

Reference:



DRAFT BASIC ASSESSMENT REPORT

Development of a 1ha Solar Array and associated Transmission Infrastructure on Marthly Farms 258KU

7 July 2023

Submitted to:

The Director: Environmental Impact Management
Mpumalanga Department of Agriculture, Rural Development, Land &
Environmental Affairs
Riverside Office Park, Aqua Street, Building 4, East Tower, Mbombela, 1200
For attention: Mr. Xolani Nkosi
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for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

DOCUMENT DESCRIPTION

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Client:
Londolozi Game Reserve (Pty) Ltd

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Mpumalanga Department of Agriculture, Rural Development, Land & Environmental Affairs
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Development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU.

Authority Reference:

Date:
7 July 2023

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1 INTRODUCTION

Zunckel Ecological + Environmental Services has been appointed by Londolozi Game Reserve (Pty) Ltd. to facilitate the process of applying for environmental authorisation and to undertake a basic assessment of the proposed development of a 1ha solar array and associated transmission infrastructure on the farm Marthly Farms 258KU in the Sabi Sands Game Reserve.

The management of Londolozi continues to strive towards achieving high standards and following global best practice. The long-term Vision as captured in their Management Plan for 2019 to 2029 states that:

It is the Vision of Londolozi to balance the wildness of the reserve against the needs of an African Safari operation and global best practice land management within an inclusive philosophy in which the benefits of the consumptive use of its ecosystem goods and services is both sustainable and shared by neighbouring and affected communities and broader stakeholders.

This Vision is unpacked into nine Management Objectives covering the aspects of governance, ecological and biodiversity management, and infrastructure development and maintenance. Within the latter is the management objective which states the following:

Ensure regular building maintenance aimed at the early detection and resolution of issues that might impact on the efficient management of Londolozi operations and ensure that any new building construction and/or renovation is carried out in a way that does not impact on Londolozi's sensitive natural and socio-economic environment.

Londolozi already has a solar array installed on the roofs of their carports which already contributes to reducing their reliance on fossil fuel generated electricity from the grid. However, they wish to increase the contribution from renewable energy options in order to become more sustainable; both from an energy consumption perspective as well as in consideration of the challenges faced by most businesses in the country as a result of ESCOM's failing capacity to provide an uninterrupted supply.

In addition to their Management Plan, Londolozi also abides by their Environmental Management Plan (EMP), compiled by Emross Consulting in 2013, and the Sabi Sand Wildtuin Protected Area Management Plan, 2019 – 2029. The EMP prescribes environmental best practice and will be used as a frame of reference for this basic assessment and it's EMP.

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2 ASSESSMENT DETAILS

2.1 THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

The Environmental Assessment Practitioner (EAP) responsible for undertaking the basic assessment and compiling this report is Mr. Kevan Zunckel, a partner in Zunckel Ecological + Environmental Services. Mr Zunckel has 38 years of experience as an ecologist and environmental scientist with an MSc Environmental Science from the University of Cape Town and affiliation with the South African Chapter of the International Association of Impact Assessments (IAIAAs – Membership number: 2396). He is registered as an EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA) and his registration number is 1483. His contact details are as follows and his full CV is included with this report as Annex A:

Postal address: 7 Annthia Road, Hilton, 3245
Cell: 082 929 4270
Email: kevanzunckel@gmail.com

2.2 NAMES AND EXPERTISE OF SPECIALISTS

In consideration of the EAPs experience both as an ecologist and environmental scientist, as well as the small scale of the proposed developments and low significance of potential impacts, it was not deemed necessary to commission additional specialist studies. The signed Declaration of Interest by the EAP is included in this report as Annex B.

Comment [K1]: Might be necessary to adjust if SAHRA call for a heritage assessment.

3 DESCRIPTION OF THE PROPOSED ACTIVITY

3.1 LOCALITY OF THE PROPOSED ACTIVITY

The proposed development (as described in Section 3.2) is located within the Londolozzi Game Reserve on Marthly 258 KU, portion 1. The Londolozzi Game Reserve is located within the Sabi Sands Wildtuin (SSW). It falls within the Mpumalanga Province, the Ehlanzeni District Municipality (DC32) and the Bushbuckridge Local Municipality (MP325). The 21 digit Surveyor General code for the property is TOKU0000000025800001. Figure 1 shows the locality of the property relative to important topographical and cadastral features and Figure 2 is a close-up Google Earth image illustrating the position of the three alternative sites and the routes of the transmission infrastructure relative to the Londolozzi camp. Coordinates for the central points of each alternative and those of the transmission infrastructure are provided in Table 1.

Table 1: Coordinates for the three alternative sites and the transmission infrastructure

ALTERNATIVE	CENTRAL COORINDATES		TRANSMISSION INFRASTRUCTURE (START, CENTRAL AND END POINTS)
A	24°48'13.20"S	31°29'52.73"E	24°48'10.52"S - 31°29'52.98"E
			24°48'4.53"S - 31°29'52.67"E
			24°47'56.43"S - 31°29'53.22"E
B	24°48'2.28"S	31°29'51.74"E	N/A
C	24°47'58.23"S	31°29'46.03"E	N/A

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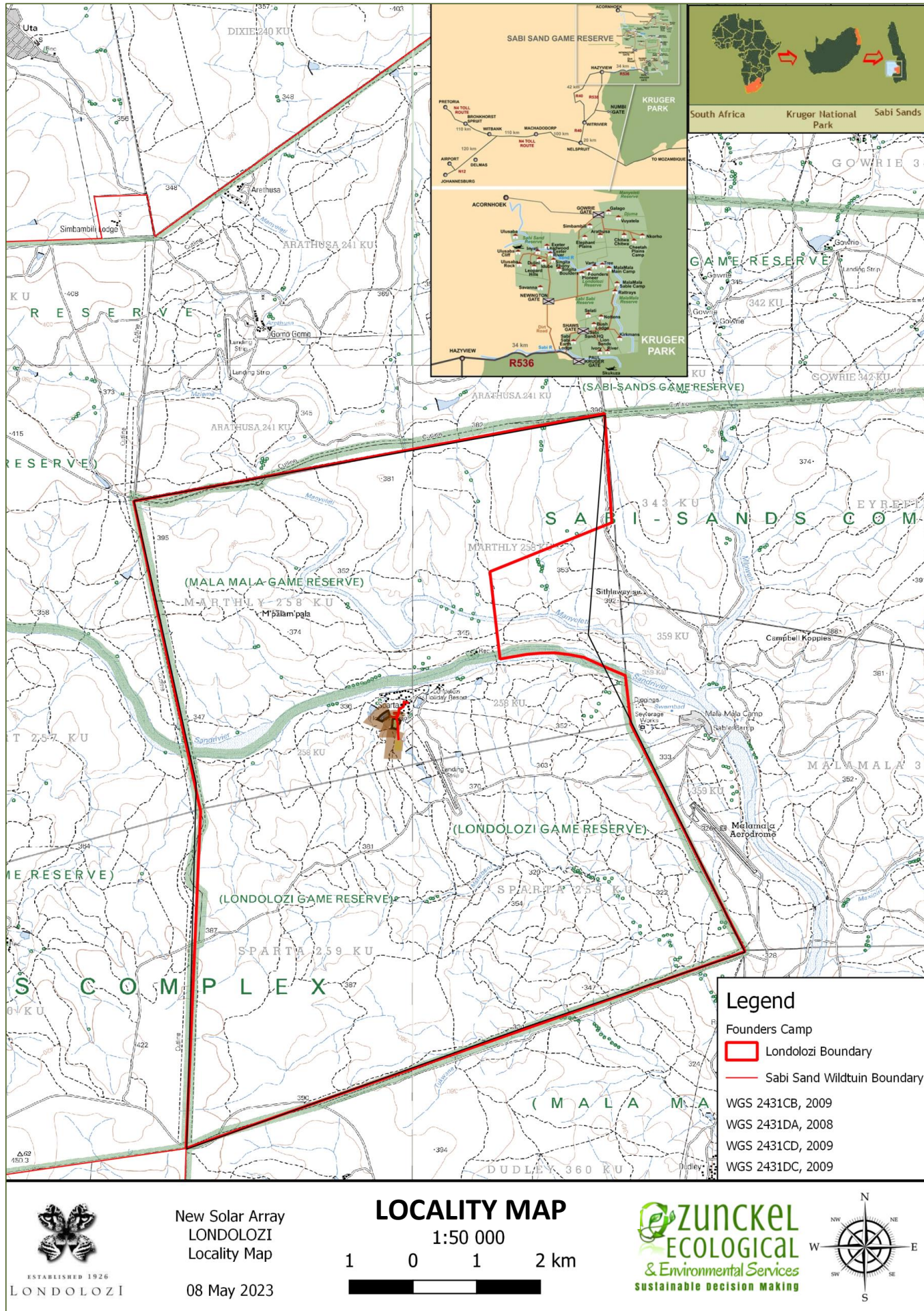


Figure 1: The locality of the proposed developments relative to topographical cadastral features.

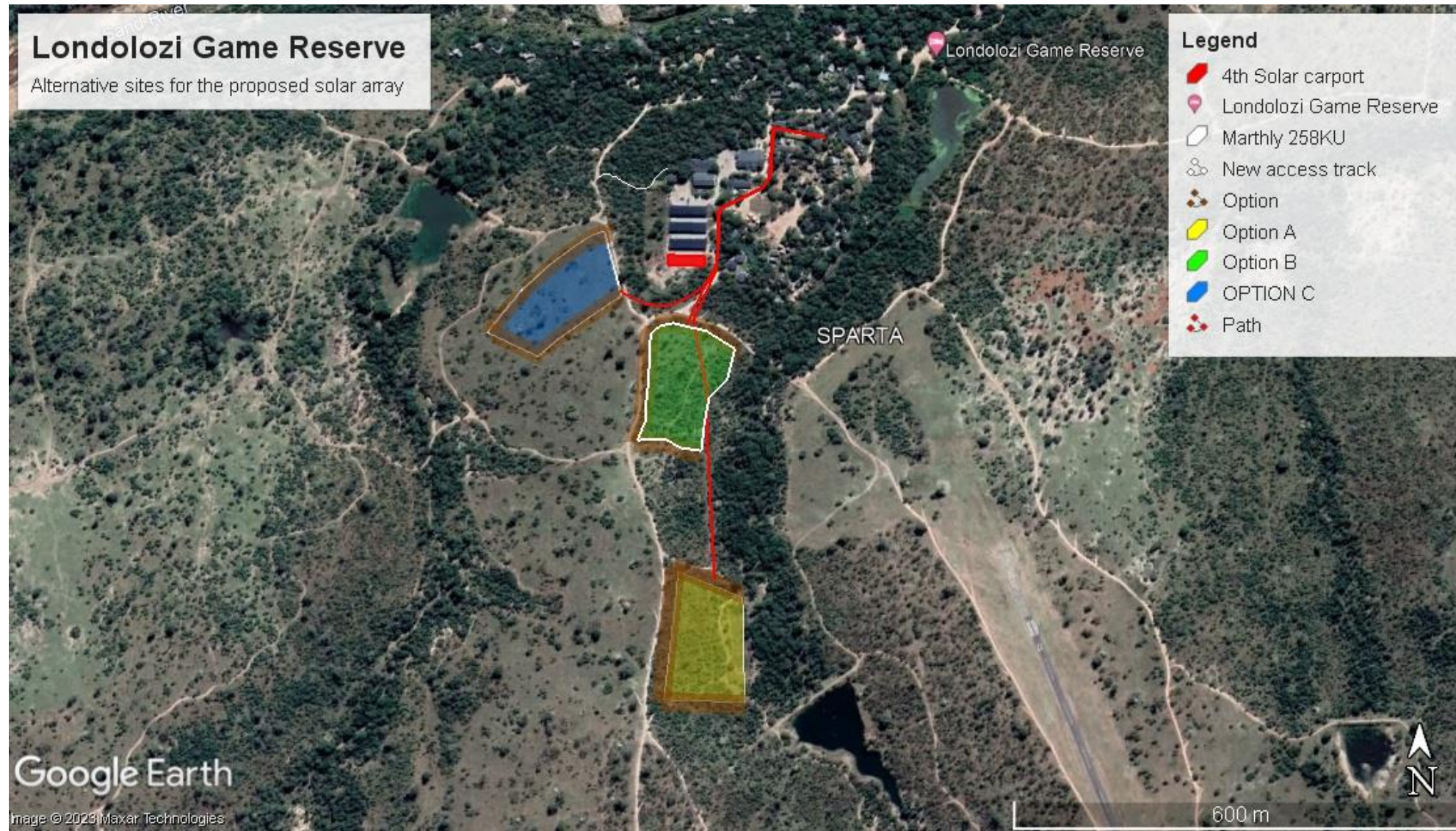


Figure 2: An aerial view of Londolozi Camp showing the position of the three alternative sites for the proposed solar array and the associated transmission infrastructure.

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3.2 DESCRIPTION OF PROPOSED DEVELOPMENT

The preferred site, i.e. Option A, will be terraced to accommodate 15 banks of solar panels of varying number, depending on the length of the bank. The banks of panels will be oriented to face north and will be mounted close to the ground on their lowest edge, i.e. approximately 500mm above the ground. Vegetation and earth moved from the site to accommodate the terracing will be used to create berms around the perimeter of the solar array so as to reduce its visual impact from surrounding areas. A detailed layout plan is included in Figure 3 below.



Figure 3: Layout plan for the solar banks within the full array on site Option A.

Reticulation of the power generated from the array will then be transmitted back to the main Back of House area at Londolozzi as per the illustration in Figure 2 above.

3.3 LISTED ACTIVITY

The activities for which environmental authorisation is being sort as per the National Environmental Management Act 107 of 1998, GNR 985, GG 38282 of 4 December 2014, as amended in GG 40772, GN No. 324 of 7 April 2017, are as follows:

Activity under **Listing Notice 1** (National Environmental Management Act 107 of 1998, GNR 985, GG 38282 of 4 December 2014, as amended in GG 40772, GN No. 324 of 7 April 2017):

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Activity 1: The development of facilities or infrastructure for the generation of electricity from a renewable resource where (ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare (note that the berms surrounding the array will bring the total area to more than 1 ha).

Activity 27: The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation.

Activity under **Listing Notice 3** (National Environmental Management Act 107 of 1998, GNR 985, GG 38282 of 4 December 2014, as amended in GG 40772, GN No. 324 of 7 April 2017):

Activity 12: The clearance of an area of 300 square metres or more of indigenous vegetation (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 or proclamation in terms of NEMPAA.

Activity 14: The development of—(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs—within 32 metres of a watercourse, measured from the edge of a watercourse (f). Mpumalanga (i). Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies.

3.4 PROJECT SECTOR

The sector within which the project falls is “Services - hospitality” and “Transformation of land – indigenous vegetation” is also relevant.

4 ACTIVITY CONTEXT AND ENVIRONMENTAL FACTORS

4.1 ACTIVITY COMPATIBILITY

From a provincial perspective the Mpumalanga Spatial Development Framework (SDF) was consulted to assess the compatibility of the proposed development with this provincial planning tool. As can be seen in the extract from the 2019 SDF in Figure 4 below, the provincial planning recognises the SSW as a private nature reserve that is part of the Regional Spatial Development Initiative known as the Kruger to Canyon or K2C.

It can be seen from Figure 4 that the proposed solar array and associated transmission infrastructure at Londolozi are compatible with the provincial SDF, and at a finer scale, they are compatible with the Purpose of the SSW and Vision of Londolozi itself. According to the Management Plan for the SSW for the period 2019 to 2029 the Purpose is (SSW, 2019):

“To conserve and maintain biodiversity, whilst providing opportunities for sustainable ecotourism and meaningful socio-economic contributions for internal and external stakeholders.”

The Vision for the Londolozi Game Reserve has been provided and discussed in Section 1 already.

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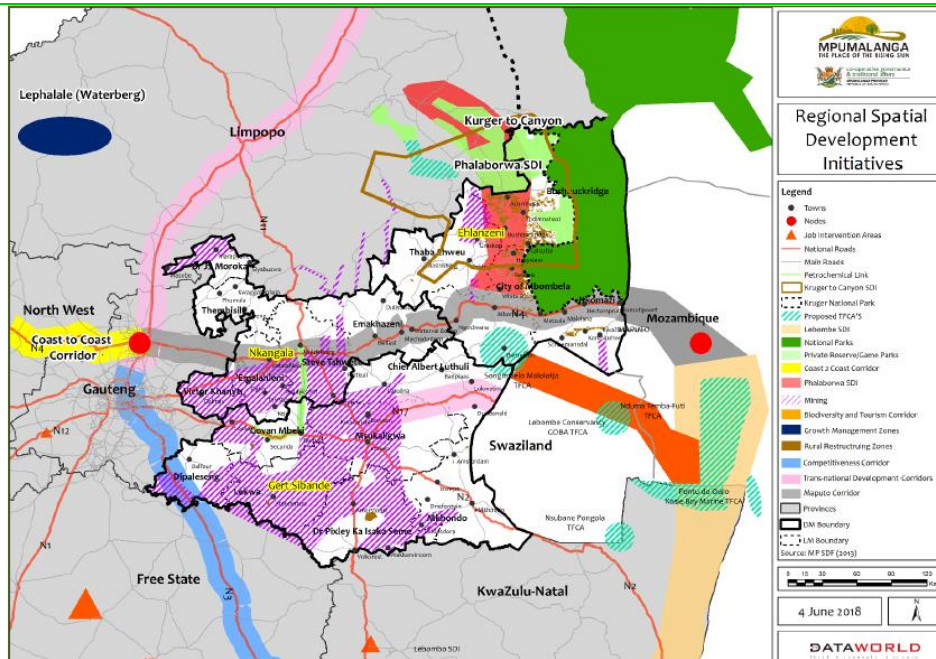


Figure 4: Regional Spatial Development Initiatives (Source: Mpumalanga SDF - 2019).

4.2 SITE DESCRIPTION

The descriptions of the site components provided below mostly focus on the area that encompasses the Londolosi Camp within the broader complex that makes up the Londolosi Game Reserve and the Sabi Sands Game Reserve, while broader description is provided in places in order to add context. Information provided has been accessed from the Sabi Sands Game Reserve Management Plan for the period 2019 – 2029, the Londolosi Game Reserve Management Plan for the same period, from observations on site on 11 April 2023 and again on 28 May 2023 and from knowledge of the area gained from carrying out various projects for Londolosi since 2018.

4.2.1 Climate

The climatic conditions characteristic of Londolosi may be described as semi-arid. Precipitation occurs predominantly as summer thunder showers with occasional light winter rain when cold fronts penetrate deeply into the country. Summer temperatures range between 18° C and 45° C while winter temperatures range between 8° C and 23° C. A south to north rainfall gradient exists in the SSW with the long-term annual averages been 620mm and 570mm respectively. With Londolosi being located roughly in the centre of the SSW and having a longitudinal orientation, this gradient is also applicable.

Typical of semi-arid environments, precipitation is erratic with oscillating period of above and below average rainfall being recorded. Variations range between 248 mm (1991/1992) during drought years to 1147mm (2000/2001) for very wet years with flooding conditions.

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4.2.2 Topography

The topography of Londolozzi is gently undulating with moderately dissected and rounded hill country, rising above the floor of the Sand River valley. The Sand River is a dominant feature in Londolozzi. It crosses the western boundary at an altitude of just more than 330 masl, flowing in an east north easterly direction to exit the property after dropping only 24 m over a distance of 6.25 km. The highest elevation on Londolozzi is approximately 417 masl in the south western corner of the property and the lowest is approximately 311 masl at the point at which the Sand River crosses the eastern boundary. The altitude ranges from 347 at Option A, 343 amsl at Option B and to 340 masl at Option C. Options A and B have an easterly aspect while Option C has a north westerly aspect all dropping by 3 to 4 meters across their shortest axis.

4.2.3 Geology and Soils

The following description of the geology and soils is a direct extract from the SSW Management Plan as it applies to Londolozzi:

The geomorphology of the eastern parts of southern Africa and particularly the Lowveld regions, the Kruger National Park and the SSW Protected Area have been directly affected by the large-scale geographical processes which have taken place in South Africa. Due to this, the geological structures and differences in resistance to weathering by different rock types and formations has greatly influenced the current landscape morphology (Venter & Bristow, 1986). The Lowveld is predominantly underlain by the basement gneisses and granites. Using Walraven (Walraven, 1989) the overall area of the SSW Protected Area can be described as follows: A central band runs from close to the eastern boundary to the western boundary and is dominated by medium to coarse grained, sphene-bearing tonalite. Forming an approximate U-shape around the latter is a series classified as quartz-microcline-plagioclase-biotite migmatite and gneiss with mafic and ultra-mafic xenoliths. Local re-crystallisation occurs in the south of the reserve where the Sabie River borders the reserve. A tongue of light grey, medium grained biotite gneiss with coarse grained quartz veldspar leucosomes traverses the area from the north-eastern corner of the reserve (Exeter) through the northern sections of the reserve through to the west to areas adjoining the Kruger National Park. The north-eastern sections of the reserve are classified as grey to pale brown, medium- to coarse grained quartz-feldspar-biotite gneiss with subordinate mafic to ultramafic xenoliths.

In some areas where gabbro and dolerite intrusions strike through, the landscape features are flatter areas of relief (Venter & Bristow, 1986). Within these areas are underlying granophyric quartz gabbro (Sabi Sand Granophyre) which dominates the central and eastern sections of the southern reserve area. The origin of these rocks is unclear, but it may be that the Sabi Sand Granophyre represents some marginal interaction facies between the surrounding Nelspruit suite and gabbroic rocks which formerly overlay the granophyre, but which have been removed by erosion. In a narrow band in the eastern and central areas of the reserve, in a band through the south and west, we find what is termed Timbavati Gabbro, a medium- to coarse-grained gabbro, olivine gabbro and quartz gabbro. These are basic rocks with an irregular outcrop pattern distinguished by a clearly recognizable vegetation type. A very prominent dyke, consisting of fine to medium grained, hybridized gabbro, with abundant inclusions of acid rocks and protrudes prominently above the flat topography formed by the granite and gneiss. In the SSW Protected Area, it stretches in a narrow

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band from the west and central boundary on the reserve though to the neighbouring Mala Mala adjoining the Kruger National Park (Peel & Stalmans, 2010).

Soil is defined as a natural mass of unconsolidated natural material which can support functional ecosystems within protected areas. This represents a critical resource and through its intrinsic properties delivers critical ecosystem services to the ecosystems in which it is found. Within the SSW Protected Area, there is a strong correlation between the geology and soils of the Protected Area. In the SSW Protected Area, the soils occur in distinctive catenary sequences on granitoid rocks. Their formation is a result of the following processes:

- a. The mobilisation and eluviation of clay particles and soluble weathering products from porous soils in upland positions by rain water;
- b. The lateral downward transportation of these components under the influence of gravitation to foot slope positions, where they are redeposited to form impermeable clay horizons. At this point the ground water is forced to the surface, thus forming waterlogged zones (seepage lines) during the rainy season which follow the contours (Venter, 1986). Thus, a general catenary sequence from crest to valley bottom, determined by the sequence of soil complexes (i.e. sandy, hydromorphic, duplex and alluvial) and associated vegetation composition, is repeated regularly across the hills and valleys.

Although these catenary sequences associated with granite-gneiss is representative of the area, the presence of gabbro intrusions and dolerite dikes causes a marked change in soil patterns. These metamorphic units generally weather into clayey structured fertile soils which differ from the normal granite-gneiss pattern (Peel & Stalmans, 2010).

Because of the minimal expansion to existing footprints (total expansion area: 186.8 m²), it is not deemed necessary to conduct any geohydrological surveys for the proposed development.

4.2.4 Hydrology

The main hydrological feature of Londolozi is the Sand River. This river has its source in the foothills of the Drakensberg escarpment to the west and is an important tributary of the Sabie River which forms part of the southern boundary of the SSW. Another important hydrological feature is the Manyaleti River, which is also non-perennial. This river lies north of the Sand River and meanders in a southerly direction turning firstly to the north and then to the east after almost 4km of run-of-river within Londolozi. Its confluence with the Sand River is approximately 1.5 km to the east of Londolozi's eastern boundary with Mala Mala. These features drain the northern two thirds of the property with the southern one third being drained by the Mshabeni and the Tukwane Rivers. Figure 5 illustrates these features where the red rectangle represents the locality of the three options for the solar array.

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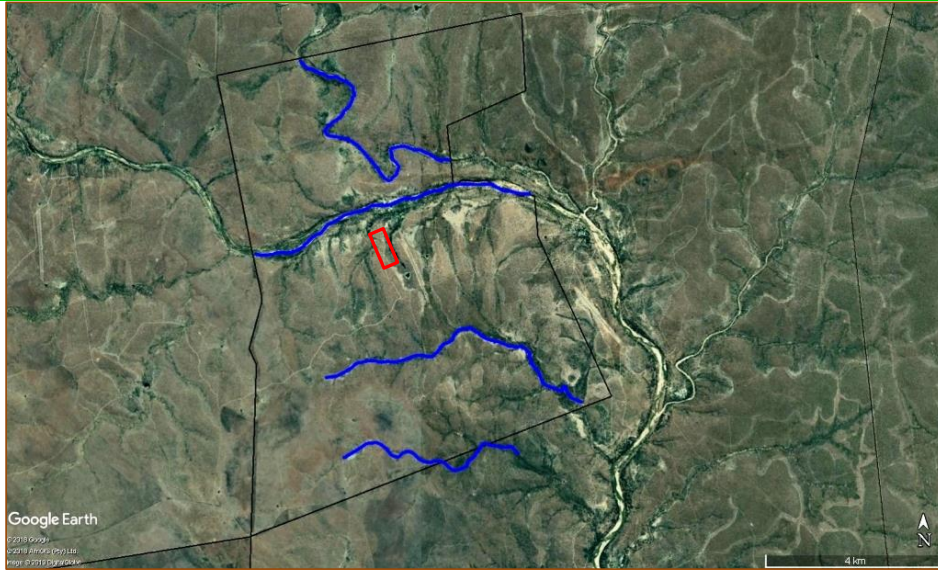


Figure 5: Londolozi with the Sand and Manyaleti Rivers draining the northern portion of the property, and the Mxabeni and Tukwane Rivers in the south.

These aquatic ecosystems in the SSW are frequently subjected to extreme events such as floods or droughts, added to which is a severely stressed catchment caused by the ever-increasing demand for water, coupled with a rapidly expanding industrial and agricultural developments and large-scale urbanisation. The SSW's dry climatic conditions, the many non-perennial rivers and the erratic water flow is inherent in them. According to the SSW Management Plan and the National Spatial Biodiversity Assessment (2004), the Sand River is considered to be "moderately modified" and "critically endangered" from the perspective of its Present Ecological State (PES) – (Figure 6). This means that a loss and change of natural habitat and biota have occurred but the basic ecosystem functions are still predominantly unchanged. It is unfortunate that the updated National Spatial Biodiversity Assessment – 2018 (SANBI, 2019) does not provide the same resolution to compare with the 2004 report, but it is safe to say that the situation has remained the same at best, but has likely deteriorated.

In order to gain an understanding of its natural structure and function and its responses to development and exploitation and to conserve it in a state where it can maintain its natural biodiversity, the SSW have undertaken to develop and implement a river health monitoring programme for the Sand and Sabie Rivers that flow through the reserve, based on accepted rapid appraisal methods.

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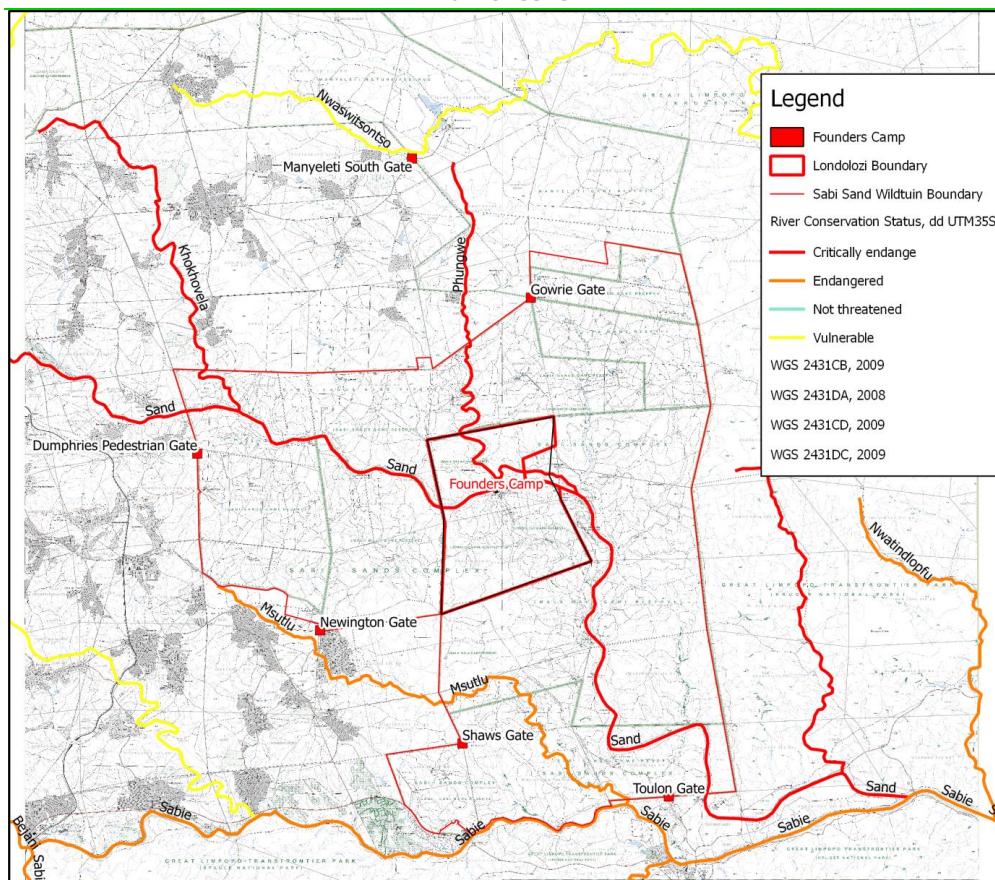


Figure 6: River Conservation Status (National Spatial Biodiversity Assessment, 2004)

Londolozi is carrying out efforts to influence land and other management decisions in the upper catchment of the river. Being a recipient of the consequences of poor upper catchment management makes Londolozi particularly vulnerable, which highlights the need for investments into the catchment to be made on an on-going basis. They also undertake to engage quarterly with SSW to ensure that Londolozi is not having a negative impact on the Sand River and to facilitate a relevant response if there has been.

In addition to these non-perennial watercourses are ephemeral pans, i.e. natural depressions that temporarily hold water in the wet season. These occur throughout the property and represent important water sources as well as a diversification of habitat.

Due to the non-perennial nature of the natural water on Londolozi, a number of artificial water sources have been developed and maintained as a water source for wildlife and human consumption. Water for human consumption is primarily provided from boreholes. However, their capacity to deliver is vulnerable to drought and therefore a series of permanent dams, in the small non-perennial watercourse to the south of the camp, are maintained and kept full of water pumped

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from the Sand River in case of borehole failure. This then allows for the gravitational feeding of the stored water to the camp's water treatment plant.

A network of pumps and pipelines allows Londolozi to manage the water levels in these dams and pans and by doing so, to use them as a management tool in the manipulation of animal movements and distribution.

The Dept. of Water and Sanitation compiled a short summary of the extreme flood events of 1996, 2000 and 2012, which provide very useful information on the flood flows in the Sabie River (Clanahan, 2018). From this information it can be seen that the estimated peak flood flow level at the Paul Kruger Gate (the gauging station was washed away) was just less than 7000m³/sec. Using the Kovac's empirical method to derive the Regional Maximum Flood, the 1:100 return period is estimated at 2810m³/sec (Kovac, 1988). Extrapolating this to the situation on the Sand River, it can be seen that the 1:100 year event is substantially smaller than that which was experienced in 2012. It can therefore be further extrapolated that the three alternative sites for the solar array are located well above the 1:100 year flood line.

4.2.5 Vegetation

Mpumalanga Biodiversity Sector Plan based terrestrial map confirms that the site falls within a Nature Reserve. A broad description of the vegetation types as per the SSW Management Plan is provided here as it is also applicable to Londolozi:

At a very coarse scale, the SSW falls within one biome and one bioregion: The Savanna Biome, and the Lowveld Bioregion. The SSW falls mainly within the Granite Lowveld (SVI 3) vegetation type, occurring at altitudes of about 250 - 700 m and is characterised by tall shrubland with few trees to moderately dense low woodland on the deep sandy uplands with *Terminalia sericea*, *Combretum zeyheri* and *C. apiculatum*, and with a ground layer including *Pogonarthria squarrosa*, *Tricholaena monachne* and *Eragrostis rigidior* (Mucina & Rutherford, Reprint, 2011). The equivalent vegetation types as described by Acocks (Acocks, 1975) are Arid Lowveld (Veld Type 11) and Lowveld (Veld Type 10). According to Low and Rebelo's classification (Low & Rebelo, 1996), the reserve comprises of Mixed Lowveld Bushveld (Type 19) and Sour Lowveld Bushveld (Type 21).

These vegetation types have provided the basis from which an accurate and easily recognised framework for the habitat delineation within the SSW has been possible. The habitat or finer scale vegetation types relevant to the alternative sites for the solar array are illustrated in Figure 7 where it can be seen that one vegetation type is relevant to all the site alternatives, i.e. *Sclerocarya birrea*/*Terminalia sericea*/*Combretum apiculatum* open to closed woodland.

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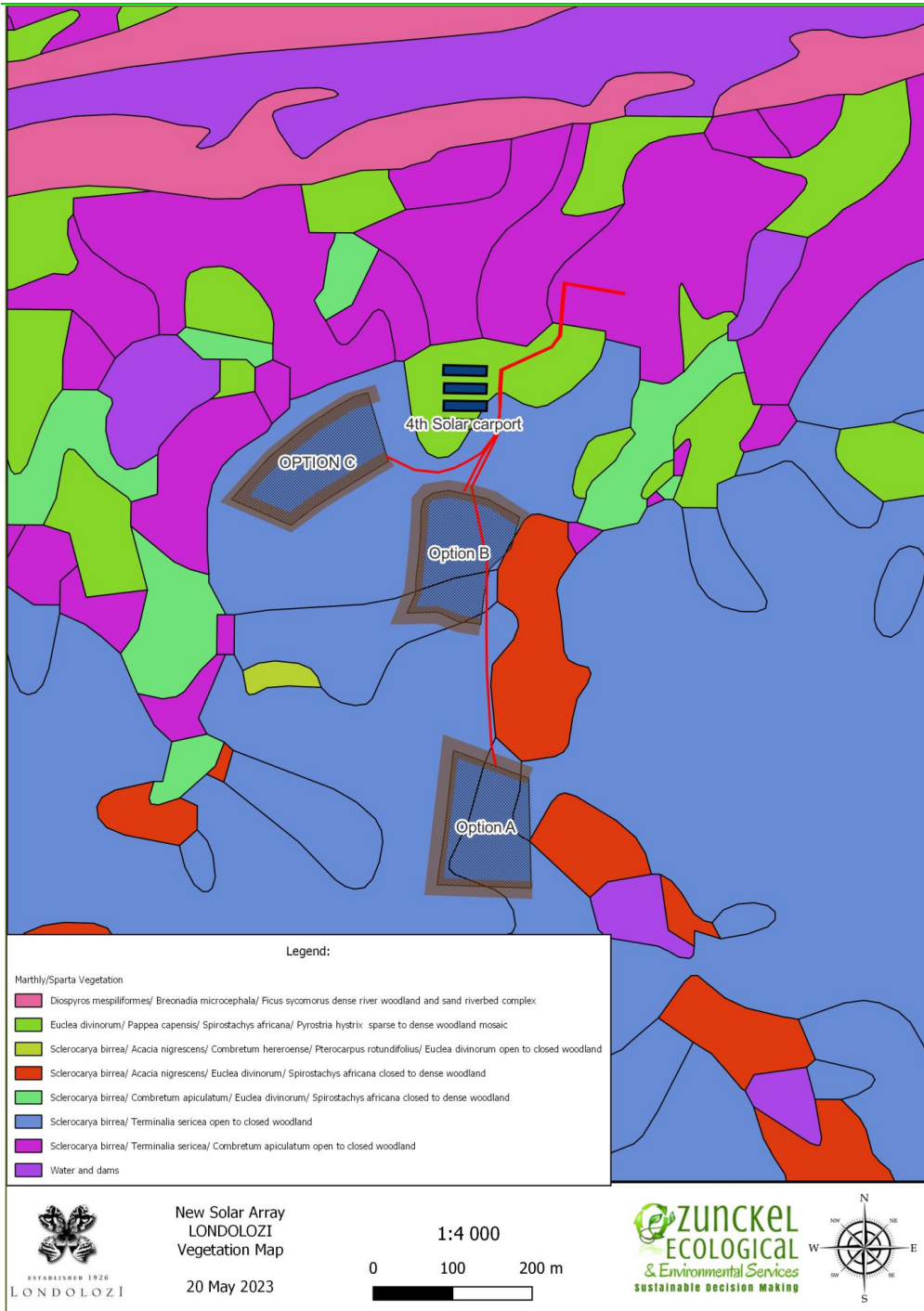


Figure 7: Vegetation Map for the three alternative sites for the solar array and transmission infrastructure.

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Care should be taken to avoid the unnecessary removal of conservation important trees such as *Sclerocarya birrea* (Marula), *Combretum imberbe* (Leadwood), and *Philenoptera violacea* (Apple Leaf). Should specimens of these trees need to be removed; permits will be required from the Dept. of Forestry, Fisheries and the Environment (DFFE).

4.2.6 Fauna

As an open system within the SSW, the Greater Kruger National Park and the Great Limpopo Transfrontier Conservation Area, the full suite of fauna associated with this semi-arid savanna may be encountered at all of these sites. This would exclude aquatic fauna as all the alternative sites are terrestrial. Also to be excluded from the preferred site for the solar array will be elephant who will be kept out through the erection of an elephant proof electric fence. The reason for this is that elephant are capable of causing serious damage to the array. Some large mammals such as giraffe may also be excluded because of the fence, but most others will be able to move freely through the site. An indication of the fauna that occurs in the SSW is provided in Table 2.

Table 2: A broad indication of the fauna that occurs in the SSW and the Londolozi Game Reserve (LMP, 2019)

PHYLUM	TOTAL NUMBER SPECIES RECORDED	CONSERVATION STATUS (IUCN RED LIST)	
		Important Species	Status
Birds	266	Western Red-footed falcon	Near threatened
		Cape Vulture	Vulnerable
		Lappet-faced Vulture	Vulnerable
		Tawny Eagle	Vulnerable
		Martial Eagle	Vulnerable
		White-breasted Cormorant	Protected
Amphibians	24	Lowveld bullfrog	Near threatened
		Mottled shovel-nosed frog	Near threatened
Mammals	41 large	Cheetah	Vulnerable
		African Elephant	Vulnerable
		Pangolin	Vulnerable
		African Lion	Globally vulnerable
		Tsessebe	Endangered
		White Rhinoceros	Near threatened
	Black Rhinoceros	Near threatened	
	34 small		

4.2.7 Ecological Functionality

Londolozi is part of an open system and as such ecological dynamics are encouraged to function naturally. Where necessary, management interventions are implemented to simulate natural ecosystem functionality. Therefore the reserve may be considered as having optimum ecological functionality. As the preferred site for the array will be highly transformed in addition to the elephant-proof fence, it will not retain the ecosystem functionality of the surrounding natural area.

4.2.8 Cultural / Historical Features

Comment [K2]: Complete depending on feedback from SAHRA

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5 LEGAL AND POLICY FRAMEWORK

A comprehensive view of policy and legislation relevant to the proposed developments is provided in Table 3 together with an indication of how the proposed developments are compliant and responsive to these.

Table 3: A list of relevant legislation and policy

Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
Constitution of Republic of South Africa (108 of 1996):	This is the fundamental law of South Africa, setting out the Bill of Rights as well as the relationship of various government structures to each other. "Everyone has the right – (a) to an environmental that is not harmful to health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that – a. prevent pollution; b. promote conservation; and c. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.	National Government	The proposed activities have been conceptualised, designed and planned in respect of meeting these constitutional requirements in that all recommended mitigation actions will be implemented and frequently monitored ensuring that any pollution risks are avoided and addressed and that conservation is promoted. Both construction and operational phases will happen within the limits of sustainability.
Conservation of Agricultural Resources (Act 43 of 1983):	The purpose of the Conservation of Agricultural Resources Act No. 43 of 1983 (CARA) is to provide for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants.	National Department of Agriculture (DAFF)	Mitigation measures are in place to ensure that no impacts on soil and water occur during the construction and operational phases of the proposed developments, and the need to address potential weed infestations is also noted in the EMPr.
National Environmental Management: Protected Areas Act (Act No. 57 of 2003):	The Act provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes; for the establishment of a national register of all national, provincial and local protected areas; for the management of those areas in accordance with national norms and standards; for intergovernmental co-operation and public consultation in matters concerning protected areas, and for matters in connection therewith. The proposed developments fall within a proclaimed Protected Area in terms of this Act, and will therefore be subject to the provisions of this Act. Specifically including the following: <ul style="list-style-type: none"> Regulations for the proper administration of special nature reserves, national parks and world heritage sites, published under Government Notice R1061, In Government Gazette 28181, dated 28 October 2005. Norms and standards for the management of protected areas, published under Government Notice R382, In Government Gazette 399878, dated 31 March 2016. 	Department of Environmental Affairs	The proposed development is nested within and is controlled by the SSW Management Association. As a proclaimed private nature reserve, the SSW will ensure that the development fits within the relevant legal and policy frameworks for the SSW as per their Standard Operating Procedures, Management Plan and Landowner Co-management Agreements.
National Environmental Management: Biodiversity Act, 2004 (Act No. 10	The objects of the National Environmental Management: Biodiversity Act 10 of 2004 (NEMBA) are to provide for the management and conservation of biological diversity within South Africa and of the components of such	Department of Environmental Affairs	The locality of the proposed development within the Londolozi Game Reserve has highlighted the potential impact on the natural environment and relevant mitigation measures have been recommended to

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Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
of 2004):	biological diversity; to give effect to ratified international agreements that are binding on South Africa; and to ensure the protection of the ecosystem as a whole, including species that are not targeted for exploitation.		ensure that these impacts remain insignificant.
National Spatial Biodiversity Assessment:	The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on their biophysical characteristics, which are ranked according to priority levels. The proposed development sites are located in the Granite Lowveld, which is ranked as vulnerable with a conservation target of 19% and some 17% statutorily conserved in the Kruger National Park. It also falls within an areas zoned as Limited and Intensive Development Zones as per the Londolozi Management Plan for 2019 to 2029.	Department of Environmental Affairs and SANBI	The locality and type of proposed development is adjacent to areas zoned as Limited and Intensive Development Zones as per the Londolozi Management Plan for 2019 to 2029 and are relatively compatible thus ensuring that the requirements of the NSBA are not compromised.
National Forests Act, 1998 (Act No 84 of 1998):	The purposes of the National Forests Act No. 84 of 1998 (NFA) are, inter alia, to promote the sustainable management and development of forests for the benefit of all and to enact special measures for the protection of certain forests and trees. The minister may declare any tree, group of trees, woodland or species to be protected trees, groups of trees and species (Section 12) or a particular forest to be a "natural forest" (Section 7). Specified activities in respect of these areas or trees are prohibited by the NFA. Protected trees require permits to move, or damage them.	Department of Agriculture, Forestry and Fisheries	All protected species of trees and shrubs will be avoided as far as possible and where not possible, permits will be applied for.
National Heritage Resources Act 25 of 1999	The National Heritage Resources Act legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares (ha) and where linear developments exceed 300 metres in length. In this regard, the proposed development site are be subject to engagement with the South African Heritage Resources Agency (SAHRA). Potential impact on cultural heritage, paleontological or archaeological resources through excavation activities or disturbance, whilst unlikely, will need to be monitored.	South African Heritage Resources Agency (SAHRA)	A chance find protocol will be implemented.
The National Water Act, (Act No. 36 of 1998)	The purpose of the National Water Act 36 of 1998 (NWA) is to ensure that the nation's water resources are protected, used, developed, managed and controlled in ways that ensure that the integrity of water resources are protected.	Department of Water and Sanitation through the	None of the proposed activities will trigger the need for a Water Use Licence.
National Environmental Management Waste Act 59 of 2008	The National Environmental Management Waste Act (NEMWA) was primarily enacted to reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.	Department of Environmental Affairs	Waste generation volumes are insignificant but will be completely absorbed into the waste management infrastructure and systems at Londolozi.
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993):	The purpose of this Act is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with, the activities of persons at work. The proposed development will therefore be subject to this Act during the construction and operational	National Department of Labour	The EMPr speaks to these aspects for the construction phase and Londolozi has provided commitments to meeting these requirements in both construction and operation.

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Title of legislation, policy or guideline	Purpose of the legislation and applicability to the project	Administering authority	Proposed activity compliance/response
	phases of the project.		
DEA Integrated Environmental Management Information Series	IEM is a key instrument of NEMA and provides the overarching framework for the integration of environmental assessment and management principles into environmental decision-making. The aim of the information series is to provide general information on techniques, tools and processes for environmental assessment and Management.	Department of Environmental Affairs	These guidelines have been applied in the assessment of the proposed development and its potential impacts on the natural, social and economic environment.

6 PUBLIC AND AUTHORITY PARTICIPATION

6.1 PUBLIC PARTICIPATION

Public involvement in this impact assessment process was facilitated through the actions listed below. Evidence of these actions can be seen in Annex E:

- Site notices in A3 format were posted at the Newington entrance gate to the SSW on 8 May 2023.
- Notice of intention to apply for environmental authorisation was placed in and published by the Mpumalanga News on Wednesday, 3 May 2023 and the Lowvelder on Thursday, 4 May 2023.
- Notification was sent to all immediate neighbours and the Sabi Sands Game Reserve Management Authority via email with a Background Information Document (BID) attached, on 8 May 2023. A copy of the BID is provided with this report as Annex F.

The contacts database for registered I&APs is provided in Table 4.

Table 4: Contact database for registered I&APs

FIRST NAME	SURNAME	AFFILIATION	PHONE	EMAIL
REGISTERED INTERESTED AND AFFECTED PARTIES				
Julie	Olivier	SSW MA (Ecologist)		ecologist@sabisand.co.za
Iain	Olivier	SSW-MA (Warden)	078 804 0347	warden@sabisand.co.za
Sekgametsi	Mandhlazi	Interest in renewable energy	0761461245	segametsi15@gmail.com
Khensane	Mandlazi	Interest in renewable energy	0722271064	khensane.mandlazi@gmail.com
STAKEHOLDERS				
Natasha	Higgit	South African Heritage Resources Agency		nhiggit@sahra.org.za
Khumbelo	Malele	Mpumalanga Tourism and Parks Agency		khumbelomalele@gmail.com
Thabile	Mnisi		076 169 4906	thabile.mnisi@mtpa.co.za
Thapelo	Shabangu	Ehlanzeni District Municipality	0137598554/0798 743304	stshabangu@ehlanzeni.gov.za
Leavi	Mokoena	Bushbuckridge Local Municipality,	0729019014/0837 984703	mokoenaevy8@gmail.com
Flominah	Timba	Information Centre,	0828270410	genoskomp@gmail.com

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FIRST NAME	SURNAME	AFFILIATION	PHONE	EMAIL
Charity	Nxumalo	Along R40 Road, Bushbuckridge	013 004 0453	tcharitynxumalo@gmail.com
Sampie	Shabangu	Inkomati Usuthu CMA	0629079061	shabangus@iucma.co.za
Xolani	Nkosi	Mpumalanga Department of Agriculture, Rural Development, Land & Environmental Affairs	0720323210	nkosixe@mpg.gov.za

Considering the low level of interest expressed by the public in the proposed developments it was deemed unnecessary to hold a public meeting.

6.2 AUTHORITY PARTICIPATION

A virtual pre-application meeting was held with Mr Xolani Nkosi of the Mpumalanga Department of Agriculture, Rural Development, Land & Environmental Affairs, ENVIRONMENTAL IMPACT MANAGEMENT (Ehlanzeni District), on 25 April 2023. Minutes of this meeting are included with this report as Annex G.

Hard and digital copies of the Draft Basic Assessment Reports were distributed to the following authorities on 3 June 2022:

- Mpumalanga Department of Agriculture, Rural Development, Land & Environmental Affairs (MDARDLEA) (hard copy via PUDO courier)
- District and Local Municipalities (Ehlanzeni and Bushbuck Ridge) (digital via Google Drive and hard copy via PUDO courier)
- South African Heritage Resources Agency (uploaded to SAHRIS)
- Inkomati Usuthu Catchment Management Agency (hard copy via PUDO courier)

A copy of the DBAR was sent to the SSW for review and comment on 4 August 2022.

- SSW Management Authority (digital via email)

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

A site visit was requested by MDARDLEA and Ehlanzeni DM on the 19 July 2022. Mr Xolani Nkosi (MDARDLEA), Ms Lebogong Mdlili (Ehlanzeni DM) and two interns, Mr Siphon Mabuza (DFFE, seconded to Bushbuckridge LM), Chris Goodman (Applicant) and Mrs Karen Zunckel (Zunckel Ecological + Environmental Services), were present. Mr Nkosi discussed his comments on the layout requirements with Mrs Zunckel. The party was shown the proposed changes to the Founder's Camp Main area, and some of the rooms from the outside, as the camp was full and guests were there. All parties said that they were satisfied with what they had been shown and were then in a position to provide comments. Mr Mabuza said that his comments would be included in those of Ehlanzeni DM. The Attendance Register is included in ANNEX L: RECORDS OF SITE MEETINGS WITH AUTHORITIES

Comment [K3]: Update

Comment [K4]: Update

Comment [K5]: Update/revise

7 NEED AND DESIRABILITY

Much has already been said in Sections 1 and 4.1 in terms of the compatibility of this proposed development and activities in relation to the Purpose, Desired State and Management Objectives of the SSW as stated in their Protected Area Management Plan for 2019 to 2029 (SSW, 2019); as well as the Vision and Management Objectives of the Londolozi Game Reserve as stated in their Management Plan for 2019 to 2029 (LMP, 2019). In terms of their need and desirability the same rationale may be used.

As a globally recognised destination for high paying guests that strives towards achieving high standards following global best practice, Londolozi needs to ensure that their ability to generate a sustainable source of electricity is enhanced and thus allow for the perpetuation of the business model which is responsible for the employment of many people from adjacent communities, both permanently and on a temporary basis; ensuring that any new building construction and/or renovation is carried out in a way that does not impact on Londolozi's sensitive natural and socio-economic environment.

The development of the solar array will significantly reduce Londolozi's carbon footprint and therefore increase their level of sustainability in terms of its operations. Considering the tourism model that is applied at Londolozi, i.e. up-market facilities drawing top rates with low numbers of guests, there is a need to increase their resilience to the failing infrastructure of the national electricity provider.

8 AUTHORISATION TIME FRAMES

8.1 VALIDITY PERIOD

All of the proposed developments are planned to be completed within the mandatory five (5) year validity period ascribed to an environmental authorisation, assuming that this is granted.

8.2 ACTIVITY SCHEDULE

8.3 COMPLIANCE MONITORING

8.3.1 *Development Phase*

All of the proposed activities will be subjected to continuous compliance monitoring by the Head of Dept.: Technical Services for Londolozi and contractors will be held accountable for adhering to the EMPr through the signing of a contract committing to such. The Environmental Compliance Officer (ECO) for the SSW will carry out inspections to audit compliance and an independent ECO will be appointed by Londolozi to oversee the process and to facilitate reporting to the relevant compliance official/s in the Mpumalanga Department of Agriculture, Rural Development, Land & Environmental Affairs (MDARDLEA). The latter will happen no less than monthly and will begin prior to the commencement of any of the activities, inclusive of a contractor's briefing, and will continue until all rehabilitation work is completed and clearly successful.

8.3.2 *Operational Phase*

Comment [K6]: Insert once provided by Chris

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The SSW and the individual property owners within it have recently instituted an annual “Green Audit” which has been developed and is implemented by an independent environmental auditor. Included within the Green Audits is assessment against compliance with all relevant environmental and natural resource management legislation. Land owners and their managers are expected to keep records of all permits, licences and authorisations; against which activities and developments are audited. Furthermore, the nature of this development is such that it will not require environmental compliance monitoring during the operational phase, as long as all rehabilitation requirements are fully met.

9 CONSIDERATION OF ALTERNATIVES

9.1 ALTERNATIVE SITES

Three alternative sites were assessed on the basis of technical and environmental considerations.

9.2 ALTERNATIVE USES FOR THE SITE

Only one use has been proposed for the site, i.e. the establishment and operation of a solar array for the purpose of generating electricity to augment supply from the national grid.

9.3 ALTERNATIVE TECHNOLOGIES

A specific technology has been selected for development on the preferred site and as specified above.

9.4 NO-GO OPTION

Assessment of the no-go option has been included.

10 ANALYSIS OF POTENTIAL IMPACTS

10.1 ASSESSMENT METHOD

This section provides a discussion on the potential impacts of the proposed solar array and associated transmission infrastructure, as well as the no-go option. Included is an indication of their significance through superimposing all phases of the proposed development, as described in Section 3 DESCRIPTION OF THE PROPOSED ACTIVITY, on the environmental aspects of the receiving environment as described in Section 4.2. The assessment considers the socio-economic, biophysical, visual/aesthetic and cultural heritage aspects of the receiving environment. In addition to this is an indication of the extent to which these impacts may be avoided or mitigated. It will be shown that as all potential impacts may be successfully avoided or mitigated, no offsets will be required and no fatal flaws were identified.

It is noted that environmental impact assessment processes call for the assessment of all the phases of a proposed development, i.e. planning, pre-construction, construction, operation and decommissioning. In the case of these proposed developments it is only the construction and operational phases that are considered relevant for this assessment. The relatively small scale of these proposed developments and the fact that they are planned within and in compatibility with

Comment [K7]: Confirm once assessment completed

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the SSW and LGR Management Plans deems the need to assess the planning and pre-construction phases unnecessary.

The detailed analysis of potential impacts was guided by the scoring allocations as listed in Table 55 and explained in detail in Annex I. Impacts that retain a post-mitigation score higher than 40, i.e. those colour coded from yellow to red, would be recognised as potential fatal flaws that could render the proposed development environmentally unsustainable, and/or which may require further detailed specialist studies.

Comment [K8]: Update numbers when report complete

Potential impacts have been considered according to the construction and operational phases of the proposed development as described in Section 3.2 and for the no-go option. As there are no plans for decommissioning, assessment of this phase has not been carried out.

The outcome of this process for the proposed development of a solar array and associated transmission infrastructure is captured in **Error! Reference source not found.**6, Table 77 and Table 88 below. Note that the tables were originally configured to address negative impacts but have been adapted to include positive impacts as well. Where these have been listed, the scoring for 'mitigation efficiency' has been applied conversely in order to cater for the positive effect of the enhancement recommendation. The colour code is also adapted here where only green is used to retain the denoting of a positive impact. In the assessment of the no-go option no mitigating measures have been included as these will not be applicable if nothing is done. The potential impact scores therefore remain the same before and after mitigation.

The tables have been completed by the EAP on the basis of their understanding of both the development proposal and the receiving environment. This understanding has been generated through the interrogation of relevant documents and reports (mostly referenced in this report), site visits on 11 April and 28 May 2023 in the company of the HOD Technical Services. Consideration of comments received from registered I&APs and relevant authorities also influenced this understanding.

Note that although site visits were carried out late in the growing season the sites were still green due to high volumes of late rains. The above average annual rainfall thus renders the timing of the field assessments to be acceptable from an ecological perspective.

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Table 5: Impact assessment score allocation guide.

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

10.2 SPECIALIST FINDINGS AND RECOMMENDATIONS IN TERMS OF POTENTIAL IMPACTS

Comment [K9]: Insert HIA findings when available.

¹ Significance Rating (without mitigation) = SUM (Extent, Duration, Intensity, Probability) * Weighting Factor
² Significance Rating (with mitigation) = Significance Rating (without mitigation) * Mitigation Efficiency

10.3 CONSTRUCTION PHASE

Table 6: Potential environmental impacts and recommended mitigation measures for the proposed solar array and associated transmission infrastructure during the Construction Phase.

POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
SOCIO-ECONOMIC										
A direct impact will be the employment of external contractors to undertake the development and who employ local people to assist with the work.	n/a	3	1	1	5	3	30	H: 1	H: 1	30
BIOPHYSICAL										
The loss of biodiversity from the vegetation cleared for the 1 ha required to accommodate the array. Note that transmission infrastructure will be buried and will therefore not equate to loss of biodiversity as trenches will be fully rehabilitated.	The vegetated layer of soil will be carefully stripped and stored for use in the rehabilitation of the site and the vegetation of berms established to screen the array. Where possible, protected plant species will be avoided or will be removed and replanted in close proximity of the site.	1	5	3	5	3	42	0.6		25.2
The loss of ecosystem functionality through the loss of natural vegetation cover.	Ensure that the construction activities are strictly limited to the development footprint, including access to the site.	1	5	4	5	3	45	0.8		36
Disturbance caused by noise and the movement of people, machinery and vehicles that may impact on the movement of fauna and guest experience.	Access to be limited to the immediate development footprint with no movement outside of this allowed, except on existing roads. Vehicles and machinery to be well serviced, including exhaust dampers and dis-engage reverse signals. All communications on site to be kept low with no unnecessary shouting or raised voices. Limit construction work during normal working hours.	2	1	4	5	2	24	0.6		14.4
The creation of dust that settles on adjacent vegetation and decreases its palatability to grazing and browsing fauna.	Where it is apparent that dust is being created, the working surface should be kept damp and any vegetation that has become unpalatable due to dust settling on it should be sprayed clean.	2	2	3	5	3	36	0.4		14.4
Potential soil erosion caused by the removal of the vegetation cover, removal of soil and compaction of surrounding areas.	Undertake the activity during the dry season, rehabilitate exposed surfaces as soon as possible after development and where the surfaces are permanently exposed ensure that appropriate anti-erosion mechanisms are in place.	2	2	3	2	3	27	0.4		10.8

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POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
The introduction of invasive alien plants (IAPs) from contractor's equipment and vehicles, as well as the opening of ground cover and the disturbance of soil, making the area vulnerable to infestations. Note that this is particularly relevant to <i>Parthenium hysterophorus</i> which is already present along Main Road West after entry through the boom gate at the Anti-poaching Unit (APU).	All current infestations must be cleared before construction work is initiated, contractor vehicles must be checked before entering the area, i.e. at Newington Gate, to ensure that they are clean and are not carrying soil in from outside, disturbed areas must be rehabilitated progressively throughout the development process, and the areas must be monitored regularly after completion of the works to ensure that there are no new infestations.	2	4	3	3	5	60	0.4		24
The presence of external contractors poses the threat of poaching of both plants and animals.	Ensure that contractors and their staff are well informed of the codes of conduct for working in a protected area, as this relates to the illegal removal of plants and animals and that this aspect is included in the contractor's contract. Maintain a presence during road works to ensure that all movements are monitored and restricted to the development footprint, access roads and the staff village, and ensure that the control measures at the APU and Newington Gate are aware of external contractors movements and the need to be vigilant in regards to this potential impact.	2	1	5	3	5	55	0.4		22
Potential pollution through the introduction of solid and liquid waste from contractors, earth moving equipment and workers.	Ensure that the contractor is aware of, and signs an agreement, to ensure that there will be no littering whatsoever and that they have access to ablution facilities provided on site. All waste is to be separated and stored on site during the day and removed at the end of each day.	2	1	3	3	3	27	0.4		10.8
VISUAL / AESTHETIC										
The clearing of vegetation and exposure of soil, as well as the presence of contractors, workers and their vehicles and equipment may be visible from beyond the construction site.	Limit the development to the immediate footprint and ensure that areas disturbed are rehabilitated progressively throughout the works. Also ensure that construction is carried out during daylight hours thus preventing the need for lights and that the number of vehicles used and the size of the contract team are kept to the minimum required to get the works done as soon as possible.	2	1	5	5	3	39	0.6		23.4
HERITAGE										

Comment [K10]: Insert once HIA completed

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POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
Clearing of vegetation cover and earth works may unearth archaeological material.	Implementation of 'chance find' procedure.	1	1	3	3	3	24	H: 0.2		4.8

10.4 OPERATIONAL PHASE

Table 7: Potential environmental impacts and recommended mitigation measures for the proposed solar array and associated transmission infrastructure during the Operation Phase.

POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
SOCIO-ECONOMIC										
As an indirect impact, the solar array will help to enhance the resilience and sustainability of Londolzi's operations and will thus ensure the enhancement of the visitor experience and therefore retain its capacity to employ local people in its operation as well as reduce the carbon footprint of its operations.	n/a	5	5	2	5	3	51	H: 1	H: 1	51
BIOPHYSICAL										
The loss of biodiversity from the vegetation cleared from the 1 ha area under the solar array.	Ensure that the area under the solar array is re-vegetated with locally occurring grass species.	1	5	2	5	3	39	0.6		23.4
The loss of ecosystem functionality in relation to the development footprint.	As above including the use of fencing that will selectively prevent access by large mammals that could potentially damage the solar array, but allow the movement of all other fauna species.	2	5	1	5	2	26	0.6		21.6

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POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
Potential soil erosion caused by the increase in hardened surface area and the resultant accelerated run-off.	Install stone aprons under the drip-lines to attenuate run-off from the solar panels. Ensure that surrounding vegetation remains in a good condition so that it retains the capacity to retard run-off and hold the soil. Monitor for soil erosion.	2	5	3	5	3	45	0.4		18
The proliferation of invasive alien plant infestations as a result of the disturbances caused by the development.	Monitor the situation closely and ensure that the emergence of any IAPs is dealt with immediately and in the most effective way. Ensure that post development rehabilitation is complete and successful.	2	2	3	4	3	33	0.2		6.6
VISUAL / AESTHETIC										
The solar panels may be visible from surrounding areas.	Ensure that the surrounding vegetation is kept in place and that berms are strategically constructed and well vegetated as a screen to any potential visual impact.	2	5	3	5	3	45	0.4		18

10.5 ASSESSMENT OF THE NO-GO OPTION

Table 8: Assessment of the No-Go Option for the proposed solar array and associated transmission infrastructure.

POTENTIAL IMPACTS AND RECOMMENDED MITIGATION MEASURES		EXTENT	DURATION	INTENSITY	PROBABILITY	WEIGHTING FACTOR	SIGNIFICANCE RATING	MITIGATION EFFICIENCY	ENHANCEMENT POTENTIAL	MITIGATED ASPECTS
IMPACT	MITIGATION / ENHANCEMENT									
SOCIO-ECONOMIC										
Guest experience will deteriorate and employment options will not be realised either in the short- or long-term.		2	3	2	5	2	24			
BIOPHYSICAL										
None of the negative biophysical impacts will occur, although the positive impacts of enhanced resilience and sustainability will be a lost, as well as the climate change mitigation opportunity. This loss counteracts the potential positive impact of the no-go options in this regards and affects the scoring.		5	5	2	5	2	32			
VISUAL / AESTHETIC										
No visual impacts will be caused and the bushveld character will be retained.		2	5	2	5	3			42	
HERITAGE										
No heritage sites will be impacted on.		1	5	2	5	3			39	

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10.6 CUMULATIVE IMPACTS

The current Management Plan for the LGR states that there needs to be a concerted and sustained effort to reduce the cumulative anthropogenic impacts on the area. An additional 1 ha of hardened surface area near the Camp may be seen as an undesirable cumulative impact. However, the potential contribution that the facility is planned to make to the perpetuation of Londolozi's operational resilience and sustainability needs to be seen as an acceptable trade-off.

11 ENVIRONMENTAL IMPACT STATEMENT

11.1 SUMMARY OF KEY FINDINGS

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

Assessment of the no-go option shows that the proposed development offers a positive trade-off that will have an overall positive impact on the environment.

11.2 SENSITIVITY MAP

The three alternative sites for the solar array are located within the SSW which places it within a sensitive natural environment. The eastern portion of Option A includes an area adjacent and parallel to the north flowing non-perennial water course which was historically used as settling ponds for waste water treatment. Option B is relatively intact natural vegetation but includes a rehabilitated gully where old thatch and brush is stacked to help counter further erosion. Option C is within an area that is mowed annually as a fire break but which is otherwise undisturbed.

A sensitivity map has been provided as Figure 7 below.

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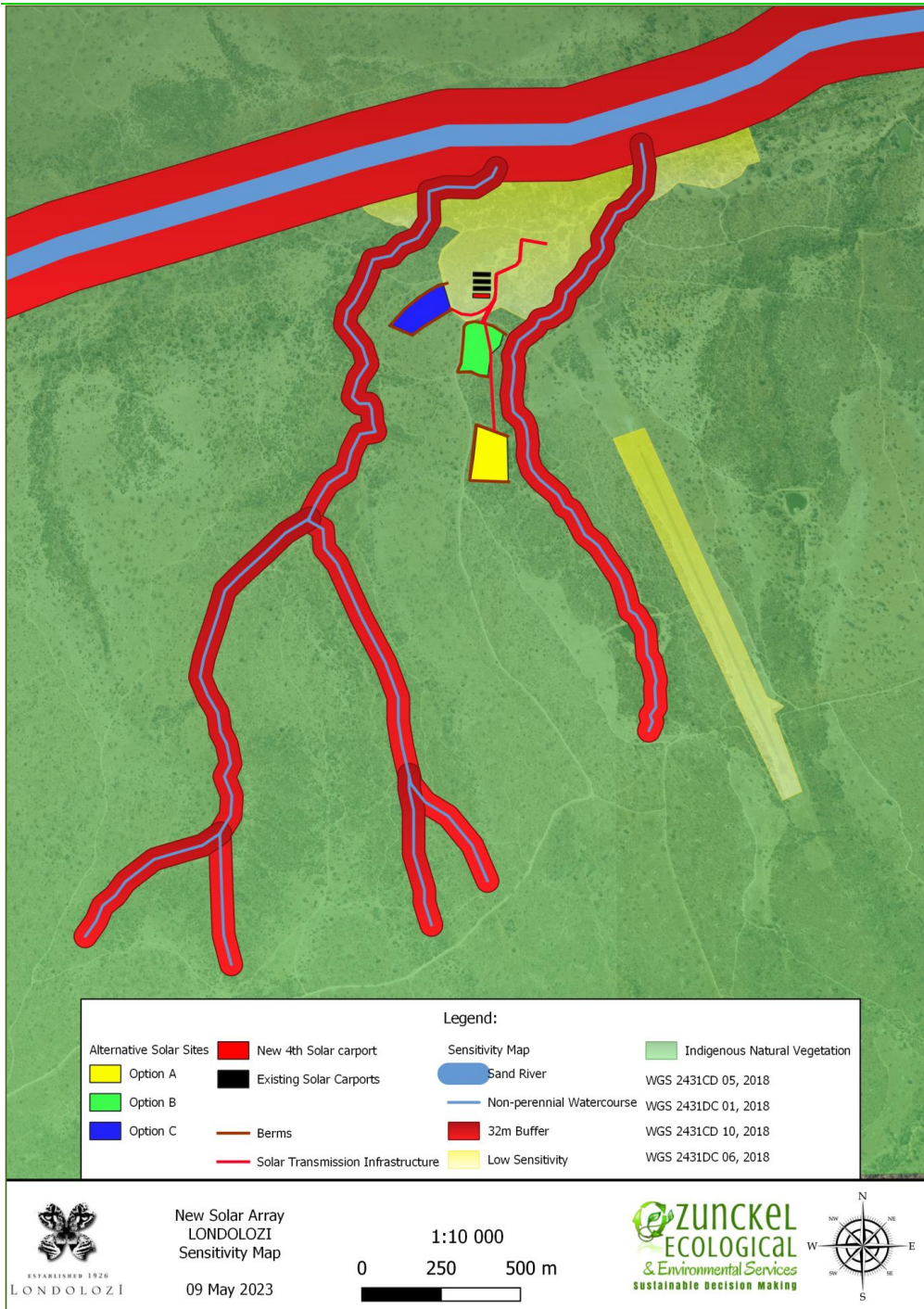


Figure 8: Sensitivity Map showing sensitive hydrological features relative to the localities of the three site alternatives.

12 ASSUMPTIONS AND LIMITATIONS

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

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

- The information provided by the client is accurate;
- The scope of this investigation is limited to assessing the environmental impacts associated with the construction and operation of the proposed solar array and associated transmission infrastructure; and
- Should the project be authorised, the Applicant will implement any recommendations and mitigation measures outlined in the BAR and conditions of environmental authorisation into the detailed design and construction contract specifications of the proposed projects.

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

13 RECOMMENDATION AND CONDITIONS OF AUTHORISATION

It is recommended that the proposed development of a 1 ha solar array and associated transmission infrastructure; as described in Sections 3.2, and the listed activity as presented in Section 3.3; be granted environmental authorisation. The conditions of authorisation need to include all the mitigation measures listed in Sections 10.3 and 10.4 which need to be strictly adhered to within the context of the compliance monitoring recommendations in Section 8.3, as well as adherence to the stand-alone EMPr and those included as Annex C.

14 CONCLUSION

In conclusion it may be stated that the development proposal assessed in this report will have an overall positive impact on the management of the LGR as it progressively works to improve its resilience and sustainability performance.

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15 REFERENCES

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- Kovacs Z. (1988). Regional Maximum Flood Peaks in Southern Africa ; Technical Report TR 137; Department of Water Affairs; December 1988.
- Londolozzi Game Reserve (LGR) (2019). Londolozzi Management Plan for 2019 – 2029. Unpublished document compiled by Messrs Kevan Zunckel, Chris Goodman and Rob Crankshaw.
- Mucina, Ladislav & Rutherford, M.C. (2006). The vegetation of South Africa, Lesotho and Swaziland. SANBI, Pretoria, South Africa.
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- Sabi Sands Wildtuin (SSW). (2019). Sabi Sand Wildtuin Protected Area | Protected Area Management Plan, 2019 – 2029. Unpublished document compiled by Mr Iain Olivier, Dr Mike Peel and Mr Edwin Pierce.
- South African National Biodiversity Institute (SANBI). (2019). National Biodiversity Assessment 2018: The status of South Africa's ecosystems and biodiversity. Synthesis Report. South African National Biodiversity Institute, an entity of the Department of Environment, Forestry and Fisheries, Pretoria. pp. 1–214.

**ANNEX A: FULL CURRICULUM VITAE OF KEVAN ZUNCKEL:
ENVIRONMENTAL ASSESMENT PRACTITIONER**

<p style="font-size: 1.2em;">Curriculum Vitae Kevan Zunckel</p>

PERSONAL DETAILS

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

Age: 62
Date of birth: 29th June 1961
ID number: 6106295044084
Nationality: South African
Marital Status: Married on the 19th April 2003
Children: Tamaryn (2 February 1987)
 Jessica Grace (13 April 2005)
 Hannah Kathleen (4 February 2008)
Health: Excellent

EDUCATION

Matriculation

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

Other achievements during the matric year were as follows:

- first team rugby
- first team squash
- first team basketball (nominated for Durban and District trials)
- chairman of the schools "Out-door Club" which entailed the organising and leading of regular hiking trips to the Kwa Zulu-Natal Drakensberg

Under Graduate (1981 -1984)

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

Post Graduates (1988 - April 1990)

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

RESUME OF WORKING EXPERIENCE

May 2010 to current

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

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EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) - Botswana	Lisa Blanken Cell: +267 72 817 577 Email: lisa.blanken@giz.de	Participate as a member of a consulting team with the determination of the resource economic value of SADC TFCA's.	Oct 2021 – on-going
UNDP Country Office Cape Verde	Goetz Schroth Email: goetz.schroth@undp.org	Compile a Project Information Form for submission to the Global Environment Facility for funding to support the revision and upgrading of biodiversity conservation governance for Cape Verde.	July – Nov 2021
UNDP Country Office Botswana	Chimbidzani Bratonozić Cell: +267 74217124 Email: chimbidzani.bratonozić@undp.org	Provide assistance as an external expert to the Environment and Climate Change portfolio of the Botswana Country Office of the UNDP in the process of developing the Country Programme Document for the period of 2022 – 2026.	Feb – June 2021
Mkambati Matters (Pty) Ltd.	Keith Stannard Cell: +27 82 7880086 Email: keith@lodgelogistics.com	Fulfil the role of an independent Environmental Compliance Officer to monitor compliance with the conditions of establishment as detailed in the environmental authorisation and report to the relevant authorities on a monthly basis.	July 2020 – on-going
South African	Lysta Stander	Undertake the environmental impact assessment and	August 2020

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TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Experiences Trading (PTY) Ltd	Cell: 0716888201 Email: lysta@experiences.co.za	facilitate the process of applying for environmental authorisation for the operation of two mobile seasonal tented camps in the Kruger National Park.	– on-going
Botswana Ministry of Environment, Natural Resources and Tourism (MENT) with funding support from the UNDP.	Chimbidzani Bratonozić Tel.: +267 74 217 124 Email: chimbidzani.bratonozić@undp.org	Provide assistance to MENT and facilitate the process of their Annual Work Planning within the context of the recent political changes in the country, i.e. their desire to shift from a middle-income to a higher income economy, as well as the changes in approach to dealing with wildlife management (the reintroduction of hunting and the management of elephant).	14 Feb 2020 – May 2020
African Wildlife Foundation	Fiesta Warinwa Tel.: +254 711 063260 Email: fwarinwa@awf.org	Support the Ethiopian Wildlife Conservation Authority in the completion of the General Management Plan for the Simien Mountains National Park World Heritage Site.	Dec 2019 – October 2020
UNDP Lesotho	Lebone Molahlehi Tel.: +266 5896 3956 Email: lebone.molahlehi@undp.org	As the Chief Technical Advisor provide strategic support to the GEF/UNDP funded project “Reducing Vulnerability to Climate Change in the lowlands of the Senqu River catchment in Lesotho”.	May 2019 – Dec 2021
Kruger Shalati	Keith Stannard	Facilitate and complete the process of applying for	Jan 2018 –

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EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
(Pty) Ltd.	Tel: +27 82788 0086 Email: keith@lodgelogistics.com	environmental authorisation for the Kruger Shalati development at Skukuza in the Kruger National Park and on-going environmental auditing as an independent compliance auditor for project implementation.	on-going
Ministry of Environment and Tourism - Namibia	André Baumgarten Tel: +264-81-5622-212 Email: andre.baumgarten@gopa.de	Facilitate the development of national guidelines for the zoning of Namibian protected areas.	Feb – April 2019
Londolozi Game Reserve	Chris Goodman Tel.: 013 735 5653 Cell: 084 692 2294 Email: chrisgoodman@londolozi.co.za	Provide ecological advice, environmental management and environmental compliance monitoring services for specific projects as and when needed. Thus far involvement has included ECO services for a number of projects, EIA for proposed developments and the facilitation of the development of a management plan for the property.	Oct 2017 – on-going
Singita Sabi Sands (Pty) Ltd.	Marc Alkema Tel.: +27 13 735 9800 Email: Marc.A@singita.com	Provide environmental management services for specific projects as and when needed in the Singita Sabi Sands portion of the Sabi Sands Game Reserve.	Oct 2017 – Sept 2019
Deutsche Gesellschaft für Internationale	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Facilitate the process for and mentor key staff of the Ethiopian Wildlife Conservation Authority in the compilation of General Management Plans for three of	Feb 2018 – July 2019

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EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Zusammenarbeit (GIZ)		their national parks, i.e. Awash, Borenasaint and Chabera Chachura.	
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Vincent Frémondrière Tel.: + 251 (0) 967 898 614 Cell: +33 6 13121510 Email: vincent.fremondriere@giz.de	Compile and present a course on an integrated approach to the planning and management of protected areas to relevant staff of the Ethiopian Wildlife Conservation Authority in Addis Ababa, Ethiopia.	Nov 2017
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Vincent Frémondrière Tel.: + 251 (0) 967 898 614 Cell: +33 6 13121510 Email: vincent.fremondriere@giz.de	Provide protected area management expertise to the process of assessing the organisational structure and strengthening potential for the Ethiopian Wildlife Conservation Authority, working in collaboration with a senior human resource management specialist.	Aug – Sept 2017
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Martin Leineweber Tel.: +267 –723 004 13 Email: martin.leineweber@giz.de	Provide a summarised version of the SADC TFCA Guidelines inclusive of a flow diagram reflecting the guideline recommendations.	July – Sept 2017
UNDP Small Grants Programme	Anele Moyo Tel.: 012 354 8166 Cell: 079 879 7314	Facilitate a process of intense stakeholder consultation and compile a COMPACT Site Strategy for the Maloti Drakensberg Park World Heritage Site on the	June – Sept 2017

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EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
	Email: anele.moyo@undp.org	foundation of a scoping exercise, a baseline assessment, and conceptual model and institutional modalities.	
UNDP and South African Department of Environmental Affairs	Mandy Cadman Tel.: 041 379 4221 Cell: 084 464 2559 Email: mandycadman@telkomsa.net	Facilitate a process of engagement with national and provincial conservation agencies to secure their inputs into the development of a National Biodiversity Framework for South Africa on the basis of the National Biodiversity Strategy and Action Plan.	Feb – June 2017
Environmental Rural Solutions	Nicky McLeod Tel.: 039 737 4849 Cell: 082 782 6067 Email: nicky@enviros.co.za	Facilitate a stakeholder engagement process aimed at the building of capacity to undertake an ecosystem services review and comparative analysis of scenarios related to options for the management of the Umzimvubu River catchment.	Feb – June 2017
Graham Muller and Associates	Graham Muller Tel: +27 31 206 1249 Cell: +27 83 457 1150 Email: grahammuller.co.za@gmail.com	Undertake and coordinate the environmental screening as part of a feasibility study for a proposed cableway development adjacent to the uKhahlamba Drakensberg Park World Heritage Site in the KwaZulu Natal Drakensberg.	Sept 2016 – Jan 2017.
IUCN Eastern and Southern African Regional Office	Leo Niskanen Tel.: +254 (20) 249 3561 /65 Cell: +254 (738) 420 766	Investigate and compile a development plan for the establishment of a transboundary hiking trail in the Afar Region of Ethiopia and Djibouti.	May – Aug 2016

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TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com Email: Leo.Niskanen@iucn.org	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Eko Horizont	Ms Maja Vasilijević Tel: +385 (91) 3010 194 Email: maja.vasilijevic1@gmail.com	Working in collaboration with fellow transboundary conservation specialists, develop training material based on the latest IUCN WCPA Best Practice Guideline on Transboundary Conservation (Vasilijević et al, 2015) and present this at the international workshop on Transboundary Conservation “Hands Across Borders” in the Glacier National Park in September 2016.	July 2015 – Sept 2016
IUCN ESARO	Mr Leo Niskanen Tel: +254 (738) 420 7660750 Email: Leo.Niskanen@iucn.org	Compile a Joint Management Plan for the Lower Awash – Lake Abbé Transboundary Conservation Landscape in collaboration with key stakeholders in Ethiopia and Djibouti.	May – Aug 2016
University of South Africa (Varsity College – Pietermaritzburg)	Ms Kirsten Forbes Tel: +2733-386 2376 Email: kforbes@varsitycollege.co.za	Prepare and deliver lectures on Environmental Education to 2 nd year UNISA BA students.	Feb – April 2016
IUCN South Africa	Ms Christine Mentzel Tel: +27 74 452 0750 Email: Christine.Mentzel@iucn.org	Review the current situation with regards to the monitoring and evaluation of SADC TFCAs and design a project and road map for the development of a M&E framework.	Feb – March 2016

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TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
University of KwaZulu Natal: Centre for Water Resources Research	Prof Graham Jewitt Tel: +2733-2605678 Cell: +2784 717 0766 Email: jewittg@ukzn.ac.za	Contributions to the Green Fund project: Investing in Ecological Infrastructure to Enhance Water Security in the uMngeni River Catchment. Jewitt, G., Zunckel, K., Dini, J., Hughes, C., de Winnaar, G., Mander, M., Hay, D., Pringle, C., McCosh, J., and Bredin, I. (eds.), 2015, 'Investing in ecological infrastructure to enhance water security in the uMngeni River catchment, Green Economy Research Report No. 1, Green Fund, Development Bank of Southern Africa, Midrand.	July 2014 – November 2015
Isikhungusethu Environmental Services (Pty) Ltd.	Mr Roger Davis Tel: +2782 775 8834 Email: roger@isik.co.za	Undertake a comparative analysis of community livelihood strategies using an ecosystem services review approach as a means to equip stakeholders to assess the potential impact of the proposed Fuleni Coal Mine and to engage more pro-actively with the impact assessment process.	Sept – November 2015
IUCN World Commission for Protected Areas: Transboundary Conservation Specialist Group	Ms Maja Vasilijevic maja.vasilijevic1@gmail.com +385 (91) 950 9970	Revise and update the IUCN Best Practice Guideline on Transboundary Conservation. Vasilijevic, M., Zunckel, K., McKinney, M., Erg, B., Schoon, M., Rosen Michel, T. (2015). Transboundary Conservation: A systematic and integrated approach. Best Practice Protected Area Guidelines Series No. 23, Gland, Switzerland: IUCN. xii +	Aug 2012 – May 2015

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EMPLOYER	CONTACT PERSON & CONTACT DETAILS	PROJECT DESCRIPTION	DURATION AND DATE COMPLETED
TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas. 107 pp.	March 2022 – on-going
SADC Directorate for Food, Agriculture and Natural Resources (FANR)	Dr Bartolomeu Soto bsoto@tvcabo.co.mz	Compile guidelines for the establishment and development of SADC TFCAs in collaboration with the SADC TFCA Network.	Dec 2013 – Sept 2014
Institute of Natural Resources (INR)	Fonda Lewis Tel: +2733 346 0796 Cell: +2782 803 8989 Email: flewis@inr.org.za	Support the selection and design of economic instruments to incentivise improved natural resources management in target areas in the uMzimvubu and uMngeni River catchments.	Feb 2014 – May 2014
Wildlands Conservation Trust	Kevin McCann Tel: +2733 343 6380 Cell: +2783 447 0657 Email: KevinM@wildlands.co.za	The Building of Institutional Capacity for the AmaNgwane and AmaZizi Communities for the Declaration and Management of new Protected Areas	Sept 2014 – July 2015
Institute of Natural Resources (INR)	Fonda Lewis Tel: +2733 346 0796 Cell: +2782 803 8989 Email: flewis@inr.org.za	Support the INR project team in the identification and assessment of economic instruments that could create meaningful incentives for improved natural resource management in the South African case study, i.e. the upper uThukela valley.	July 2013 – May 2014
Ezemvelo KZN	Mr Lehlohonolo Joe Phadima	EKZNW Climate Change Response Strategy on the four	Feb-2013 -

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TRAFFIC International hosted by IUCN, International Union for Conservation of Nature and Natural Resources	Katrina Mole Cell: 0760316182 Email: katrina.mole@traffic.org	Undertake the Biodiversity Management Plan write up for <i>Pelargonium sidoides</i> in close collaboration with relevant stakeholders.	Nov 2022 – July 2023
International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Wildlife	Email: phadimal@kznwildlife.com Cell: +2782 727 8761	biomes in KZN.	Apr-2013
Emross Consulting (Pty) Ltd.	Mr Andrew Rossaak Email: andrew@emross.co.za Cell: +2782 3399 627	Design of the UNDP project: Improving Management Effectiveness of the South African Protected Area Network	Oct – Dec 2013
South African National Biodiversity Institute (SANBI)	Ms Kristal Maze Tel: +2712 843 5260 Cell: +2782 890 0188 Email: k.maze@sanbi.org.za	Coordination of Market Supply Chain for Payment for Ecosystem Services in the Upper uThukela, Umzimvubu and uMngeni Catchments for the SANBI Grasslands Programme.	May 2011 – August 2013
KZN Dept. Economic Development and Tourism	Mr Roger Davis Email: roger@isik.co.za +2782 775 8834	Ecosystem Goods and Services Specialist for the KZN Spatial Economic Development Strategy.	April 2011 - April 2012
KZN Biodiversity Stewardship Programme Coordinator Ezemvelo KZN Wildlife	Mr. Kevin McCann Tel: +2733 343 6380 E-mail: KevinM@wildlands.co.za	Facilitation of the KZN Biodiversity Stewardship Agreement process for the Upper uThukela (AmaNgwane and AmaZizi) Wilderness Areas, inclusive of a biodiversity assessment and the compilation of protected area management plans.	Sept 2010 – May 2011
David Bristow,	David Bristow	Author of assessment criteria and sustainability	Dec-10 –

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International Union for the Conservation of Nature – Eastern and Southern African Regional Office	Charles Karangwa Cell: +250 788 309 024 Email: Charles.KARANGWA@iucn.org	Coordinate the development of a grant application for the Biodiverse Landscape Fund working with the IUCN ESARO as the Lead Delivery Partner in a consortium with TRAFFIC and CIFOR/ICRAF.	12 Sept – 7 Oct 2022
Environmental Rural Solutions	Nicky Macleod Cell: 082 782 6067 Email: nicky@enviros.co.za	Contribute as a member of a team to a Water Research Commission project aimed at interrogating the work of the Umzimvubu Catchment Partnership Programme in terms of an NGO approach to applying catchment management and restoration strategies and projects, with a specific focus on understanding reliance on the ecosystem services offered by a well-managed catchment.	August 2022 – on-going
USAID Resilient Water Programme	Steve Collins Cell: +27 82 808 6255 Email: scollins@resilientwaters.com	The Greater Limpopo Transfrontier Conservation Area (GLTFCA) is divided into nine nodes for which Conservation and Development Frameworks (CDF) are required as mechanisms to deliver on the broader Livelihoods Strategy. This project is aimed at developing the first of these CDFs for the Pafuri/Sengwe Node of the GLTFCA.	April 2022 – on-going
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kasahun Abera Tel.: +251 (0) 913 028435 Email: kassahun.abera@giz.de	Train, mentor and provide quality control for the development of General Management Plans for six protected areas in Ethiopia, i.e. three National Parks and three Community Conservation Areas.	May 2022 – on-going
IUCN Green List Programme	Daniel Marnewick Cell: +27 82 772 4432 Email: dmarnewick@gmail.com	Serve as a member of the Expert Assessment group for the Green List (EAGL) for Namibia to assess the legibility of protected areas applying to be included on the IUCN Green List of protected areas.	March 2022 – on-going
Green Safari Africa Project	Email: eardstapper@gmail.com	assessor of ±28 Lodges in 4 African countries for the book <i>Africa's Finest: The Most Responsible, Sustainable Safari Destinations in Africa</i> , showcasing the top 50+ sustainable safari destinations in sub-Saharan Africa in 14 countries and 30 "other green places to visit" finalists.	June 2012
Ezemvelo KZN Wildlife	Mr Oscar Mthimkhulu Cell: +2782 457 7174 Email: mthimkho@kznwildlife.com	Economic assessment of the natural capital of the buffer zone of the uKhahlamba Drakensberg Park World Heritage Site and development of economic incentive options for residents to participate in the establishment and maintenance of the buffer	Sep 2009 – April 2010
South African National Biodiversity Institute	Prof John Donaldson +2783 290 1170 Email: J.Donaldson@sanbi.org.za	Stakeholder engagement process and compilation of the Biodiversity Management Plan for the Albany Cycad (<i>Encephalartos latifrons</i>)	Jan 2009 – July 2009
South African National Parks	Dr Michael Knight +2783 640 4918 Email: mknight@nmmu.ac.za	Feasibility study for the establishment of a high altitude grassland conservation and development area in the Eastern Cape Drakensberg	Dec 2009 – May 2010

April 2008 to March 2010

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

September 2002 to March 2008

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

April 2002 to August 2002

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

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

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

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

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

January 1996 to March 2002

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

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

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

I became involved in the process of establishing a Trans-Frontier Park between South Africa, Mozambique and Zimbabwe, the Greater Limpopo Transfrontier Park. At a workshop between the three countries I compiled and presented a power point presentation entitled "A framework for the joint management plan for the Gaza-

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Kruger-Gonerazhou Trans-Frontier Park” (the name by which it was previously known). This was accepted and was used to guide the compilation of the joint management plan. I also reviewed the plan as mentioned above.

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

November 1994 to January 1996

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

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

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

The reason why this period seems to have taken almost two years was due to political complications. The direction taken for the new agency was one of a parastatal nature, and while this was originally supported by the politicians, it had to go through a long period of re-evaluation just when everything was in place for implementation, i.e. March 1995. From then until September 1995 all that had been achieved was scrutinised very carefully, including a 2-month intensive commission of enquiry.

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

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

February 1991 to November 1994

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

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

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

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

August 1989 to January 1991

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

January 1985 to July 1989

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

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

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

NATIONAL SERVICE

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

REFERENCES

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

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AFFILIATIONS

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

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

IUCN World Commission on Protected Areas – member.

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

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

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

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

COMPUTER SKILLS

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

LANGUAGE PROFICIENCY

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

CONFIRMATION OF AUTHENTICITY

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



Kevan Zunckel

Zunckel Ecological & Environmental Services

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

ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS

1. SCOPE

The scope of this Environmental Management Plan (EMP) is to set a protocol for addressing environmental issues associated with the construction and renovation of buildings, to ensure that appropriate controls and checks are implemented to minimise potential environmental damage and to mitigate the impacts that may occur during the construction, renovation and development of buildings.

2. AGREEMENT

It is important to note that the EMP is to be read as a contract between the Contractor and Londolozzi. It is therefore crucial that the Contractor is supplied with a copy of the EMP (or provided access to this through a web link or by other means) and it is made clear that failure to adhere to its requirements may lead to penalties levied against the Contractor.

It is also noted that any damage caused by the Contractor to areas outside the construction site, is to be compensated for, repaired or replaced at the Contractor's expense, to the satisfaction of the Londolozzi Management in accordance with the Contractors penalty schedule as listed in Appendix 2.

The Landcare Manager may institute contractual measurements to ensure that Contractors adhere to the environmental obligations agreed upon. Penalties for non-compliance may be enforced and Construction staff must adhere to any management plans, policies, codes of conduct and other requirements of the Sabi Sands Game Reserve. These documents will be made available to the contractor.

The Contractor will be required to sign each page of this EMP as an acceptance of the conditions stipulated.

Londolozzi looks to maintaining a fair, ethical and transparent working environment. Disagreements and grievance structures are in place and should any disagreements or issues arise, these can be managed through the existing company processes. It is preferable to all parties that a reasonable attempt is made to resolve issues through open discussion, and if necessary, with a neutral party present.

3. RESPONSIBLE PERSON

The Landcare Manager, acting in the capacity as Londolozzi's Environmental Officer (here after referred to as Landcare Manager), is appointed by Company Board of Directors to ensure full compliance with the requirements of this Environmental Management Plan (EMP). The Landcare Manager should be familiar with the contents of this document and requirements of Londolozzi and the Sabi Sands Game Reserve.

The primary role of the Environmental Control Officer is to act as quality controller regarding all environmental concerns. In this respect, the Landcare Manager is to conduct periodic site

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inspections, attend regular site meetings, pre-empt problems and suggest mitigation and be available to advise on incidental issues that arise.

The Landcare Manager will keep a written record in the form of compliance reports during the construction phase to monitor compliance and general progress. These compliance reports must be kept on file for possible future inspection.

The Landcare Manager may at any time institute action against a contractor due to non-compliance with the EMP.

The Landcare Manager will be responsible for the training of Contractors in terms of conveying the contents of this EMP and associated policy and Codes of Conduct to them through an induction / training session.

4. DEFINITIONS

Pre-construction: Involves all facets for the preparation of the site for construction.

Construction: For the purpose of this document, construction is defined as the physical action of constructing any structures, temporary as well as permanent. This activity should be checked prior to ensure it complies with all necessary legislation and EIA regulations.

Post-construction/rehabilitation: This phase includes the restoration of the surrounding environment that was impacted upon due to the construction process to its original state.

Decommissioning: The decommissioning of a building will occur when the use of the said structure is no longer required or when it has become non-viable in terms of maintenance to continue its upkeep. This phase is not anticipated, although it is acknowledged as a potential possibility. An EMP for this task specifically will have to be compiled.

This activity should be checked prior to ensure it complies with all necessary legislation and EIA regulations.

Incident: An event resulting in temporary or permanent cumulative or immediate adverse effects on the environment, e.g. an oil or chemical spillage, or release of refrigerant gas. Typically, the spill of more than 1 litre of petrol or diesel or oil or paint would constitute an incident

Natural vegetation: All existing vegetation species, indigenous or otherwise, of trees, shrubs, ground cover, grasses and all other plants found growing on the site.

Rehabilitation: Making the land useful again after a disturbance. It involves the recovery of natural ecosystem functions and processes in a degraded habitat. Rehabilitation does not necessarily re-

The SSW (draft) Management Plan Building Policy :

- *Buildings must blend in with the local landscape. They should be against a natural backdrop and exterior colours should be natural and earthy to blend with the site;*
- *Buildings must not be higher than the surrounding tree-line;*
- *The structures must be planned around large trees and must minimize the need for the removal of trees or large boulders;*
- *Light and sound pollution must be minimized in the location, design, structure and management of all buildings and infrastructure;*
- *New infrastructure must not be located where it may have a potentially negative effect on important existing infrastructure, or on the possible future tourism experience of an area;*
- *Emphasis must be placed on water and energy saving devices and processes.*

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establish the pre-disturbance condition, but does involve establishing geological and hydrologically stable landscapes that support the natural ecosystem mosaic.

Topsoil: The upper soil profile irrespective of the fertility appearance, structure, agriculture potential, fertility and composition of the soil, usually containing organic material and which is colour specific.

Protected Tree/ plant: A tree or plant which is listed as a protected species in terms of the National Forest Act or the Mpumalanga Nature Conservation Act. Both these lists are attached in Appendix 3.

5. INCIDENT REGISTERS AND REPORTING

Accidents, resulting in an incident will happen from time to time. The reporting process seeks to ensure that these are addressed and that environmental damage is minimised and that practical measures are put in place to prevent recurrence where appropriate. The purpose of the reporting is not to apportion blame, however this does not exclude the possibility that action will be taken if a failure to follow the environmental management plan, specific instructions or negligence is shown.

A site book will be kept on site at all times and completed/updated by the Contractor regularly. All incidents, instructions and agreements must be recorded in the site book. The site book must be a copy type book, available to Londolozi management for inspections. All incidents must be reported to the Landcare Manager, and the responsible Contractor will sign the logging of the incident, to ensure that the information contained in the site book is correct. The site book must contain the date, time and place of the incident that took place. Remedial measure(s) taken must also be recorded in the logbook.

Refer to Appendix 1, for an example of the information and format for incident recording.

6. CONTROLS DURING PRE-CONSTRUCTION AND CONSTRUCTION

6.1 VEHICLE ACCESS

Vehicle access to Londolozi will be through Newington Gate only and via the existing main access road. No new roads or short-cuts are to be constructed by the Contractor. Access to the footprint of the development location will be via existing roads and through the Londolozi access control boom gate. No new access is to be created without prior authorisation from the Londolozi Management (in writing) and Sabi Sands Game Reserve (if necessary).

The access road should be closely monitored for signs of potential degradation during the course of the project, this particularly due to the movement of heavy machinery. The Landcare Manager will advise on appropriate measures to mitigate any road degradation should it be required.

6.2 PROTECTION OF FAUNA AND FLORA

Londolozi has a responsibility to comply with the National Environmental Management Act (NEMA). The Londolozi properties are also declared protected in terms of the National Environmental Management Protected Areas Act (NEMPAA) and there is a SSW management plan in the process of formal approval. Contractors have no right to damage or destroy fauna and flora without written approval from the Landcare Manager. During site layout, trees that are authorised for removal will

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be identified and tagged and registered by the Land Care Manager. Only these trees may be removed. Any trees that are protected species, such as *Sclerocarya birrea*, *Combretum hereoense*, *Spirostachys africana* and *Diospiros mespilliformes*, may not be moved or damaged unless this is the only option available. In these cases, efforts will be made to transplant the tree following the granting of the prescribed permits.

If wood from a protected species, such as Lead Wood, is to be used in construction, permits to possess said wood must be kept on file. If wood from a protected species is purchased, this must come with a permit for transport and possession. If dead wood is collected, permits must be obtained prior to such collection.

In order to limit damage to the environment during construction, the site layout phase will also identify and peg/demarcate the stockpile sites.

No foreign materials may be nailed or attached to any trees and all 'no-go' areas are to be demarcated through the use of colour coded pegs.

No firewood or any other plant material or animal may be removed from the site.

No soil or overburden or naturally occurring rocks may be removed from the site.

Care should be taken during construction not to cause siltation or any form of pollutants to enter the water courses.

The footprint to be impacted must be scrutinised for the presence of any fauna (burrowing animals such as baboon spiders, scorpions etc.) and necessary relocation action taken in the event of finding any. No footprint may be worked until such time that the Landcare Manager has completed the footprint investigation.

Open trenches must be marked and if left overnight must have escape routes available for animals – such as a sloped end to natural ground level, or a branch 'ladder' placed in the trench.

Debris and litter on site must be removed daily, particularly plastics, rope, string and wire, which can all form animal traps, or entangle on an animal, compromising its survivability.

All toxins, solvents and harmful substances must be removed from site or stored in a locked vermin proof container or room.

Contractors should clearly understand that they are working within a nature reserve. Contravention of any conservation and environmental legislation may result in prosecution. The Contractor is responsible for any illegal action by his/her staff, e.g. illegal hunting, setting of snares, fishing etc.

The Contractor will be held liable for the replacement of any plant or feature under the protection of these specifications that is removed or damaged by the Contractor's negligence or mismanagement.

The Landcare Manager shall monitor that there is no introduction of alien invasive species to the construction site. Should any such species be identified, immediate complete physical removal and any additional appropriate control measures are to be implemented under the guidance of the Landcare Manager.

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6.3 ESTABLISHMENT OF CONSTRUCTION SITE

6.3.1 Inside of camp:

The location of storage areas etc. will be indicated by the Landcare Manager. No drainage lines may be impacted upon by stored material. Where building materials are stored on the construction site, these must be neatly stacked and kept tidy. It is necessary for the Contractors to travel to and from the construction site on a daily basis.

The site boundaries will be laid out by the Landcare Manager with coloured pegs. This boundary may not be altered without Landcare Manager approval. All activities must be contained within the demarcated area and are the responsibility of the contractor. The demarcations must remain in place until rehabilitation phase has been completed.

6.3.2 Outside of camp:

There is to be no storage of construction materials outside of camp. Should storage be required for an out-of-camp construction job, this will be allocated in camp in consultation with the Landcare Manager.

Where building materials are stored on the construction site, these must constitute a maximum of one days supplies, except for stockpiles of sand and stone. Building materials must be neatly stacked on as small a footprint as possible and kept tidy.

All Contractors are to comply with the terms as stipulated in this document It is necessary for the Contractors to travel to and from the construction site on a daily basis.

No contractor on site accommodation is available at Londolozi, however, by arrangement, it may be possible for the contractor to erect tents on a site identified for such and with management agreement.

6.4. ABLUTION FACILITIES AND WASTE/ REFUSE DISPOSAL

Toilet facilities are not always available at the construction sites. Contractors are encouraged to tap into the existing sewerage pipes and septic tanks wherever possible. However, a temporary ablution facility must be in place. Toilets are to be erected at a ratio of at least 1:15 toilets per persons. The Landcare Manager will monitor the standard of hygiene and maintenance of toilets throughout the duration of the contract. It is the Contractors responsibility to keep these toilets clean and functional. Toilet paper is to be provided by the Contractor. Temporary toilets are to be secured to prevent toppling over.

Contractors are requested to paint all portable toilets a dull military nutria type colour (eg: Polynesia, matt finish) to lessen the visual impact of these temporary facilities in the natural environment. The same applies to any temporary sheds erected for material storage on building sites.

In terms of refuse disposal, the Contractor will ensure that, on a daily basis, all refuse is removed from site and disposed of at the Londolozi waste centre. The use of clear plastic refuse liners in the dustbins is obligatory to facilitate the sorting and removal of waste. These dustbins will be managed

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in accordance with the Londolozi waste management policy and management plan (part 4 of this document). It is essential that no refuse be disposed of amongst the building rubble generated, since this rubble may later be used in other applications. Building rubble and building waste is not catered for in the Londolozi waste stream. Building rubble and any other non-compactable rubble should be safely stored to be transported at a later stage. A skip container for rubble may be placed at the site as determined by the Landcare Manager. All such rubble and building waste must be removed from the site and the reserve unless specifically directed to do otherwise by the Landcare Manager.

6.5. PROVISION OF WATER

Water is currently available from the Londolozi reticulation system. This water is suitable for human consumption.

The Landcare Manager is to train Contractors on correct and safe water usage practices. Water is a precious and limited resource at Londolozi and must be used sparingly.

Washing of vehicles and laundry is prohibited on all construction sites.

Hose pipes must be entire and free of leaks and taps turned off when not in use. Hose pipes should have taps at both ends.

Handwash facilities and drinking water should be available to employees at all times.

6.6. AIR POLLUTION

No significant air pollution is anticipated. Dust suppression may be necessary if work is conducted in camp. This should be discussed with the Landcare Manager.

6.7. NOISE

Within camp, contractors must gain confirmation with regards to work hours, as this is highly dependent on existing guest movements and occupation levels. Site personnel may be required to vacate the site from time to time to a suitable venue, as directed by the Landcare Manager.

Outside of camp, management may allow extended work hours. Any work hour schedules should therefore be in agreement with management and obtained in writing.

Noise pollution will be monitored and should the need arise, the Landcare Manager may request the contractors to use manual equipment or to fit sound deadening apparatus to their equipment e.g. silencers, soundproof boxes etc. The Landcare Manager will monitor noise levels and if deemed to be excessive will request for the contractors to limit use to specified times.

Noise levels shall adhere to SABS 0103 specifications and no hooters or sirens may be used on site except where required in terms of SABS standards or in emergencies.

The use of generators may only be done with the prior permission (in writing) from Londolozi Management.

Unnecessary noise will not be tolerated. Contractors will not be permitted to shout on site. The use of megaphones is prohibited. Radios and / or any other music or sound systems are prohibited.

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6.8. VEHICLE AND EQUIPMENT FUELLING AND MAINTENANCE

All vehicle refuelling and maintenance is to occur in areas specifically maintained for these activities e.g. the workshop. The servicing and repair of equipment is to take place in the workshop or off site in areas specifically designed and designated for this.

In the event of an on-site emergency repair, the contractor must ensure that all work is conducted over an impervious layer preventing spillage of oils and fuels into the environment. Sufficient absorbent materials and spill kits must be available to assist with potential clean up requirements.

6.9. SOIL CONTAMINATION AND RESPONSE

Should any soil contamination occur during construction, such contamination is to be immediately reported to the Landcare Manager. The soil shall be removed and stored in an area determined by the Landcare Manager and shall be labelled as to the form of contamination to prevent its future use. After consultation with the Manager, the contaminated soil must be cleaned or disposed of in accordance with legislation. Minor (less than 50 litres) soil contamination by hydrocarbons (fuel) may be addressed with a bioremediation solution. Bioremediation is the application of biological microbes for the clean-up of hazardous oil spills resulting in a safe, efficient and cost-effective solution. Bioremediation uses microbes, enzymes, oxygen and other nutrients to chemically transform oil into carbon dioxide and water.

6.10. CEMENT

Cement mixing is to take place on an impermeable layer. Cement mixing areas must not be in the vicinity of drainage-lines or water bodies as cement is toxic to aquatic species. Cement wash must be prevented from entering any drainage lines.

It is suggested that cement working equipment, at the end of a working day, is washed in a drum of water. Allowing the water to settle overnight will make the upper layers of water available for further cement mixing and wetting. The remaining sludge can be allowed to dry and disposed of at the end of the project as building rubble.

Any excess cement and concrete mixes shall be retained on the construction site until completion of the construction when all spoil material and rubble will be removed and the rehabilitation process commences.

All used cement bags are immediately to be disposed of into the solid waste system. These bags are not to be used for other on site applications. On site burning of cement bags is not permitted unless in a controlled manner and with the Landcare Managers permission. The normal process will be for waste cement bags to enter the general waste system.

6.11. PROVISION OF STORAGE FACILITIES - DANGEROUS AND TOXIC MATERIALS

All toxic materials such as paints, fuel, or oil shall be stored in well ventilated areas that can be locked.

It is essential for safety reasons that all toxic materials are handled in an appropriate manner as prescribed by the labels on the products used.

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Drip trays are to be placed underneath paints and toxic materials in storage to contain accidental spills.

Toxic substance volumes must be kept at less than a total of 100 litres on site at any one time.

Should any spillage or pollution of any toxic materials occur, the Landcare Manager should immediately be contacted and mitigation measures taken. The Contractor will be liable for any clean-up costs, legal costs or fines, which may arise from such an accident.

Washing of tools used for the application of these materials is to be done in washing trays and water stored in drums, adequately labelled as toxic, with closing lids for disposal on recommendation by the Landcare Manager. No cleaning may take place using the environment as a receptor.

Empty containers that contained toxic substances are not to be used for any other application, but are to be returned to supplier, or punctured and discarded (not in the reserve) as recommended by the Landcare Manager and the product label.

6.12. PROVISION OF STORAGE FOR CONSTRUCTION MATERIAL

The Contractor will be responsible for the storage of construction material at a site determined in conjunction with the Landcare Manager. Where necessary in the stockpiled areas, the topsoil is to be removed and stored adjacent to the stockpile. No bushes or trees are to be removed for this purpose.

All storage areas are to be indicated with the Landcare Manager.

6.13. TOPSOIL REMOVAL AND STORAGE

The topsoil of all the areas affected by construction (material stockpiles and construction footprint) is to be removed and stored in heaps not higher than 1.5 meters. Periodic watering will be required to maintain the microbial action within the topsoil. Care should be taken to store topsoil in such an area, where it will not be susceptible to soil erosion or contamination from any other materials. Care should be taken to prevent any compaction of the topsoil occurring. In some case it may be necessary to trench the area around the topsoil stockpiles to prevent runoff water from heavy rains eroding these stockpiles.

6.14 BORROW PITS, QUARRIES AND THATCH

The creation of borrow pits and quarries of any size on Londolozi, is not permitted. Material may be obtained from borrow pits on Londolozi with management's permission.

Any imported fill or sand shall be free of weeds, litter and contaminants.

Thatch grass shall be free of contaminants, combed and be free of viable seed as per standard thatching regulations and standards.

6.15 SPOIL MATERIAL

All spoil material shall be disposed of in accordance with legislation. No spoil material will be left on site at completion of the project and the reuse of any material (excess crushed stone, sand etc)

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for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

should be investigated. These spoil materials may be relocated to stockpile areas within Londolozi for later use, by arrangement with the Landcare Manager.

6.16 FIRE PREVENTION

No open fires will be allowed on the construction site or in the veld under any circumstances.

It will be expected by all Contractors to indicate their ability to fight accidental fires, through having fully functional and serviced equipment on site in the event of accidental fires. The Landcare Manager will determine the level of equipment and training required by the Contractors.

6.17 STORM WATER MANAGEMENT

No obstructions of any storm water system will be allowed and the dumping of water used for the cleaning of equipment will also not be permissible, the management of this water has been addressed under point 6.10 and 6.11 above.

Only level areas are to be used for stockpile zones and care is to be taken to prevent the stockpiling of materials in drainage lines. The Landcare Manager will assist in determining these areas.

6.18 GROUNDWATER MANAGEMENT

Caution should always be deployed when working with or in the vicinity of bore holes. No construction site run-off or waste should be allowed within 100m of a borehole.

6.19 WASTE DISPOSAL

All refuse waste will be managed in accordance with Londolozi's waste management policy and management plan.

Building rubble and any other non-compactable rubble should be safely and suitably stored for later removal. Open vehicles transporting rubble should be carefully loaded to prevent material from falling off the load area. No waste may be buried or burned on site.

6.20 TRAFFIC CONTROL

All vehicles used by Contractors and sub-contractors are to be maintained in a safe working condition.

Vehicle operators are to be in possession of valid driver licenses. It is advisable to insure vehicles and operators against claims arising from accidents and third party liability. All vehicles shall undergo regular checks to ensure they are free of oil or other lubricant leaks. The Landcare Manager may at any time prevent sub-standard or dangerous equipment from being used on Londolozi.

Contractors and sub-contractor drivers are to be courteous in all dealings with other road users and shall adhere to all roadway signage and speed limits.

Contractors and sub-contractors are to use the shortest possible route between the place of entry and the construction site at all times. Unauthorised driving through the reserve for purposes other than the building contract is not permitted.

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All the contractor's vehicles must have the contractor's decal clearly visible on both sides.

Contractors vehicles may not be left on a building site over weekends or holiday periods. These vehicles must be removed and parked in an area indicated by the Landcare Manager during these periods.

6.20 LITTERING

No littering by the Contractors or sub-contractors shall be allowed. The Landcare Manager shall monitor the neatness of the work site for any litter.

6.21 COMMUNICATION

It is essential that good communication channels between the Contractor and Landcare Manager be maintained.

6.22 TRENCHING

Trenching must be undertaken with care, considering appropriate drainage, existing water and power services and other buried obstacles.

For significant trees (as indicated by the Landcare Manager), trenching must be 3m away from the stem.

Where possible, trenches should be excavated and backfilled on a progressive basis. Excavations to stand open for no longer than 2 days if at all possible. Excavations should preferably be opened and closed on the same day. If excavations are to be left open over night, they must be clearly marked with a reflecting material and have exit points for fauna so any such can escape and are not trapped.

Ensure that no trench longer than 500m is exposed at any one time.

Programme excavation to take place only once the required materials are on site. This facilitates the immediate laying of services and / or construction of subsurface infrastructure and minimises open trench time.

7. REHABILITATION PHASE

7.1 REHABILITATION OF THE CONSTRUCTION SITE

On completion of construction, the site must be rehabilitated through the removal of all construction facilities introduced, removal of waste and any other feature constructed or established during the use of the site. All areas devoid of vegetation or where spoils and stockpiles have been stored shall be scarified or ripped and the topsoil, previously removed and stockpiled, shall be reintroduced to these areas. In some cases it may be necessary to re-seed and mulch. This, however, will be at the discretion and under the advice of the Landcare Manager.

All natural and appropriate storm water drainage areas and channels must be restored. This may also entail the creation and installation of appropriate erosion control measures. Such measures will be determined by the Landcare Manager and may involve berms, walls or other construction.

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Any concrete from past activity on the site may be required to be broken and removed – as determined by the Landcare Manager.

7.2 FINAL REHABILITATION OF THE SURFACE

On completion of the construction phase, the various surfaces in use by the contractors and sub-contractors shall be finally rehabilitated as described in this document. All infrastructures, equipment, plant and any other items used during the construction period must be removed from site. Waste receptacles, scrap and rubble will be removed entirely from site. No burial or burning of any material whatsoever will be allowed on site.

Final rehabilitation shall commence within 1 week from cessation of construction operations.

8. SITE SAFETY MANAGEMENT PROCEDURES

Disasters are a constant threat when working in conservation areas and especially on construction sites.

In order to avoid accidental fires and to aid firefighting, the Contractors must be instructed in Londolzi fire management procedures by the Landcare Manager.

In case of flooding, Londolzi will notify contractors of flooding potential as soon as this information is received (from, for example, weather forecasts).

The greatest factor regarding disaster management in this instance is the proximity to medical care for injuries on duty or evacuation in the case of serious illness. The Contractor is to have a first aid kit available on site at all times along with at least one person with a basic first aid training and current / valid certificate.

Contractors are expected to abide by National health and safety standards, and as such, hard hats are expected to be worn on site, protective eye wear, dust masks and ear protection made available for tasks that require such and harnesses for any work above 1.8 meters. Scaffolding must be secure and appropriate warning signage placed for dangerous activities. Proper footwear should be worn by all employees.

The contractor must identify the following person(s) to the Landcare Manager for each site:

- A safety representative
- A first aid officer

Contractors must be able to demonstrate that all workers are registered with the Workers Compensation Commission - WCA.

ANNEX D: PHOTOS OF THE PROPOSED FOUNDER'S CAMP REFURBISHMENT³

³ All photographs are the copyright of K Zunckel.

ANNEX E: EVIDENCE OF PUBLIC NOTIFICATION



Figure 9: Site notice put up at Sabi Sands Newington Gate on 2022-04-25.



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for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

10 CLASSIFIEDS

Mpumalanga News | Wednesday April 27, 2022

WHAT YOU DO MAKES A DIFFERENCE, AND YOU HAVE TO DECIDE WHAT KIND OF DIFFERENCE YOU WANT TO MAKE.
- JANE GOODALL

You can't have a good day with a bad attitude, and you can't have a bad day with a good attitude.
- Paul Wellstips.com

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The AIDS Foundation of South Africa (AFSA), an NGO headquartered in Durban, wishes to appoint suitably experienced persons interested in serving on the Approval's Committee for the Ukusekela Small Project and Support Fund (SPSF) which will be overseen by AFSA through a grant it has received from Bread for the World (BFWW). The SPSF exists to support small initiatives, community-based organizations or smaller emerging NGOs to empower communities to act and participate in their own development through actions that are designed, implemented and owned by the communities themselves from which they will directly accrue benefit.

Full Terms of Reference (TOR) are available on the links which outline the eligibility criteria and application forms:
<https://ukusekela.org.za/>
<https://www.aids.org.za/request/call-for-applications-for-independent-members-for-the-spsf-approval-committee-the-ukusekela-small-project-and-support-fund-spsf-program-april-2022/>

Applications close: 30 April 2022

The University of Mpumalanga

Tender Notice and Invitation to Tender
Framework agreement for professional services within University of Mpumalanga precincts

University of Mpumalanga invites tenders for professional services over a 3-year term without a guarantee of the quantum of work for the following disciplines:

NIT0117	Framework agreement for environmental compliance monitoring services within the University of Mpumalanga precincts
NIT0118	Framework agreement for audio-visual specialist services specialist services within the University of Mpumalanga precincts

The contracts will be based on the NEC3 Professional Service Contract.

Only tenderers who have suitable experience and suitably qualified personnel in providing similar services to those that are required are eligible to submit tenders.

Documents may be obtained from www.ump.ac.za from **10:00 on Tuesday 19 April 2022**.

Queries relating to the issue of these documents may be addressed using the website query logging facility.

A compulsory on-demand Online Briefing is presented from the website where the documentation is downloaded. This can be accessed on-demand at any time before the tender closes.

The closing time for receipt of on-line tenders is **12:00 on Wednesday 11 May 2022**. Telegraphic, telephonic, telex, facsimile, e-mail, physical and late tenders will not be accepted.

Telegraphic, telephonic, telex, facsimile, e-mail, physical and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued.

Requirements for preparation, uploading, submission, opening and assessment of tenders are stated in the Tender Data.

NOTICE: APPLICATION FOR ENVIRONMENTAL AUTHORISATION

Londolzi Game Reserve (Pty) Ltd, is applying in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014, to the Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs; for environmental authorisation at the Basic Assessment level, to refurbish and expand seven of the existing ten units that make up the Founder's Camp. As some of this work will cross a non-perennial watercourse, authorisation may also be sought in terms of the National Water Act, 1998 (Act No. 36 of 1998), S21 Water Uses.

Founder's Camp is one of the oldest components of the Londolzi tourism complex and requires refurbishment and expansion in order to continue meeting the high standard of the operation.

It is envisaged that the potential negative environmental impacts that will occur as a result of the proposed expansion and refurbishment are either avoidable or will be mitigated through the careful implementation of an environmental management plan, implementation of which will be closely and regularly monitored.

The proposed expansions and upgrades will take place at the Founder's Camp on Sparta Farms 259KU on the Londolzi Game Reserve, which is part of the Sabi Sands Game Reserve and falls within the Bushbuckridge Local Municipality and the Ehlanzeni District Municipality (DC32) in the Mpumalanga Province.

In order to participate in the Basic Assessment process you are invited to register as an Interested and Affected Party by contacting the Environmental Assessment Practitioner as per the details provided below. Please submit your name, contact information and interest in the above mentioned project.

Kevan Zuncel of Zuncel Ecological + Environmental Services:
Address: 7 Annthia Road, Hilton, 3245
Cell: 082-929-4270
Email: kevanzuncel@gmail.com

The University of Mpumalanga

T1.1 Tender Notice and Invitation to Tender
Tender Number: NIT0121
The supply and installation of Chiller Plant, and HVAC Installations for West Campus.

The University of Mpumalanga, Mboembela Campus invites tenders for the supply, installation and commissioning of the West Campus Chiller Plant, and HVAC Installations for West Campus of the University of Mpumalanga.

It is estimated that tenderers should have a CIDB contractor grading designation of **7ME or higher**.

Only tenderers who have suitable experience and suitably qualified personnel in providing similar services to those that are required are eligible to submit tenders.

Documents may be downloaded from the Employer's website www.ump.ac.za from **10:00 on Tuesday 26 April 2022**.

Queries relating to the issue of these documents may be submitted through the form on the tenders website, or addressed in writing to **Mr Lucky Khoza, E-mail: Lucky.Khoza@ump.ac.za**.

A compulsory Online Briefing is presented from the website where the documentation is downloaded. This can be accessed on-demand at any time before the tender closes. It is compulsory for tenderers to view the entire Online Briefing and capture their particulars for submission at the end of the presentation. Tenderers are required to print out this confirmation and include this in their tender submissions.

The closing time for receipt of tenders is **12:00 (noon) on Thursday 26 May 2022**.

Tenders are to be submitted online to the Online Tender Box that is located on the Tender Notice Page where procurement documentation are downloaded. Detailed instructions for online submission are published with the Online Tender Box.

Telegraphic, telephonic, telex, facsimile, e-mail, physical and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

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Figure 10: Mpumalanga News BAR Advertisement, Wednesday, 27 April 2022

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for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

32 | LOWVELDER - CLASSIFIEDS

Thursday April 28, 2022

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R11,300 pm.
Koopkrag
084-599-3641
083-628-3901

0550 TOWNHOUSES / SIMPLEXES / CLUSTERS / DUP

WITRIVIER
Ruim 4 slipk, 2 bad, s/bad, d/motorhuus + 2 afadke. Koopkrag. R11,000 pm +dep.
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083-628-3901

0530 INDUSTRIAL PREMISES

CENTRAL PARK DOWNSIZING?
Factories, Office and Storage from R48
Call 082-449-9102

0530 INDUSTRIAL PREMISES

WHITE RIVER STRILIZIA COMPLEX
3 Bedr, 2.5 bath, R8,200
Ref STR 5
Space for 2 vehicles. Pre-approved pets. Pre-paid elec & excluding water.
Bernice
013-751-3000
082-343-0752

0530 INDUSTRIAL PREMISES

WHITE RIVER KINGSVIEW COMPLEX
1 x 3 bed, 2.5 bath, garage and pre-approved pets, communal pool, R8500.00 ex Water, Pre-paid electricity Ref KV 11
Bernice
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SECOND-HAND SPARES
57 Better Street
Reymart 064-051-8518
Jaco 082-078-8893
No 16 R40 Barberton road
Stefan 074-780-5141

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Warehouse or retail space
Corner of Samora Machel and Petroleum Street
R55/m² excl VAT and W & L
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NOTICE: APPLICATION FOR ENVIRONMENTAL AUTHORISATION

Londolzi Game Reserve (Pty) Ltd, is applying in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014, to the Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs; for environmental authorisation at the Basic Assessment level, to refurbish and expand seven of the existing ten units that make up the Founder's Camp. As some of this work will cross a non-perennial watercourse, authorisation may also be sought in terms of the National Water Act, 1998 (Act No. 36 of 1998), 521 Water Users.

Founder's Camp is one of the oldest components of the Londolzi tourism complex and requires refurbishment and expansion in order to continue meeting the high standard of the operation.

It is envisaged that the potential negative environmental impacts that will occur as a result of the proposed expansion and refurbishment are either avoidable or will be mitigated through the careful implementation of an environmental management plan, implementation of which will be closely and regularly monitored.

The proposed expansions and upgrades will take place at the Founder's Camp on Sparta Farms 258KU on the Londolzi Game Reserve, which is part of the Sabi Sands Game Reserve and falls within the Bushbuckridge Local Municipality and the Ehlanzeni District Municipality (DC32) in the Mpumalanga Province.

In order to participate in the Basic Assessment process you are invited to register as an Interested and Affected Party by contacting the Environmental Assessment Practitioner as per the details provided below. Please submit your name, contact information and interest in the above mentioned project.

Kevan Zuncel of Zuncel Ecological + Environmental Services:

Address: 7 Anntia Road, Hilton, 3245
Cell: 082-929-4270
Email: kevanzuncel@gmail.com

Figure 11: Lowvelder BAR Advertisement, Thursday, 28 April 2022

ANNEX F: BACKGROUND INFORMATION DOCUMENT

DRAFT BASIC ASSESSMENT REPORT
for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

ANNEX G: MINUTES OF PRE-APPLICATION MEETING

From: Kevan Zunckel [mailto:kevanzunckel@gmail.com]

Sent: Monday, April 11, 2022 11:36 AM

To: rluyt@mpg.gov.za

Cc: Chris Goodman (chrisgoodman@londolozico.co.za)

Subject: Notes from pre-application meeting re Londolozzi Founders Camp upgrade

Dear Robyn

Thanks again for making the time to meet with us on the 6th of April 2022 to discuss Londolozzi's intention to apply for authorisation for the upgrade of units 4 – 10 of their Founder's Camp in the Sabi Sands Game Reserve.

To recap, Londolozzi wish to upgrade seven of the ten units that make up their Founder's Camp located on the property Marthly 258KU Portion 1, on the banks of the Sand River. Most of these units are within the 32m buffer from the edge of the Sand River and Unit 4 is immediately adjacent a non-perennial 3rd order tributary. For five out of the seven units the plans are for minor expansions with most of the upgrades taking place on the existing footprints. Expansions will however encroach on untransformed natural vegetation. The plans for Unit 4 are for a substantial expansion of approximately double its current footprint and a slight change in orientation. This expansion will take the unit out over the non-perennial tributary where the plan is to use ribbon blocks to suspend the construction above the drainage line and limit its impact on the hydrology. In total the additional area that will be impacted on by these expansions is just less than 200m².

The activity that is triggered by the proposed expansions and for which authorisation will need to be applied is the following:

Activity 23 of Listing Notice 3 – The expansion of (ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; where such expansion occurs (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse in f. Mpumalanga i. Outside urban areas: (aa) A protected area identified in terms of NEMPAA.

The need for specialist studies will be taken up with the relevant agencies, i.e. flood lines and water use licence – Incomati Usuthu Catchment Management Agency; vegetation assessment – Mpumalanga Tourism and Parks Agency; and Heritage Assessment – South African Heritage Resources Agency. These agencies will be sent a Background Information Document and will be requested to comment on the need for specialist studies or not. Alternatively our own ecological expertise will be used to provide details on the vegetation and water course delineation through the production of a sensitivity map as part of the basic assessment report.

Please would you confirm if you agree that the above captures our discussions accurately or provide any additional thoughts or inputs that we may have missed.

Thanks and kind regards

Kevan

----- Forwarded message -----

From: Robyn Luyt rluyt@mpg.gov.za

Date: Fri, 27 May 2022 at 13:20

Subject: Re: FW: Notes from pre-application meeting re Londolozzi Founders Camp upgrade

To: kevanzunckel@gmail.com

Cc: <karzunckel@gmail.com>

Hi Kevan,

Apologies - I missed this in my inbox, which is currently inundated with bold / unread items.

I agree with your account of our discussions. Just to clarify - SAHRA to confirm requirements for heritage studies. In terms of ecology - your baseline assessment would be acceptable unless MTPA makes specific requirements. Ecology to include assessment of aquatic impacts (remember to complete the specialist declaration form if you are doing the ecological work).

Kind Regards

Robyn

ANNEX H: COMMENT AND RESPONSE REPORT

I&AP	COMMENT	RESPONSE
BACKGROUND INFORMATION DOCUMENT		
Chris Fismer, neighbour at "Dudley" Fismer@fsf.co.za 25 May 2022 1:22 PM	Our view is that Dudley will not be affected by this project, and as such we have no objections against it.	Noted.
DRAFT BASIC ASSESSMENT REPORT		
Xolani Nkosi Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs (MARDLEA) (013) 759 4000 / 072 032 3210 nkosixe@mpg.gov.za 14 June 2022	The Department confirms having received the application form for Environmental Authorisation and Draft Basic Assessment Report for the abovementioned project on 13 June 2022.	Noted with thanks.
	The application has been assigned the reference number 1/3/1/16/1E-386 . Kindly quote this reference number in any future correspondence in respect of the application. The responsible officer is Xolani Nkosi and <u>all correspondence</u> must be directed to: Environmental Impact Management, Ehlanzeni District Office, marked for the attention of the responsible officer. Please note that you must, within 90 days from 13 June 2022, submit to this office a Final Basic Assessment Report – inclusive of specialist reports and an EMPr - which has already been subjected to a public participation process, and was provided to interested and affected parties for a period of 30 days for comments, and which reflects the incorporation of any comments received, including any comments from this office. In this regard you are referred to the requirements of Regulation 40(3) ⁴ .	Will do. 90 day deadline will take us to 11 September 2022.
	Please take note in terms of the provisions of regulation 45 ⁵ , the application will lapse, and this office will deem the application to have lapsed, if the applicant fails to submit the Final Basic Assessment Report within the timeframe specified above.	Noted.
	Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.	Done. Applicant is aware.
Natasha Higgitt SAHRA 1 July 2022	The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit requests that an assessment of the impact to heritage resources be conducted as part of the EA process that complies with section 38(3) of the NHRA as required by	A Letter of Exemption was submitted via SAHRIS on the 2 August, which is discussed in Section 4.2.8 included in full in ANNEX N: LETTER OF EXEMPTION OF HERITAGE IMPACT ASSESSMENT

⁴ Regulation 40(3) Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but must be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority.

⁵ Regulation 45 An application in terms of these Regulations lapses, and a competent authority will deem the application as having lapsed, if the applicant fails to meet any of the time-frames prescribed in terms of these Regulations, unless extension has been granted in terms of regulation 3(7).

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Tel: 021 462 4502 Email: nhiggitt@sahra.org.za	section 38(8) of the NHRA and section 24(4)(iii) of NEMA.	
	The assessment must include an assessment of the impact to archaeological and palaeontological resources. The assessment of archaeological resources must be conducted by a qualified archaeologist and the report comply with the SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports (see www.asapa.co.za or www.aphp.org.za for a list of qualified archaeologists). The Minimum Standards refers to a Letter of Recommendation for Exemption for Further Studies that may be submitted, should the appointed archaeological deem it appropriate.	
	The proposed development is located within an area of zero Palaeontological Sensitivity as per the SAHRIS PalaeoSensitivity map. As such, no further assessment of the impact to palaeontological resources is required.	Noted.
	Any other heritage resources as defined in section 3 of the NHRA that may be impacted, such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.	The 4 original hunting rondavels >200 m east of Founder's Camp were assessed in the Letter of Exemption (Section 4.2.8 included in full in ANNEX N: LETTER OF EXEMPTION OF HERITAGE IMPACT ASSESSMENT) and found to be too far away for the proposed activities to have any impact on them.
	The applicant is advised to extend the EA process in terms of section 19(1)b of the NEMA EIA regulations in order to comply with this comment. A revised BAR with the results of the HIA must be submitted for review.	
Xolani Nkosi Mpumalanga Department of Agriculture, Rural Development, Land and Environmental Affairs (MARDLEA) (013) 759 4000 / 072 032 3210 nkosixe@mpg.gov.za 12 July 2022	The draft Basic Assessment Report which was submitted by you in respect of the expansion and refurbishment of [Founder's Camp on Ptn 1 of the Farms Marthly 258KU, Londoloz Game Reserve] and received by the Department on 13 June 2022 refers. The Department considered the content of the report, and has the following comments:	
	<ol style="list-style-type: none"> The BAR must include a consolidated single layout plan that must be referenced and dated, and must include a legend and a land use table. You are further referred to the following provisions of the EIA Regulations 2014: <ul style="list-style-type: none"> Appendix 1: 3(1)(c) - A BAR must contain the information that is necessary for the competent authority to consider and come to a decision on the application, and <u>must</u> include – a plan which locates the proposed activity or activities applied for as well as associated structures and infrastructure at an appropriate scale. Appendix 4: 1(1)(c) - [The EMPr must include] a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the 	Noted. Please see revised layout.

Comment [K11]: Update once feedback has been received from SAHRA

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I&AP	COMMENT	RESPONSE
	<p>preferred site indicating any areas that should be avoided.</p> <p>In order to comply with these provisions, the layout plan must clearly superimpose the proposed activity and its associated structures and infrastructure on the preferred site. The layout plan must be dated and referenced, and must include all infrastructure applied for.</p>	
	2. MTPA must be consulted and provided with an opportunity to comment on the draft BAR.	MTPA were consulted and sent a copy of the draft BAR. Comments were received, dated 5 August 2022 and responses are recorded in this report.
	3. The final BAR must provide proof of compliance with Regulation 40(3) ⁶ .	Please see Annex E
	4. The final BAR must include an issues and response report, as well as copies of an responses to comments received from all I&APs, including these comments.	Included herein.
	You are reminded of the requirements of Regulation 19(1) ⁷ , and that if such requirement is not met, the application will lapse in terms of the provisions of Regulation 45.	Noted.
	Please draw the applicant's attention to the fact that the activity may not commence prior to an environmental authorisation being granted by the Department.	Done. Applicant is aware.
<p>Ms Natasha Higgitt South African Heritage Resources Agency (SAHRA) Tel: 021 462 4502 Email: nhiggitt@sahra.org.za 1 July 2022</p>	<p>The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit requests that an assessment of the impact to heritage resources be conducted as part of the EA process that complies with section 38(3) of the NHRA as required by section 38(8) of the NHRA and section 24(4)b(iii) of NEMA.</p> <p>The assessment must include an assessment of the impact to archaeological and palaeontological resources. The assessment of archaeological resources must be conducted by a qualified archaeologist and the report comply with the SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports (see www.asapa.co.za or www.aphp.org.za for a list of qualified archaeologists). The Minimum</p>	<p>Annie van Deventer Radford, Freelance Heritage Practitioner at Heritage Matters, submitted a Letter of Exemption of Heritage Impact Assessment which concluded that:</p> <ul style="list-style-type: none"> the project footprint is already disturbed and utilised for Founder's Camp tourism facilities and as such the proposed project will not alter the character of the site; although four buildings older than 60 years are located within the area, the proposed project will not impact of these; and it is highly unlikely that heritage resources will be present in the project footprint. <p>We support the submission of Zunckel Ecological & Environmental Services</p>

⁶ Regulation 40(3) Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but must be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority.

⁷ Regulation 19(1) Where basic assessment must be applied to an application, the applicant must, within 90 days of receipt of the application by the competent authority, submit to the competent authority –
(a) a basic assessment report, inclusive of specialist reports, an EMPr and where applicable a closure plan, which have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority; or
(b) a notification in writing that the basic assessment report, inclusive of specialist reports, an EMPr, and where applicable, a closure plan, will be submitted within 140 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the basic assessment report or EMPr or, where applicable, a closure plan, which changes or information was not contained in the reports or plans consulted on during the initial public participation process contemplated in subregulation (1)(a) and that the revised reports or, EMPr or, where applicable, a closure plan will be subjected to another public participation process of at least 30 days.

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	<p>Standards refers to a Letter of Recommendation for Exemption for Further Studies that may be submitted, should the appointed archaeological deem it appropriate.</p> <p>The proposed development is located within an area of zero Palaeontological Sensitivity as per the SAHRIS PalaeoSensitivity map. As such, no further assessment of the impact to palaeontological resources is required.</p> <p>Any other heritage resources as defined in section 3 of the NHRA that may be impacted, such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.</p> <p>The applicant is advised to extend the EA process in terms of section 19(1)b of the NEMA EIA regulations in order to comply with this comment. A revised BAR with the results of the HIA must be submitted for review.</p>	<p>that in accordance with s38(2) of the NHRA the need for an HIA for the project is exempted and so be considered.</p> <p><u>The deadline for submission of the FBAR is 11 September 2022 and therefore a request for extension is not seen to be necessary as sufficient time is available to accommodate a decision on the request for exemption. If however, the decision declines the request for exemption, a request for extension will be submitted.</u></p>
<p>Lebogang P. Mdluli Ehlanzeni District Municipality lmdluli@ehlanzeni.gov.za 28 July 2022</p>	<p>1. FAUNA AND FLORA.</p> <ul style="list-style-type: none"> Adhere to the provisions of the National Environmental Management: Protected Areas Act, Act 57 of 2003 and all other related legislations in terms of conservation of protected area. Clearing of vegetation must be clearly quantified as to how much vegetation will be cleared during construction phase to ensure provision for conservation corridors to facilitate and maintain ecological function. <p>2. WATER SUPPLY</p> <ul style="list-style-type: none"> The quality of water supply on the premises must comply with the specifications of the South African National Standards 241 for drinking water, with regards to microbiological, chemical and physical quality. <p>3. WASTE MANAGEMENT</p> <ul style="list-style-type: none"> Refuse bins and a designated refuse storage area must be available on the premises for the storage of waste pending removal/ disposal with special reference to the rubble waste that will be generated during the expansion of the rooms. Ensure that general waste is disposed of at an approved landfill site, not 	<p>Agreed. Covered in the EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p> <p>Vegetation to be cleared has been quantified in the dBAR, and construction activities will be limited to these amounts through regular ECO audits.</p> <p>Londolozu regularly tests its potable water, as well as its waste water for compliance.</p> <p>Covered in the EMPr Section 6.4 and 6.19 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>

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	<p>any other site that is not approved.</p> <ul style="list-style-type: none"> Indicate the measures that are in place to contain spillages and prevent storm water contamination. 	
	<p>4. ABLUTION FACILITIES</p> <ul style="list-style-type: none"> Adequate ablution facilities (toilets, hand wash basins, showers) must be provided for the construction team for the duration of the development. Drainage pipes of all ablution facilities must be connected to an approved sewage drainage system. 	<p>Covered in the EMPr Section 6.4 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>5. AIR POLLUTION CONTROL</p> <ul style="list-style-type: none"> Dust control measures must be in place to adequately control dust and prevent nuisance or hazards from occurring. 	<p>Covered in the EMPr Section 6.6 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>6. NOISE POLLUTION CONTROL</p> <ul style="list-style-type: none"> Excessive, disruptive and displeasing noise emanating from any activity on the premises must be controlled to ensure acceptable levels. Construction activities must be carried out during normal working times or as specified and approved by the contractor to minimize noise exposure to the potential receptors. 	<p>Covered in the EMPr Section 6.7 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>7. HEALTH AND SAFETY</p> <ul style="list-style-type: none"> All employees must be provided with adequate Personal Protective Equipment during the construction phase and the actual operation of the site e.g., employees at food premise, waste collectors etc. Safety procedures (fire extinguishers, tobacco control, warning signs, first aid kit, emergency points, policies, incidents plans and etc) must be in place and warning signs clearly displayed. 	<p>Covered in the EMPr Section 8 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>8. BUILDING STRUCTURE</p> <ul style="list-style-type: none"> The building structure of the service station must comply with the requirements of the National Building Regulations and Building Standards Act, Act 103 of 1977. The building plans (layout) of the proposed expansion must be submitted to the relevant authority for approval prior construction. 	<p>Copy and paste error - irrelevant to this application. Londolozi have to inform the SSW and let them know 24 hours in advance of commencement of construction.</p>
	<p>9. VECTOR CONTROL</p> <ul style="list-style-type: none"> A pest control management plan must be in place to minimize the risk of rodent and pest on the premises. 	<p>Already in place. Londolozi has a contractor that visits monthly to control rodents and other pests.</p>
	<p>10. OTHER LOGISTIC</p> <ul style="list-style-type: none"> Proper signage indication construction must be erected. All disturbed areas must be rehabilitated. An emergency preparedness plan must be in place to address any emergency situation such as spillages or incidences that may occur on or 	<p>Agreed. Progressive rehabilitation is referred to in Section 10.3. Mentioned throughout the EMPr.</p>

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	off site.	
<p>Frans N. Krige Mpumalanga Tourism and Parks Agency 013 0650286 frans@mtpa.co.za 5 August 2022</p>	<p>With reference to your Draft BAR document of May 2022, please consider the comments below:</p>	
	<p>The MTPA has no objection to the proposed small scale expansion of the infrastructure layout plan for the existing rooms at Founder’s Camp.</p>	
	<p>A Mpumalanga Biodiversity Sector Plan based terrestrial map is provided, that indicates the site [falls within PA National Parks and Nature Reserves].</p>	<p>All of the provisions of NEMB:PA will be complied with, as specified in the EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>The Biodiversity studies done on the proposed sites are conclusive and the recommendations done by Zunckel Ecological services are supported.</p>	<p>Thanks.</p>
	<p>Care should be taken to avoid the unnecessary removal of conservation important trees such as <i>Sclerocarya birrea</i>, <i>Combretum hereoense</i>, <i>Spirostachys africana</i> and <i>Diospiros mespilliformes</i>.</p>	<p>Included in the EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
	<p>The appointed Londolozi Land Care Manager should keep a register of all the plants to be removed or large trees to be clipped. This is to ensure that the minimum disturbance in the natural riparian zones is done. It is not just the identification, protection and avoidance of Red Data or the plant species of “conservation importance” that are necessary but rather a holistic approach with regards to the intact untransformed habitat for a host of living organisms. Very little is known about the needs of various important pollinators and insects that might be dependent on less conspicuous shrubs to feed on or lay their eggs on. It is also general knowledge that certain small geophytes that might be abundant are crucial in providing nectar and pollen during the dry season when no other plants are in flower. During construction care should be taken not only to preserve the large trees and those that are taller than 1, 8 meters but that sensitivity to all indigenous plants are shown. If any protected plants are to be rescued or to be clipped or removed the necessary, plant removal permits must be obtained from the MTPA.</p>	<p>A register of all plants to be removed or trimmed will be kept, and permits will be obtained from MTPA for any protected plant species, as per EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS. Note, however, that it is our understanding that permits to trim or remove protected tree species need to be obtained from DFFE. All legal requirements in this regards will be fulfilled.</p>
	<p>The MBSP freshwater map provided indicates that the Sand River is an Ecological Support Area (fish support area). Your report indicates the presence of Shortfin barb and Small-scale yellowfish. Care should be taken during construction not to cause siltation or any form of pollutants to enter the water causes.</p>	<p>Included in the EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
<p>The riparian zone together with the river contributes greatly to the sense of place. The sense of place cannot be quantified but the quality of the undisturbed natural places is what distinguishes it.</p>	<p>Sense of place will be preserved during construction and operation phases of the refurbishment and expansion of the camp. Note that Londolozi’s business model is dependent on maintaining this sense of place.</p>	

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	<p>MTPA is furthermore concerned that a flood line demarcation is done in order to ensure that the development meets the sustainable development goals. It is recommended that a 1 meter's clearance in height of the 1:100-year flood line is used for infrastructure placement.</p> <p>All alien invasive plants if present must be removed.</p>	<p>This is a brownfield site. All activities are focussed around existing footprints, and the flood history has shown that only one of the seven units (Unit 4) has been impacted on during the extreme 2012 floods. This has been taken into consideration and the unit will be raised to avoid potential flood damage in the future. If this were a greenfield site, the need for floodline delineation would be relevant.</p> <p>Included in the EMPr Section 6.2 (ANNEX C: LONDOLOZI ENVIRONMENTAL MANAGEMENT PLAN FOR CONSTRUCTION AND RENOVATION OF BUILDINGS.</p>
<p>Mr Iain Olivier Sabi Sand Wildtuin Email: warden@sabisand.co.za 8 August 2022</p>	<p>The email sent to the eco and warden of the SSW on Thursday 04th August at 15h36 indicated that comments will be included in the final submission. In addition to the aforesaid commitment, the Management Authority (MA) sincerely requests that the EAP formally respond in writing to each comment below, describing the actions to be taken, including, but not limited to, any revisions to the draft BAR, before submitting the final report to the Competent Authority.</p>	<p>A copy of the Comment and Response Report will be forwarded, as requested.</p>
	<p>1. Section 3.2 Description of Proposed Developments, pg 11 "70 to 140 m2 to the 186,8 m²ⁿ refers. The maximum potential area of currently undisturbed land to be cleared is 140 + 186,8 m² = 326,8 m². This exceeds the clearance threshold of 300 m² in Listed Activity 12 of Listing Notice 3 on land zoned as conservation or an equivalent zoning or proclamation in terms of NEMPAA. Considering LA12 of LN3 was not included in the application the EAP and applicant should take the necessary measures to ensure that the cumulative clearance for new pathways and room expansion does not reach or exceed 300 m². If it has not already been undertaken, the EAP is further advised to investigate whether phased activity 26, read together with LA12 of LN3 will be triggered if the proposed clearance activities will reach or exceed 300 m² when considered in combination with historical clearance activities dating back to 03rd July 2006.</p>	<p>Noted. LA 12 of LN 3 is included in the fBAR and Application.</p>
	<p>2. Table 5, pg. 23 "None of the proposal activities will trigger the need for a Water Use License" refers. The project area falls within the Department's (DWS) regulated area. As such the proposed expansion and clearance activities constitute a Section 21 (c) and (i) water use if they pose any quantum of risk to the resource quality of the Sand River and/or the non-perennial drainage line that passes unit 4. Note that S21(c) and (i) water uses within the regulated area may (subject to exclusions) be authorised under a General Authorisation (GA) if the Risk Class as determined by the Risk Matrix is Low.</p>	<p>None of the Section 21 activities are relevant to this application and it was therefore not deemed necessary to carry out a risk assessment or to apply for a Water Use License. Also no comment has been received from the Inkomati—Usuthu CMA indicating the requirement for a WUL. All activities associated with this application are existing and fall within existing DWS authorisations.</p>

Comment [K12]: Waiting for confirmation from Chris re pathway widths.

Comment [K13]: Confirm based on feedback from IUCMA.

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I&AP	COMMENT	RESPONSE
	<p>Considering it has been determined that there is no need for a Water Use License (or other water use authorisation), was any investigation undertaken by a suitably qualified SACNASP professional member to substantiate zero perceived risk to the resource quality?</p> <p>Should a GA be required, please note that the applicant/registered water user may only commence with the water use as contemplated in the relevant GA upon written receipt of a registration certificate from the Department.</p>	
	<p>3. Section 6.1 Public Participation “All registered Interested and Affected Parties were provided with a copy of the Draft Basic Assessment Report on 3 June 2022” refers.</p> <p>Kindly revise above statement to reflect the exclusion of the MA of the SSW, and subsequent involvement on 04th August 2022.</p>	Done.
	<p>4. Table 6 relating to the contact database for registered I&APs (pg. 24) refers. Will any protected trees be affected, and if so, was/will the Department of Forestry be consulted?</p>	All mature woody species will be avoided as far as possible, but where trimming or removal of protected species is required, the necessary permits will be applied for from DFFE.
	<p>5. Section 6.2 Authority Participation refers.</p> <p>Kindly revise the date of distribution to the MA of the SSW to reflect the 04th August 2022.</p>	Done
	<p>6. Section 7. Need and Desirability refers.</p> <p>According to Regulation 13(1)(b) and 13(1)(e) read together with Regulation 18 of the amended EIA Regulations, 2014, an EAP must have knowledge of any guidelines that have relevance to the proposed activity and have regard to the need for and desirability of the undertaking of the proposed activity.</p> <p>Was the Guideline on Need and Desirability published by DEA taken into consideration?</p>	Yes.
	<p>7. Section 10.2 Specialist Findings and Recommendations in terms of Potential Impacts “It was deemed unnecessary to commission any specialist studies for this assignment” refers.</p> <p>In terms of regulation 16(1) An application for an environmental authorisation must – (b) when submitted in terms of regulation 19 or 21, be accompanied by – (v) the report generated by the national web-based environmental screening tool, ...</p> <p>The Screening Reports usually include the following, “The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed” and “It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of</p>	The biodiversity protocols related to the outputs of the screening tool allow for site verification and for justification to be provided subject to the assessment by a suitably qualified professional. While the screen tool will highlight high sensitivities for any site with a protected area, the context for this particular application, related to both scale and nature of proposed development, provided adequate substantiation for the call for no specialist studies. Please note that the MTPA have concurred with this in their responses to the DBAR.

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	<p>the site situation.” Although a motivation, including 3 reasons for not including any of the identified specialist assessments was provided in the assessment report (pg. 29), the environmental sensitivities identified in the Screening Report must be verified on site by a suitably qualified person before the identified specialist assessments can be confirmed. Were the sensitivities of the various environmental themes and/or identified specialist assessments verified on site?</p>	

ANNEX I: SUMMARY OF QUANTIFIERS AND QUALIFIERS USED FOR ASSESSMENT PURPOSES

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

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ANNEX J: EVIDENCE OF DISTRIBUTION OF DBAR TO I&APS

From: Karen Zunckel [mailto:karzunckel@gmail.com]
Sent: Monday, 06 June 2022 1:41 PM
To: rluyt@mpg.gov.za
Cc: Kevan Zunckel
Subject: Fwd: FW: Notes from pre-application meeting re Londolozi Founders Camp upgrade

2022-06-06 13:36:42
Waybill Number: LOCK791999
Status: Deposit Pending
Deposit Expiry Date: 2022-06-09 13:36:42
PIN Code: 440326
Drop Off Terminal: BP Quarry
Delivery Contact: Mrs Robyn Luyt

Dear Robyn

I have just booked in the Londolozi Founder's Camp dBAR courier via The Courier Guy. Tracking details are above. Please let us know when you receive it.

Many thanks and kind regards,

Karen

From: Kevan Zunckel <kevanzunckel@gmail.com> Wed, Jun 8, 2022 at 9:46 AM
To: "Lebogang LP. Mdluli" <lmdluli@ehlanzeni.gov.za>, flominah timba <genoskomp@gmail.com>, shabangus@iucma.co.za

Dear Stakeholders

Please find herewith a link
(<https://docs.google.com/document/d/1gZgnfmTqZEMHpIG7wATEOfsGVW2iIjB/edit?usp=sharing&oid=117304076494246915957&rtpof=true&sd=true>) to the Draft Basic Assessment Report for the application for Environmental Authorisation for the refurbishment of the Founder's Camp at the Londolozi Game Reserve in the Sabi Sands Game Reserve. You have also been given access as a commentator to the report on Google Drive and should receive an email in this regards.

If you have any comments, please send them through to me no later than 8 July 2022. Also if you have any questions or require addition, please do not hesitate to contact me.

Kind regards

Kevan

From: Iain Olivier <warden@sabisand.co.za> Thurs, Aug 4, 2022 at 15:53
To: Karen Zunckel <karzunckel@gmail.com>, Julie Olivier <ecologist@sabisand.co.za>
cc: Chris Goodman <chrisgoodman@londolozi.co.za>, Kevan Zunckel <kevanzunckel@gmail.com>, Justin Bowers <justin@ecoleges.co.za>, Julie Olivier

DRAFT BASIC ASSESSMENT REPORT
for the development of a 1ha solar array and associated transmission infrastructure on Marthly Farms 258KU

<ecologist@sabisand.co.za>, Guy More <guy.more@swaziplant.com>, Oscar Mthimkhulu <ceo@sabisand.co.za>

Dear Karen,

I take note of your email and request.

We will consider this and revert in due course.

Kind Regards,

Iain

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<p align="center">Booking Details</p> <p align="center">Waybill - LOCK667229</p> <table border="1"> <tr><td>Date</td><td>4/23/2022, 5:23:57 PM</td></tr> <tr><td>Status</td><td>Courier Collected</td></tr> <tr><td>Cost</td><td>100.00</td></tr> <tr><td>Service</td><td>Locker to Door</td></tr> </table> <p align="center">From</p> <table border="1"> <tr><td>Locker</td><td>BP Quarry</td></tr> <tr><td>Box Size</td><td>V4-M</td></tr> <tr><td>Contact name</td><td>Kevan Zunckel</td></tr> </table> <p align="center">To</p> <table border="1"> <tr><td>Company name</td><td>Ehlanzeni District Municipality: Environmental Management</td></tr> <tr><td>Contact name</td><td>Mr Thapelo Shabangu</td></tr> <tr><td>Contact number</td><td>079 874 3304</td></tr> <tr><td>E-mail</td><td>stshabangu@ehlanzeni.gov.za</td></tr> <tr><td>Address</td><td>8 Van Niekerk Street, Sonheuwel Central, Mbombela, South Africa</td></tr> <tr><td>Additional Address Info</td><td></td></tr> </table>	Date	4/23/2022, 5:23:57 PM	Status	Courier Collected	Cost	100.00	Service	Locker to Door	Locker	BP Quarry	Box Size	V4-M	Contact name	Kevan Zunckel	Company name	Ehlanzeni District Municipality: Environmental Management	Contact name	Mr Thapelo Shabangu	Contact number	079 874 3304	E-mail	stshabangu@ehlanzeni.gov.za	Address	8 Van Niekerk Street, Sonheuwel Central, Mbombela, South Africa	Additional Address Info		<p align="center">Booking Details</p> <p align="center">Waybill - LOCK667234</p> <table border="1"> <tr><td>Date</td><td>4/23/2022, 5:30:39 PM</td></tr> <tr><td>Status</td><td>Courier Collected</td></tr> <tr><td>Cost</td><td>100.00</td></tr> <tr><td>Service</td><td>Locker to Door</td></tr> </table> <p align="center">From</p> <table border="1"> <tr><td>Locker</td><td>BP Quarry</td></tr> <tr><td>Box Size</td><td>V4-M</td></tr> <tr><td>Contact name</td><td>Kevan Zunckel</td></tr> </table> <p align="center">To</p> <table border="1"> <tr><td>Company name</td><td>Inkomati Usuthu Catchment Management Agency</td></tr> <tr><td>Contact name</td><td>Mr Sampie Shabangu</td></tr> <tr><td>Contact number</td><td>062 907 9061</td></tr> <tr><td>E-mail</td><td>shabangus@iucma.co.za</td></tr> <tr><td>Address</td><td>13 Streak Street, Nelspruit, 1200, South Africa</td></tr> <tr><td>Additional Address Info</td><td>Suite 801, MAXSA Building</td></tr> </table>	Date	4/23/2022, 5:30:39 PM	Status	Courier Collected	Cost	100.00	Service	Locker to Door	Locker	BP Quarry	Box Size	V4-M	Contact name	Kevan Zunckel	Company name	Inkomati Usuthu Catchment Management Agency	Contact name	Mr Sampie Shabangu	Contact number	062 907 9061	E-mail	shabangus@iucma.co.za	Address	13 Streak Street, Nelspruit, 1200, South Africa	Additional Address Info	Suite 801, MAXSA Building
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**ANNEX K: COPIES OF COMMENTS FROM NATIONAL AND
PROVINCIAL ENVIRONMENTAL MANAGEMENT
AUTHORITIES**

To be provided in the FBAR

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ANNEX L: RECORDS OF SITE MEETINGS WITH AUTHORITIES

	agriculture, rural development, land & environmental affairs MPUMALANGA PROVINCE REPUBLIC OF SOUTH AFRICA													
ATTENDANCE REGISTER: DEPARTMENT OF AGRICULTURE, RURAL DEV, LAND AND ENVIRONMENTAL AFFAIRS														
A. MEETING DETAILS:														
Name of Meeting	Site Visit – Sabi Sand Game Reserve													
District	Ehlanzeni													
Venue	Ptn 1 of the Farm Marthly 258 kU (Londolozu)													
Date/Time	19/07/2022													
Meeting No														
B. SUMMARY OF PARTICIPATION														
	GENDER		AGE					POPULATION			PWDs		PARTICIPANTS	FACILITATOR
	MALE	FEMALE	0-18	19-35	36-59	60+	African	Coloured	Asian	White	Yes	No		
TOTAL														
X.E. Mkhosi INITIAL & SURNAME OF PROGRAMME MANAGER/FACILITATOR										[Signature] SIGNATURE		19/07/2022 DATE		

	agriculture, rural development, land & environmental affairs MPUMALANGA PROVINCE REPUBLIC OF SOUTH AFRICA											
NAME & SURNAME	ORGANIZATION	CONTACT	E-MAIL	GENDER	AGE	RACE					PWDs	SIGNATURE
				MALE FEMALE	19-35 36-59 60+	AFRICAN	COLOURED	ASIAN	WHITE	YES NO		
Karen Zumbie	Zumbie Ecological	0832355628	kazumbie@gmail.com	X	X				X	X	[Signature]	
Chris Goodman	Londolozu	0848922276	chrsgoodman@londolozu.co.za	X	X				X	X	[Signature]	
Lebogang Molefi	EDM-EM	0609729908	lmolefi@scholarship.gov.za	X	X	X				X	[Signature]	
Sipho Mabiza	EDM-LGS	072043714	cmabiza@edf.co.za				X				[Signature]	
Teliso Mkhosi	EDM-CORIS	0123327196	teliso@coris.co.za				X				[Signature]	
Cedusizwe Mkhosi	EDM-CORIS	01144304	cmkhosi@coris.co.za				X				[Signature]	
Xolani Mkhosi	ORROUFA	0721510551	xolani@orroufa.co.za				X				[Signature]	

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Farms 258KU

**ANNEX M: PROPOSED NEW FOUNDER'S CAMP FLOOR
PLANS**

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**ANNEX N: LETTER OF EXEMPTION OF HERITAGE IMPACT
ASSESSMENT**
