of resource: Historical structures have been identified in proximity to the Project area and within the Project area boundaries.</p> <p>Potential impact: Potential direct impact.</p>
<input type="checkbox"/>	3(2)(b)	<p>Places to which oral traditions are attached or which are associated with living heritage</p> <p>Description of resource: None identified</p> <p>Potential impact: None</p>
<input type="checkbox"/>	3(2)(c)	<p>Historical settlements and townscapes</p> <p>Description of resource: None identified</p> <p>Potential impact: None</p>
<input checked="" type="checkbox"/>	3(2)(d)	<p>Landscapes and natural features of cultural significance</p> <p>Description of resource: Natural features associated with cultural practices include mopane, Marula and baobab trees.</p> <p>Potential impact: None identified.</p>
<input checked="" type="checkbox"/>	3(2)(e)	<p>Geological resources of scientific or cultural importance</p> <p>Description of resource: The area is underlain by geological strata of palaeontological sensitivity.</p> <p>Potential impact: None</p>
<input checked="" type="checkbox"/>	3(2)(f)	<p>Archaeology and/or palaeontology (Including archaeological sites and material, fossils, rock art, battlefields & wrecks)</p> <p>Description of resource: Archaeological material representing the Stone Age and Farming Community periods has been identified in proximity to the Project area.</p> <p>Potential impact: Potential direct impact.</p>

	Section	Description
<input checked="" type="checkbox"/>	3(2)(g)	Graves and burial grounds (e.g. ancestral graves, graves of victims of conflict, historical graves & cemeteries)
		Description of resource: Archaeological material representing the Stone Age and Farming Community periods has been identified in proximity to the Project area.
		Potential impact: Potential direct or indirect impact.
<input type="checkbox"/>	3(2)(h)	Other human remains
		Description of resource: None identified
		Potential impact: None
<input type="checkbox"/>	3(2)(i)	Sites of significance relating to the history of slavery in South Africa
		Description of resource: None identified
		Potential impact: None
<input type="checkbox"/>	3(2)(j)	Movable objects
		Description of resource: None identified
		Potential impact: None

4 Illustrative Material

Illustrative material is provided in Plan 1 and Plan 2. The illustrative material demonstrates the general Project locality and the properties within the Project area.



5 Recommendation

Table 7 presents a summary and motivation of the specialist recommendations.

Table 7: Specialist heritage recommendations

Is a Heritage Impact Assessment required?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If NO, provide motivation:			
Not applicable. A HIA is recommended.			
If YES, provide suggested components that may be required or undertaken during HIA.			
<input checked="" type="checkbox"/>	Archaeology	<input type="checkbox"/>	Architecture
<input checked="" type="checkbox"/>	Built Environment	<input checked="" type="checkbox"/>	Burial Grounds and Graves
<input checked="" type="checkbox"/>	Palaeontology	<input type="checkbox"/>	Public Participation
<input type="checkbox"/>	Townscapes	<input type="checkbox"/>	Visual Impact
<input type="checkbox"/>	Other:		
Recommendation made by:			
Name: Shannon Hardwick		Name: Justin du Piesanie	
Capacity: Junior Heritage Resources Management Consultant		Capacity: Divisional Manager: Social and Heritage Services	