

#### EIA PROCESS AND WATER USE LICENSE APPLICATION FOR ALLUVIAL DIAMOND PROSPECTING RIGHT APPLICATIONS WITH BULK SAMPLING BY SAMARA MINING (PTY) LTD ON THE LEFT BANK OF THE ORANGE RIVER, RICHTERSVELD, NORTHERN CAPE PROVINCE, SOUTH AFRICA

#### DMRE REF. NCS 30/5/1/1/2/12664 PR, 12663 PR

#### 1<sup>st</sup> ROUND OF PUBLIC ENGAGEMENTS: SCOPING PHASE

#### **STAKEHOLDERS MEETING**

Meeting called by Naledzi Environmental Consultants (Pty) Ltd Facilitator and Notetaker: Marissa Botha Date: 14 December 2020 Time: 14:00 Location: Zoom Meeting (Meeting ID: 8790244 Passcode: 715674)

#### Participants: Please refer to Annexure A for the Zoom Meeting Participants List

Name & Surname	Position	Abbrev.	
Naledzi Environment	al Consultants (NEC)		
Marissa Botha EAP and Public Participation Programme			
Samara Mining (Pty)	Ltd (Samara)		
Dr Anthony Dywili	Director	AD	
Dap Du Preez	Director	DDP	
NDI Geological and (	Consulting Services (Pty) Ltd (NDI)		
Ndi Mofokeng	Geologist and Project Manager	NM	
Bridget Tshioma	Geologist	BT	
Tina van der Merwe	To the T Drafts	TVDM	
Stakeholders			
Peter Ramollo	Department of Environment, Nature Conservation: Kimberley TR (DENC), Northern Cape Wetland Forum		
Bronwyn Maree	Birdlife South Africa, East Atlantic Flyway Initiative Project BM Manager		
Melissa Lewis	Birdlife South Africa, Policy and Advocacy Programme Manager.	ML	
Johan van Rooyen	Lower Orange River Diamonds (Pty) Ltd / LOR Baken Mine General Manager	JvR	
Peter van Rooyen	Lower Orange River Diamonds (Pty) Ltd / LOR Manager Legal	PvR	
Leilani Swartbooi	Alexkor Limited RMC JV, Environmental Manager	LS	
Nicolaas Du Plessis	NamWater – Namibia Water Corporation, Senior Environmentalist	NDP	
Norbert Jurgens	Biota Africa, Head of Research Unit Biodiversity, Evolution & NJ Ecology (BEE) of Plants, Institute of Plant Science and Microbiology, University of Hamburg, Germany		
Bertchen Kohrs	Earthlife Namibia, Chair	BK	
Regrets - None			

#### 1. AGENDA ITEMS

No	Item	Presenter
1.1	Welcome and Introductions	NEC
1.2	Application Summary (Legislative Requirements, Details and Location)	NEC
1.3	Project Background, Prospecting Method and Designs	Samara
1.4	EIA and Public Participation Process	NEC
1.5	Potential Impacts, Legal Implications and required specialist investigations	NEC
1.6	Water Use License Application	NEC
1.7	Overview of Samara Mining (Pty) Social Development Plan	Samara
1.8	Discussion session	All
1.9	Way Forward, Closure	NEC

The full PowerPoint presentation is attached as Annexure B.

#### 2. KEY ISSUES

- The Orange River Mouth is internationally important and is an important site for migratory birds. South Africa also has obligations in terms of the Conservation of African-Eurasian Migratory Waterbird (AEWA) to conserve those species and the agreements parent convention which is Convention on the Conservation of Migratory Species (CMS). The AEWA and CMS should be engaged as part of the EIA Process PPP.
- The Scoping Report relies on the idea that several impacts can be addressed through rehabilitation. The application areas are highly sensitive and the EIA should engage in a more rigorous assessment of the available methods of rehabilitation and their probability of success.
- It is a concern that the DMRE allowed an application to proceed in a protected area.
- PRAA 1 might also fall within the Alexkor Mining Right Area.
- The water rights from the Orange River belong to the Richtersveld CPA.
- The alluvial terraces along the Orange River are ancient tertiary gravel terraces, are highly sensitive and carry endemic species.

#### 3. ACTION ITEMS

Action Item	Assigned	Completed
NEC to engage RAMSAR, UNESCO including AEWA	Marissa Botha,	To be engaged during
and CMS in the EIA Process PPP. (Birdlife South	NEC	January 2021
Africa)		
Confirm if PRAA 1 falls within the Alexkor Mining	Marissa Botha,	2020/12/30
Right Area. (Leilani Swartbooi, Alexkor)	NEC	The PRAA 1 does not fall
		within the Alexkor MRA.
		Refer to the Key Plan
		provided under Annexure D
		to the minutes.
The water rights from the Orange River belong to	Marissa Botha,	The Richtersveld
Richtersveld CPA. Samara must engage the CPA in this	NEC	communities will be
regard to apply for water rights.		engaged during January
(Leilani Swartbooi, Alexkor)		2021 in this regard.

#### 4. MEETING MINUTES

No	Agenda Item		
1.1	Welcome and introductions         Presenter         Marissa Botha, NEC		
1.1.1	Welcome and introductions by NDI, NEC and Stakeholders. It was highlighted that		
	Samara would join the meeting later.		
1.1.2	The agenda and purpose of the meeting were confirmed.		
1.1.3	The project team role and responsibilities were explained:		
	• Samara has applied to the Department of Mineral Resources and Energy		
	(DMRE) for two alluvial diamond prospecting right applications on the left		
	bank of the Orange River close to Sendelingsdrift in the Richtersveld within the		
	Namakwa District of the Northern Cape Province of South Africa.		
	• NDI has been appointed as the consulting geologist and project manager for the		
	applications.		
	• NEC is the independent environmental assessment practitioner (EAP) appointed		
	to conduct the statutory EIA and Public Participation Process (PPP) for the		
1.0	applications. This meeting forms part of the EIA Process PPP.		
1.2	Application Legislative Requirements, Presenter Marissa Botha, NEC		
1.0.1	Location and Details		
1.2.1	The legislative requirements of the applications were specified.		
	A prospecting with bulk sampling requires a prospecting right application in terms of section 16 and 20 of the Mineral and Petroleum Resources Development Act (Act 28 of		
	2002) (MPRDA). Application is required to the DMRE.		
	Prospecting with bulk sampling are also regulated activities under the National		
	Environmental Management Act (Act 107 of 1998) (NEMA) EIA Regulations of 2014		
	(GNR 326) and its associated listing notices GNR 327 (Activity 20) and GNR 325		
	(Activity 19) and require environmental authorisation. The application for		
	environmental authorisation must be submitted concurrently to the application for		
	prospecting rights to the DMRE.		
	On 22 July 2020, NDI submitted Samara's two applications for alluvial diamond		
	prospecting rights and environmental authorisation to the DMRE: Springbok. The		
	applications were accepted on 15 September 2020 on the following prospecting right		
	application areas (PRAA):		
	$\circ$ PRAA 1 – NCS 30/5/1/1/2/12664PR situated on the left bank of the Orange		
	River boundary to Portion of Remainder of Farm Richtersveld No. 11 and is		
	987 Hectares in extent; PP + A = 2 $PI = 20/5/1/1/2/(2) PP = it to be the first of the O$		
	• PRAA 2 – NCS $\frac{30}{5}/\frac{1}{2}$ Particle of the Remainder of Ferry Na 18 and is (00)		
	River boundary to a Portion of the Remainder of Farm No. 18 and is 690		
	Hectares in extent.		
	The applications are subject to a full EIA Process and PPP to be conducted by an independent consulting company (NEC)		
1.2.2	independent consulting company (NEC). The general purpose and phases of the EIA Process were explained.		
1.2.2	The EIA Process comprises two phases i.e. Scoping and EIA Phase.		
	roccos comprises con a prases no. seopring and Dirit rado.		
	The Scoping Phase identifies the main issues and impacts that need to be considered		
	and addressed in the EIA Phase, through a consultative process and determines which		
	specialists studies are required to evaluate the significance of such impacts. The		
	findings are presented in a Scoping Report. The Scoping Report is subjected to a 30		
	days public review period thereafter is submitted to the DMRE for acceptance.		
	Acceptance of the Scoping Report signifies the start of the EIA Phase. The EIA Phase		

	assesses the significance of the potential impacts through in-depth specialist field		
	investigations. The findings of the assessment are presented in an Environmental		
	Impact Report (EIR) and include an Environmental Management Programme (EMPR)		
	which recommends how to operate and implement the activity. The EIR and EMPr		
	reports are subjected to a 30 days public review and comment period thereafter is		
	submitted to the DMRE for decision making on the application.		
1.2.5	Maps were presented to illustrate the location of the application areas relevant to		
	the EIA Process.		
	Samara proposes to prospect on the left bank, below the flood line of the Orange River		
	near Sendelingsdrift, on the border between South Africa and Namibia, approximately		
	30km north of Alexander Bay.		
	The high-water level on the northern bank of the Orange River demarcates the South		
	African border based on the 1890 treaty between Britain and Germany. According to		
	the EAP's knowledge, the application areas fall within Wards 1 and 2 of the		
	Richtersveld Local Municipality within the Namakwa District of the Northern Cape		
	Province of South Africa.		
	PRAA 1 is approximately 250m west of Sanddrift and is situated within 10km of the		
	Richtersveld National Park and Richtersveld Botanical and Cultural Landscape World		
	Heritage Site.		
	PRAA 2 is approximately 10km northeast of Sendelingsdrift within the protected area		
	of the Richtersveld National Park and Richtersveld Cultural and Botanical Landscape		
	World Heritage Site.		
1.2.6			
1.2.0	Satellite maps and an orthophoto were presented to illustrate the location of the		
	proposed prospecting focus areas and position of a prospecting pocket within the		
	regulated zone of the Orange River.		
	Bulk sampling will focus on several prospecting pockets along the Orange River within		
	the greater PRAAs. The pockets are located near existing diamond mining operations		
	of the Lower Orange River Diamonds (Pty) Ltd and Oena Diamond mine.		
	The actual prospecting focus area is significantly less than the overall PRAA's. PRAA 1		
	prospecting focus area will be 241.95 hectares in extent and PRAA 2 focus area 175		
	hectares.		
1.2.7	The details of the application were described.		
	Prospecting and bulk sampling will be conducted in line with a prospecting works		
	programme (PWP) over a five (5) year period and will comprise three phases, i.e.:		
	• Phase 1 - Non-invasive prospecting activities limited to desktop studies		
	<ul> <li>Phase 2 – Invasive bulk sampling to be conducted over a three (3) year period</li> </ul>		
	followed by final rehabilitation.		
	•		
	• Phase 3 – Preparation of Feasibly Studies to determine if mining at the		
	application areas would be feasible.		
	Application has been made for environmental authorisations to be valid for eight (8)		
	years to provide for the completion of the PWP and possible renewal of the prospecting		
	rights for another three (3) years. If the PWP yields positive results Samara will apply		
	for a Mining Permit to commission a 'pilot mine'.		
	The prospecting method will include:		
	• Excavation of ten (10) trenches per application area, each 100m x 25m x 4m		
	with each sample size being 10 000m <sup>3</sup> ;		
	<ul> <li>Minor temporary river diversions will be constructed to gain access to alluvial</li> </ul>		
	material. A channel way will be excavated from the current river flow on the		
	dry side of the river bed. Open bottom and top entrances will be included to		
1	allow flow through the new channel and include a cast bunt wall in the river to		

	1		
	<ul> <li>direct flow through the new channel.</li> <li>Load and haul samples to Rotary Pan Plant to process, screen, concentrate samples and recover alluvial diamonds. No chemicals will be used in the process;</li> </ul>		
	• Water for the processing will be abstracted from the Orange River. A vacuum and filter system will remove the dirt, filter the water to drinkable standard and either release it back into the river or supply communities with water by		
	<ul><li>pumping it into municipal reservoirs (open for discussion);</li><li>Tailing and overburden will be backfilled (returned) into excavations,</li></ul>		
	<ul><li>followed by topsoil.</li><li>Distributed areas will be appropriately rehabilitated according to environmental</li></ul>		
	<ul> <li>guidelines.</li> <li>Associated prospecting infrastructure will include:</li> </ul>		
	<ul> <li>Ablution facilities;</li> <li>Access roads</li> </ul>		
	<ul> <li>Diesel storage facilities</li> <li>Fences</li> </ul>		
	<ul> <li>Office sites</li> <li>Plant sites (Rotary Plant)</li> </ul>		
	<ul> <li>Contractor's camp</li> <li>Vehicle parking areas.</li> </ul>		
	The location of processing infrastructure must still be finalised based on the recommendations to be made by the specialist investigations which will follow in the EIA Phase.		
1.3	Project Background Presenter Dr Dywili (Samara)		
	Dap Du Preez,		
1.3.1	Introductions by Samara.		
1.3.2	Samara provided clarity regarding the overlapping of PRAA 1 into the LOR Mining Right Area.		
	Samara is in discussions with LOR regarding the overlapping of the PRAA 1 onto LOR Mining Right Area. The outcome of the engagement is still pending.		
1.3.3	The Rotary Processing Plant Design was illustrated and discussed. The entire plant will be operated on a skid frame for easy movement and or evacuation		
	in case of a flood. The plant can be raised and moved within six (6) hours.		
	All the plant conveyor belts will have underpans to collect any oil spills or grease and will drain into a tray beyond the plant. From the tray, the runoff will be pumped into a filter system to breakdown oil and grease. The plant has been designed to have zero spillage. The filter system has been put in place to replace the need for a slimes dam.		
	The filter system will remove the water from the processed material; clarify it to drinkable standard and either discharge it downstream of the workings or pump it to municipal reservoirs for it to be used by communities. The silt/mud removed from the		
1.3.4	process water will be collected in a bottom pan and backfilled into the excavations. The prospecting method (item 1.2.7) was recapped and the prospecting scale was		
	The prospecting method (item 1.2.7) was recapped and the prospecting scale was explained.		
	explained.		
	<b>explained.</b> Samara will implement the prospecting activities at a small scale and in a phased manner to minimise the risk to the environment. The first prospecting pocket will be a pilot operation to refine the prospecting method.		

1.4	EIA Process Presenter Marissa Botha (NEC)		
1.4.1	The EIA process diagram was illustrated and the Scoping and EIA Process		
	purpose (1.2.2) was recapped and the tasks and reporting were described.		
	The Scoping Phase identifies the major issues and impacts that need to be considered		
	and addressed in the EIA Phase, through a consultative process and determines which		
	specialists studies are required to evaluate the significance of such impacts. This is		
	presented in a Scoping Report.		
	The EIA Phase assesses the significance of the potential impacts through in-depth		
	specialist field investigations. The findings of the assessment are presented in an		
	Environmental Impact Report (EIR) and include an Environmental Management		
	Programme (EMPR) which recommends how to operate and implement the activity.		
	The findings are presented to the competent authority to decide on the application.		
	A consolidated EIA Process is being conducted for the prospecting right applications as		
	the areas are end-to-end. Separate environmental reports are being generated according		
	to the application areas. The EIA process is currently in the Scoping Phase.		
	The EIA Process timeline was presented. The specialist desktop investigations and		
	Scoping Reports for the application areas have been prepared during October and		
1 4 2	November 2020 and are currently available for public inputs until 14 December 2020.		
1.4.2	The list of potentially significant impacts as detailed in the Scoping Reports for the applications was indicated.		
	The list of potentially significant impacts included in the Scoping Reports for the		
	applications include:		
	<ul> <li>PRAA 2 is located within a protected area (Richtersveld National Park,</li> </ul>		
	Richtersveld Cultural Botanical Landscape) and important fish corridor. The		
	applicant and registered I&APs have been notified of the implication on the		
	Draft Scoping Report availability letter;		
	• There are currently claims of Samara's Prospecting Right Applications		
	overlapping the Lower Orange River Diamonds (Pty) Ltd and Oena Mine		
	Mining Right Areas. NEC has lodged a spatial query to the DMRE in this		
	regard and waits on their response. Samara, LOR and DMRE have also		
	engaged in this regard on 11 December 2020;		
	• There are also existing diamond mining operations along the Orange River		
	including livestock farming on the banks of the river. Samara will need to		
	negotiate access or reach an agreement with existing diamond mining		
	operations for placement of prospecting infrastructure.		
	The significant features of onsite and likely impacts were presented. (refer to		
1.4.2	presentation attached as Annexure B for details, slide 19 -21)		
1.4.3	The present legal implications relevant to the application areas were highlighted.		
	PRAA 2 has a significant legal implication being located within the Richtersveld		
	National Park and Richtersveld Cultural Botanical Landscape protected area.		
	According to the National Environmental Management Protected Areas Act (Act 57 of 2003) (NEMBAA) these areas are legally protected, and mining herein is prohibited		
	2003) (NEMPAA), these areas are legally protected, and mining herein is prohibited.		
	According to the Northern Cape Critical Biodiversity Areas (CBA) database of 2016		
	PRAA 1 falls within a CBA1 area, whereas PRAA 2 is located within a protected area.		
	Protected and CBA1 areas consist of intact, undisturbed ecosystems. According to		
	Namakwa Bioregional Plan in terms of the National Environmental Management:		
	Biodiversity Act, 2004 (Act No. 10 of 2004), strictly no mining is allowed within these		
	regions.		

	Mining and Biodiversity Guideline 2013 - PRAA 1 pockets are located in an area of		
	Highest Biodiversity Importance and therefore poses a high risk for mining. If the		
	presence and significance of these biodiversity features are confirmed during the site		
	assessment, it is deemed likely that these areas could also be considered no-go areas		
	from a biodiversity perspective due to the high impact and potential loss of		
	irreplaceable habitat.		
1.4.4	The requirement for specialist field investigations was explained and required		
1.7.7	studies listed.		
	The list of potential impacts has been identified based on desktop investigations by the EAP and appointed specialists and are still subject to further in-depth specialist field investigations to be conducted during the EIA Phase.		
	Identified specialist field investigations to be conducted during the EIA Phase include: • Terrestrial Biodiversity Impact Assessment		
	<ul> <li>Freshwater Impact Assessment</li> </ul>		
	<ul> <li>Heritage and Palaeontological Impact Assessment</li> </ul>		
	<ul> <li>Hydrological and Hydrogeological Impact Assessment</li> </ul>		
	<ul> <li>Visual Impact Assessment</li> </ul>		
	The specialist field investigations will allow NEC to determine the full scope of the potential impacts and to produce well-informed EIR and EMPR Reports for the		
	application areas. The intention is to start conducting the field investigations from 6 –		
	12 January 2021, yet NEC and the specialists require access to prospecting right areas		
	to conduct the investigations and consent to access areas is still being sought from		
	existing mining operations. The prospecting focus areas are only accessible from		
1.4.5	existing mining operation gravel roads.		
1.4.5	The Scoping Reports will be finalised to incorporate public submissions and will be		
	submitted to the DMRE by 11 January 2021, based on an approved 50-day extension.		
	It is anticipated that the DMRE will either accept/reject the Final Scoping Reports for		
1.4.6	the applications by February 2021 after which specialist field investigations will follow.		
1.4.6	Samara is undertaking a high-end environmental impact assessment process to gauge		
	the likely environmental impacts of the project and formulate mitigations measures		
	with the assistance of a multi-disciplined specialist team, to avoid and or manage the		
	potentially significant impacts of the prospecting and bulk sampling activities along the		
	Orange River. Samara intends to work in a phased manner by implementing concurrent		
	rehabilitation to minimise potential impacts and risk of degradation of the affected		
1.5	focus areas.Public Participation Process (PPP)PresenterMarissa Botha (NEC)		
1.5.1	The PPP was described and the completed PPP activities detailed.		
	Two rounds of public engagement are scheduled for the EIA Process. The first round		
	seeks to announce the EIA Process and present the Draft Scoping Reports for 30		
	calendar days' public review and comment. The findings of the Scoping Reports are		
	presented at public engagements to facilitate comments on the reports.		
	The draft Scoping Reports are currently available for public review and comment from		
	13 November until 14 December 2020. Electronic copies of reports are available for		
	download from the Naledzi website and hardcopies have been placed at the following		
	public venues:		
	<ul> <li>Sendelingsdrift SANPARKS offices</li> <li>Senddrift Kubaca Eksteenfontain and Lakkarsing Public Libraries</li> </ul>		
	<ul> <li>Sanddrift, Kuboes, Eksteenfontein and Lekkersing Public Libraries</li> <li>Stakeholders con submit their comments on the reports by completing the Comment.</li> </ul>		
	Stakeholders can submit their comments on the reports by completing the Comment		
•	Sheet available on the website and at public venues, writing a letter, sending an email		
	or contact Naledzi on or before 14 December 2020. The availability of the Draft Scoping Reports has been announced in the Gemsbok and		

	Plattelander Newspapers on 13 November 2020 and by the placement of site notice		
	posters in the project area. The emailed notification has been sent to the list of		
	registered I&APs on the project database.		
	Virtual meetings have been scheduled for 8 and 14 December 2020 with key		
	stakeholders and commenting authorities. Public Meetings with the affected		
	communities are scheduled for 12 and 13 January 2021. The communities meetings		
	were scheduled for 3 and 4 December 2020 had to be postponed due to the covid-19		
	risk in the Richtersveld area.		
1.5.3	The importance of public participation and the need to incorporate public inputs		
	into the EIA Process environmental reporting for decision making for highlighted.		
	All the comments received during the first round of engagements will be recorded in		
	the Finalised Scoping Reports and submitted to the DMRE for decision making by no		
	later than 11 January 2021 based on a granted 50-day extension.		
1.6	Water Use License Application         Presenter         Marissa Botha, NEC		
1.6.1	The WULA Process, relevance to the applications and requirement was explained.		
	The WULA Process runs parallel to the EIA Process. The water uses that have been		
	identified in terms of Section 21 water uses in terms of the National Water Act (Act 36		
	of 1998) (NWA) include:		
	<ul> <li>S 21a - Abstracting water from the Orange River – It is understood that the net</li> </ul>		
	loss to the Orange River will be zero. The water abstracted from the river will		
	be abstracted, clarified and released back into the river downstream of		
	workings.		
	<ul> <li>S21c – Diversion of the watercourse during the bulk sampling, impeding natural</li> </ul>		
	flow – as the material is excavated, the mining level will drop below the water		
	level and the influx of water into the workings will need to be considered.		
	<ul> <li>S21f – Clarified water from the filtration process at the prospecting works will</li> </ul>		
	be released back to the river – Better quality water will be released back into the		
	water. The impact of filtered water will need to be considered. There will be		
	changes in water quality in terms of suspended solids.		
	<ul> <li>S21g is related to the disposal of waste and is relevant to any stockpiles (topsoil,</li> </ul>		
	product/alluvial gravel, waste material) and temporary on-site disposal of waste;		
	• S21i – Temporary altering of course of the watercourse, bulk sampling		
	excavation and subsequent rehabilitation within the 1: 100-year flood line, the		
	release of clarified water back into the Orange River downstream of the		
	workings		
	• Application for the relaxation of conditions imposed by GN704 (GG-20119),		
	due to workings within the river flood line.		
1.6.2	The overall potential impacts from the mining operations on the Orange River system		
	would be sedimentation to the river and the changes in the flow dynamics of the		
	Orange River in and around the bulk sampling sites.		
1.7	Social Development Plan (SDP) Presenter Dr Anthony Dywili		
	(Samara)		
1.7.1	A broad overview of Samara's planned SDP was explained.		
	Samara has consulted outcome five (5) and nine (9) of the National Development Plan		
	(NDP) including the Provincial Growth and Development Strategy and narrowed these		
	down to the IDP and Local Economic Development (LED) Plan for the Richtersveld.		
	· · · · · · · · · · · · · · · · · · ·		
	Many young people in the Richtersveld area, many under the age of 20, are without		
	jobs and critically affected by property and crime. Skills development remains a critical		
	part of job creation and poverty eradication.		
	Current diamond mining operations are bringing in the workforce from outside areas		
	because the local communities are not skilled enough to work on the mines.		

1.7.2	The broad aim and objectives of the SDP we	re detailed.	
1.7.2	The prospecting right applications aim to		
	Richtersveld area. Local engagement and community participation are considered critical in the process of obtaining the prospecting right applications. Samara has used		
	the Richtersveld IDP as its data source. $\frac{00\%}{2}$ of Samara's labour force will be sourced from the local communities of Kachoo		
	90% of Samara's labour force will be sourced from the local communities of Koebo		
	Sandrift, Lekkersing, Eksteenfontein, and S		
	communities benefit maximally from job opportunities emanating from this prospecting		
	right. Samara wants to create capacity within the communities so that they can		
	participate meaningfully.		
	As part of local development, Samara will a	avail land to local artisanal miners and	
	support them with the necessary equipmen		
	sustainable development. Samara will also er		
	created by this prospecting right. This wi	e 11	
	stakeholders to ensure a multi-disciplinary appr		
	All the stakeholder input will sharpen S	1	
	implementation of the project if approved, b		
	mining. Samara's research shows that forr		
	significant impacts on the environment and riv	er system by not being able to adhere to	
	legislation and policies.		
	All agricultural land will remain protected f	or agricultural usage. Samara will also	
	support local farmers through linking them		
	focusing on funding, skills development and	training. Samara will use the emerging	
	farmers' program as a tool to support and	6 6 6	
	sustainability, Samara will set up a trust that w	1	
	agricultural development in the Richtersveld a	11 5	
	•	-	
	<ul><li>the existing strategies in the area but enhance those.</li><li>Social development is a key priority. Samara will partner with provincial and local</li></ul>		
	government to ensure that local schools, clinic		
	Other key priorities include school transportation		
1.7.3			
	Attendees are allowed to ask questions to gain		
1.8	Discussion Session (All)	Response	
1.8.1	Melissa Lewis (Birdlife South Africa)	Marissa Botha, NEC:	
1.8.1.1	We agree with the notion of the Scoping	We will engage with RAMSAR,	
	Report findings that any significant impact on	UNESCO and the secretariats of the	
	the Orange River Mouth Ramsar site is	AEWA and CMS in January 2021.	
	unacceptable in terms of South Africa's		
	commitments under the RAMSAR		
	Conventions.		
	But the Scoping Reports don't go into the		
	reason why the Orange River Mouth was		
	designated as internationally important,		
	which in large measure are linked to its		
	importance as a site for migratory birds.		
	Further to South Africa's obligations under		
	the Ramsar Convention, South Africa also		
	has obligations in terms of the Conservation		
	of African-Eurasian Migratory Waterbird		
	(AEWA) to conserve those species and the		
	agreements parent convention which is		

	Commention on the Constitution of the Constitution	1
	Convention on the Conservation of Migratory Species (CMS).	
	The Scoping Reports identify the need to engage the RAMSAR and UNESCO. Is there any intention to engage with the two species- specific secretariats?	
1.8.1.2	It is stated that the Terrestrial Biodiversity Assessments will consider avifaunal aspects. Is it envisaged that an Avifaunal Specialist will specifically be involved to conduct that assessment and that the assessment will not only cover the prospecting focus areas but the entire area of influence including the Orange River Mouth?	Marissa Botha, NEC: An Avifaunal Specialist will be commissioned to conduct the Avifaunal Assessment. SASS Environmental Services is the appointed specialist. Post-meeting note, Marissa Botha, NEC: According to SASS's methodology statement, the Avifaunal Assessment will cover the general effects of the proposed mining and migratory routes and breeding sites of potential Red Data List species, as well as ecological and migratory connectivity, will be
1.8.1.3	Several portions of the Scoping Report rely on this idea that several impacts can be addressed through rehabilitation. We are very cautious about that approach given the environmental sensitivity of the application areas. Is it envisaged that the EIA will engage in a more rigorous assessment of the available methods of rehabilitation and their probability of success?	assessed. Marissa Botha, NEC: Yes, it is part of the scope of works of the specialists to assist Samara to formulate the mitigation, rehabilitation and monitoring measures based on Samara's specific prospecting method. Specialists will investigate and recommend rehabilitation measures that have proven to be successful. Samara is further engaging with a multidisciplinary team to assist with the formulation of the prospecting method with the lowest possible environmental risk with concurrent rehabilitation. The EIA Report will consider the hierarchy of rehabilitation measures that should be applied. In certain instances where we are uncertain of the success rate of the rehabilitation measures, restrictions would need to be placed on the specific activity. However, these are recommendations the specialists will need to make based on the refined prospecting method and findings of
1.8.1.4	Am I correct in understanding that none of the existing mining operations is operating	field investigations. <b>Marissa Botha, NEC:</b> We have reviewed satellite imagery of

		· · · · · · · · · · · · · · · · · · ·
	<ul><li>within the 1: 100-year flood line?</li><li>Will the application for relaxation of the conditions imposed by GN 704 in terms of the NWA due to workings in the flood line, be submitted at the same time as the WULA?</li><li>Will all interested and affected parties be notified of the decision on the application?</li></ul>	PRAA 1 and PRAA 2 showing existing mining operations. None of the existing mining operations along the application areas are mining below the Orange River flood line. According to LOR, they have agreed with key stakeholders and interested and affected parties to honour the Orange River flood line to limit the environmental risk to the system and maintain riverbank stability.
		The application for relaxation of the conditions imposed by GN 704 is incorporated in the WULA.
		The Water Use Technical Report in support of the WULA will be made available for 60 days of public review and comment. I&APs will also be notified of the DWS decision on the application.
1.8.1.5	Birdlife South Africa is concerned that the DMRE allowed an application to proceed in a protected area given the legal protection status under section 48 of NEMPAA. We assume that this is a matter that NEC discussed in the authorities meeting. We also want to thank NEC for raising this legal implication very clearly in the Scoping Report. Not all EAP's show that level of independence.	Marissa Botha, NEC: Yes. This matter was discussed endlessly during the authorities meeting. We highlighted to authorities that NEC has advised the applicant of the legal implication during the project kick-off meeting, in writing, included it in the I&AP Notification Letters and made it clear in the Scoping Report for
	independence.	The application areas correspond to two protected areas namely Richtersveld National Park and the Richtersveld Cultural and Botanical Landscape World Heritage Site.
		NEC will recommend that PRAA 2 be excluded from the authorisation and EIA Process given the legal protection status of the application area. We will recommend that only PRAA 1 continue to the EIA Phase with the exclusion of the northern portion since it also falls within a protected area.
1.8.2	Bronwyn Maree, Birdlife South Africa	Marissa Botha, NEC
1.8.2.1	Will the EIA Reports consider the cumulative impact from the current diamond operations as well as the proposed prospecting activities?	The specialist studies will consider the cumulative impacts from the current diamond mining operations and the proposed prospecting activities which

<ul> <li>will be incorporated into the FIA Reports. It must however be noted that NEC will only be able to assess the cumulative impacts based field investigations and available investigations and available information from existing mine EIA reports. There is a certain limitation to assessing the cumulative impacts but these will be stipulated in the EIA Reports.</li> <li>1.8.2.2 What is Samara's plan if the prospecting results prove to be successful? Will there be more detail available in upcoming reports results, the next step will include applying for a Mining Permit. Initially, the project will unfold in a pilot mine (Mining Permit) to allow Samara to study the proposed process (mining method, environmental risks) under the same conditions as will exist in the full-scale mine without the cost of experimenting on large tonnages of ore.</li> <li>Once the 'proof of concept' shows the mine can be profitable and can be operated at an environmentally sustainable manner without adverse risks, Samara will apply for a Mining Right to upscale the mine to a commercial-scale mine. Indued in the EIA Reports.</li> <li>1.8.2.3 I assume the minutes will not be available before we submit our comments?</li> <li>1.8.3 Leilani Swartbooi, Alexkor</li> <li>1.8.3 Leilani Swartbooi, Alexkor</li> <li>Post-meeting note, Marissa Botha, NEC: Ne we will still need to prepare these minutes in the coming week.</li> <li>1.8.3 Leilani Swartbooi, Alexkor</li> <li>Post-meeting note, Marissa Botha, NEC: No, We will still need to prepare these ortion of Portion 9, Portion 15 (a portion of Portion 9, Portion 15 (a portio</li></ul>			
have been included in the Scoping Reports and will be included in the EIA Reports.1.8.2.3I assume the minutes will not be available before we submit our comments?Marissa Botha, NEC: No. We will still need to prepare these minutes in the coming week.1.8.3.1Leilani Swartbooi, AlexkorPost-meeting note, Marissa Botha, NEC: Please note that PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 9), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.Please note that mining right areas held by Alexkor, LOR and Oena Mine.1.8.3.2Please note that mining activities are takingMarissa Botha, NEC:	1.8.2.2	results prove to be successful? Will there be more detail available in upcoming reports	NEC will only be able to assess the cumulative impacts based field investigations and available information from existing mine EIA reports. There is a certain limitation to assessing the cumulative impacts but these will be stipulated in the EIA Reports. <b>Marissa Botha, NEC:</b> If the prospecting yields positive results, the next step will include applying for a Mining Permit. Initially, the project will unfold in a pilot mine (Mining Permit) to allow Samara to study the proposed process (mining method, environmental risks) under the same conditions as will exist in the full-scale mine without the cost of experimenting on large tonnages of ore. Once the 'proof of concept' shows the mine can be profitable and can be operated at an environmentally sustainable manner without adverse risks, Samara will apply for a Mining Right to upscale the mine to a
EIA Reports.1.8.2.3I assume the minutes will not be available before we submit our comments?Marissa Botha, NEC: No. We will still need to prepare these minutes in the coming week.1.8.3Leilani Swartbooi, AlexkorPost-meeting note, Marissa Botha, NEC:1.8.3.1During the presentation, it was noted that PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.Please note that mining activities are taking1.8.3.2Please note that mining activities are takingMarissa Botha, NEC:			have been included in the Scoping
before we submit our comments?No. We will still need to prepare these minutes in the coming week.1.8.3Leilani Swartbooi, AlexkorPost-meeting note, Marissa Botha, NEC:1.8.3.1During the presentation, it was noted that PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.No. We will still need to prepare these minutes in the coming week.1.8.3.2Please note that mining activities are takingMarissa Botha, NEC:			-
1.8.3Leilani Swartbooi, Alexkorminutes in the coming week.1.8.3.1During the presentation, it was noted that PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.Please note that mining right areas held by Alexkor, LOR and Oena Mine.1.8.3.2Please note that mining activities are takingMarissa Botha, NEC:	1.8.2.3		Marissa Botha, NEC:
<ul> <li>1.8.3.1 During the presentation, it was noted that PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.</li> <li>1.8.3.2 Please note that mining activities are taking</li> <li>Post-meeting note, Marissa Botha, NEC:</li> <li>Post-meeting note, Marissa Botha, NEC:</li> </ul>			
PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.NEC: Please note that PRAA 1 does not fall within the Alexkor Mining Right Areas. The application area is situated on the left bank of the Orange River boundary to a Portion of the Remainder of the farm Richtersveld No. 11. Please refer to Annexure D for the key plan showing the Samara application areas in relation to existing mining right areas held by Alexkor, LOR and Oena Mine.1.8.3.2Please note that mining activities are takingMarissa Botha, NEC:			
		PRAA 1 may overlap with the mining right of Alexkor SOC. Alexkor SOC MR554 comprises the following portions: Centre line of the Orange River, to the bank of along the following properties: Korridor-Wes Farm No. 2, Portion 17 (a portion of Portion 8), Portion 16 (a portion of Portion 9), Portion 15 (a portion of Portion 10), Arrisdrift Farm No. 616), Farm No. 1 and Farm Brandkaros Farm No. 517.	<b>NEC:</b> Please note that PRAA 1 does not fall within the Alexkor Mining Right Areas. The application area is situated on the left bank of the Orange River boundary to a Portion of the Remainder of the farm Richtersveld No. 11. Please refer to Annexure D for the key plan showing the Samara application areas in relation to existing mining right areas held by Alexkor, LOR and Oena Mine.
	1.0.3.2		·

	River at Witvoorkop, Kortdoorn and	
1.8.3.3	Arrisdrift as part of Alexkor operations. The water rights for these application areas are held by the Richtersveld Communal Property Association. Has NEC engaged the CPA in this regard yet?	Marissa Botha, NEC: The CPA will be engaged on this matter during the 12 and 13 January 2021 public meetings.
	Also, did you engage with the Richtersveld CPA administrator?	Yes, we have engaged with the CPA Administrator, Mr Donovan Matjiet from Honey Incorporated.
1.8.4	Peter Ramollo, DENC	Marissa Botha, NEC
1.8.4.1	Section 21b water use for 'storing water' is not included in the list of applied for water uses. Where will the water that is abstracted from the Orange River go to?	Water will be abstracted from the Orange River in the area of the mine workings to gain access to the alluvial gravel. The abstracted water will be pumped to the Rotary Pan Plant for use in the processing plant. The water will thereafter pass through a filter and vacuum system for clarification to drinkable standard and will be released back into the river downstream of the workings.
		Therefore at this stage, no water use activity triggers storing of water. Samara is investigating the alternative of potentially pumping the clarified water into municipal reservoirs for use by the local communities, however, this alternative must still be discussed with the local authorities and local communities during the public engagement process.
1.8.5	Norbert Jurgens, University of Hamburg, Germany	Marissa Botha, NEC:
1.8.5.1	Draw attention to two points; will a specialist on avifauna be included? It also makes sense to include a specialist on migratory fish. We observe declining water levels in the	An Avifauna Assessment will be conducted by an Avifaunal Specialist and included as part of the Biodiversity Impact Assessment.
	Orange River during several decades now and it will increase with climate and land-use change and other challenges make it more difficult for migratory fish to come up the Orange River. When making the necessary deviations on the river for prospecting trenches, it will be very important to conduct	A Freshwater Ecological Assessment has also been commissioned and will include a Fish Migratory Assessment. The Biodiversity and Freshwater Study will be conducted by SASS Environmental Services CC.
	these activities during the right season to allow migratory fish to pass.	<b>Post-meeting note, Marissa Botha,</b> <b>NEC:</b> The Freshwater Ecological Assessment will include a Fish Ecological Survey and Fishway Design to provide for fish

		· · · · · · ·	
		migration as a mitigation measure to	
		retain longitudinal habitat connectivity, reduce habitat fragmentation and	
		enhance migratory freedom of fish	
		despite infrastructure development to	
1050	I want to draw ways attention to the high	protect this fisheries resource.	
1.8.5.2	I want to draw your attention to the high	Marissa Botha, NEC: These details will be knowshit to the	
	importance of the ancient tertiary gravel	These details will be brought to the	
	terraces next to the Orange River. The	attention of the specialists for	
	terraces are highly sensitive and carry	consideration in their specialist site	
	endemic species which are not listed in the	investigations and reporting. The issue	
	application Scoping Reports or specialist	of the ancient alluvial terraces along	
	studies. I am the author of the vegetation	the Orange River has been raised by	
	types listed in your Scoping Reports as	the Richtersveld Park Manager, Mr	
	Appendix E. The specified vegetation types	Brent Whittington.	
	are relevant but not complete, because when the SANDI Wah man was prepared and I	Plaga note that the site vegetation	
	the SANBI Web map was prepared, and I submitted years detailed many the editorial	Please note that the site vegetation	
	submitted very detailed maps, the editorial decision was made to focus on a larger	types and species descriptions and likely impacts included the DMRE	
	landscape scale and therefore the vegetation	Scoping Report template and the	
	and flora of these alluvial gravel terraces	Specialist Scoping Reports are based	
	were never included. There are endemic	on desktop investigations. These	
	species which are critically endangered and	descriptions and likely impacts will be	
	are not on your species list. The specialist	refined based on in-depth specialist	
	investigations will also need to include the	investigations.	
	terraces on the Namibian side as these	investigations.	
	terraces are rare and vulnerable and have		
	already suffered some damage.		
1.9	Closure	Presenter Marissa Botha (NEC)	
1.9	The way forward was recapped. Naledzi will		
1.7.1	make it available to participants via email. The		
	submissions made on the Draft Scoping Repor	e	
	Scoping Reports for submission to the DMRE.	is will be meorporated into the r mansed	
1.9.2	Participants were afforded until COB 15 De	cember 2020 to submit their finalised	
1.7.4	comments based on the meeting discussions.	control 2020, to submit their initialised	
1.9.3	The Finalised Scoping Reports will be submitted to the DMRE Springbok no later than		
1.7.5	11 January 2021. The DMRE will have 43 days to accept or reject the Scoping Reports.		
1.9.4	Interested and Affected Parties will be notified of the DMRE's decision on the Scoping		
1.7.4	Reports.		
1.9.4	Participants were thanked for their comments and the meeting was closed.		
1.7.7	Tarterparts were thanked for their comments and the meeting was closed.		

### Attachments:

### **Annexure A-Zoom Participants List**

### **Annexure B - PowerPoint Presentation**

Annexure C – Maps

Annexure **D** 

Key Plan showing PRAA's relation to existing Mining Right Areas

The recording of this meeting is available on the following One Drive folder:

https://ldrv.ms/u/s!Aphfm3X6bo0GkAeYn1UxbG8am3Ak?e=Bgw DgO Meeting ID: 87902448448 Topic: Key Stakeholders Meeting - EIA Study & WULA Samara Mining Prospecting Right Applications, Orange River, Richtersveld, Northern Cape, South Africa Date: 14 December 2020, 14:00 Participants:

#### Name (Original Name), User Email, Join Time, Leave Time, Duration (Minutes)

Marissa Botha (Naledzi) (Desmond Musetsho),dmusetsho@naledzi.co.za,12/14/2020 01:52:16 PM,12/14/2020 04:08:08 PM,136 LOR Boardroom, rooms cj8jzggzrr6phwuxhdbsxg@lor.co.za,12/14/2020 01:52:39 PM,12/14/2020 01:53:12 PM,1 PRamollo..12/14/2020 01:52:52 PM.12/14/2020 01:53:13 PM.1 LOR Boardroom, rooms cj8jzggzrr6phwuxhdbsxg@lor.co.za,12/14/2020 01:53:13 PM,12/14/2020 04:07:26 PM,135 PRamollo,,12/14/2020 01:53:14 PM,12/14/2020 02:39:50 PM,47 PlessisN,,12/14/2020 01:57:23 PM,12/14/2020 01:57:34 PM,1 PlessisN,,12/14/2020 01:57:35 PM,12/14/2020 04:07:32 PM,130 Bronwyn Maree - BirdLife South Africa, bronwyn.maree@birdlife.org.za,12/14/2020 01:58:43 PM,12/14/2020 01:58:56 PM,1 Bronwyn Maree - BirdLife South Africa, bronwyn.maree@birdlife.org.za,12/14/2020 01:58:57 PM,12/14/2020 04:07:35 PM,129 NorbertJuergens, 12/14/2020 01:59:00 PM, 12/14/2020 01:59:09 PM, 1 leilanis,,12/14/2020 01:59:05 PM,12/14/2020 01:59:21 PM,1 NorbertJuergens, 12/14/2020 01:59:10 PM, 12/14/2020 04:07:29 PM, 129 leilanis, 12/14/2020 01:59:22 PM, 12/14/2020 04:07:44 PM, 129 Melissa Lewis,,12/14/2020 02:00:05 PM,12/14/2020 02:00:15 PM,1 Melissa Lewis..12/14/2020 02:00:15 PM.12/14/2020 04:07:31 PM.128 Ndi, 12/14/2020 02:15:50 PM, 12/14/2020 02:16:51 PM, 2 iPhone, 12/14/2020 02:16:16 PM, 12/14/2020 02:16:31 PM, 1 iPhone..12/14/2020 02:16:31 PM.12/14/2020 02:18:49 PM.3 Ndi..12/14/2020 02:16:51 PM.12/14/2020 04:08:08 PM.112 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:31:49 PM, 12/14/2020 02:32:50 PM, 2 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:32:50 PM, 12/14/2020 02:36:45 PM, 4 Tina vd Merwe, 12/14/2020 02:37:25 PM, 12/14/2020 02:37:33 PM, 1 Tina vd Merwe..12/14/2020 02:37:34 PM.12/14/2020 02:40:00 PM.3 PRamollo..12/14/2020 02:40:02 PM.12/14/2020 04:07:38 PM.88 Tina vd Merwe,,12/14/2020 02:40:19 PM,12/14/2020 02:40:27 PM,1 Tina vd Merwe, 12/14/2020 02:40:28 PM, 12/14/2020 04:08:07 PM, 88 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:52:24 PM, 12/14/2020 02:52:37 PM, 1 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:52:38 PM, 12/14/2020 02:53:34 PM, 1 B.Kohrs, 12/14/2020 02:56:01 PM, 12/14/2020 02:56:12 PM, 1 B.Kohrs,,12/14/2020 02:56:13 PM,12/14/2020 04:08:05 PM,72 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:58:26 PM, 12/14/2020 02:59:38 PM, 2 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:59:38 PM, 12/14/2020 03:00:52 PM, 2 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 03:01:05 PM, 12/14/2020 03:08:54 PM, 8 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 03:09:35 PM, 12/14/2020 03:33:13 PM, 24 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 03:35:53 PM, 12/14/2020 03:36:06 PM, 1 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 03:36:07 PM, 12/14/2020 03:37:33 PM, 2 Bridget Tshioma.btshioma@gmail.com.12/14/2020 03:37:45 PM.12/14/2020 03:45:33 PM.8 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 02:36:46 PM, 12/14/2020 02:49:08 PM, 13 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 03:45:45 PM, 12/14/2020 04:01:23 PM, 16 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 04:02:45 PM, 12/14/2020 04:03:56 PM, 2 Bridget Tshioma, btshioma@gmail.com, 12/14/2020 04:04:46 PM, 12/14/2020 04:05:45 PM, 1

### STAKEHOLDERS ZOOM MEETING

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS AND WATER USE LICENSE APPLICATION FOR TWO ALLUVIAL DIAMOND PROSPECTING RIGHT APPLICATIONS WITH BULK SAMPLING ON THE LEFT BANK OF THE ORANGE RIVER, RICHTERSVELD, NAMAKWA DISTRICT, NORTHERN CAPE PROVINCE, SOUTH AFRICA

DMR Ref. NCS 30/5/1/1/2/1 (12664) PR & NCS 30/5/1/1/2/1 (12663) PR

#### DATE: 14 December 2020 TIME: 14:00hrs - 16:00hrs. VENUE: ZOOM MEETING (MEETING ID: 879 0244 8448 PASSCODE: 656384)

#### PURPOSE OF THE MEETING

- Provide the legislative requirements, project background and locality
- Provide details on the prospecting infrastructure and method including designs
- EIA Process and Public Participation
- Discuss the potential impacts and any legal implications
- Confirm EIA Phase specialist study requirements
- To record any comments, issues and concerns from stakeholders on the applications

### **DRAFT AGENDA**

#### Facilitator: Marissa Botha – Naledzi Environmental Consultants Pty Ltd

-		
1	WELCOME, INTRODUCTIONS, PURPOSE OF MEETING	Marissa Botha
		Naledzi Environmental Consultants
-		
2	APPLICATION SUMMARY (LEGAL BACKGROUND,	Marissa Botha
	LOCALITY, DETAILS, INFRASTRUCTURE)	Naledzi Environmental Consultants
-	PROJECT PACKOPOLINE PROCRECTING METHOD AND	
3	PROJECT BACKGROUND, PROSPECTING METHOD AND	Samara Mining (Pty) Ltd
	RELEVANT DESIGNS	
4	EIA PROCESS AND PUBLIC PARTICIPATION PROCESS	Marissa Botha
	LIA FRUCESS AND FUDLIC FARTICIPATION PRUCESS	
		Naledzi Environmental Consultants
5	POTENTIAL IMPACTS AND ANY LEGAL IMPLICATIONS	Marissa Botha
		Naledzi Environmental Consultants
6	PROPOSED EIA PHASE SPECIALIST INVESTIGATIONS	Marissa Botha
-		Naledzi Environmental Consultants
		Naleazi Environmentai Consultants
7	WATER USE LICENSE APPLICATION	Marissa Botha
		Naledzi Environmental Consultants
8	DISCUSSION SESSION (Q & A)	All
9	THE WAY FORWARD & CLOSURE	Marissa Botha
-		Naledzi Environmental Consultants

### **EIA STUDY AND WATER USE LICENSE APPLICATION**

## SAMARA MINING (PTY) LTD ALLUVIAL DIAMOND PROSPECTING RIGHT APPLICATIONS WITH BULK SAMPLING

DMR REF. NCS 30/5/1/1/2/12664 PR, 12663 PR

## **STAKEHOLDERS MEETING**

14 DECEMBER 2020, 14:00



# Introductions



**APPLICANT - SAMARA MINING (PTY) LTD** *Hereinafter Samara* 



GEOLOGISTS & PROJECT MANAGER (AGENT TO SAMARA)



**NEC INDEPENDENT EAP TO FACILITATE EIA STUDY** Meeting Facilitator : Marissa Botha

## PLEASE NOTE THIS SESSION IS BEING RECORDED

# Agenda

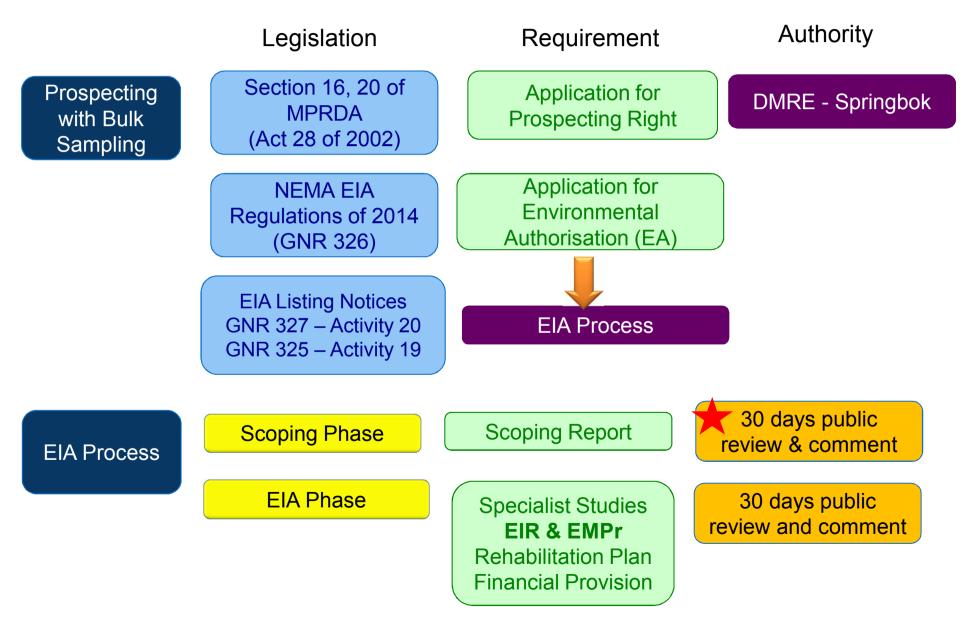
- 1. Purpose of the meeting by Naledzi
- 2. Application Summary by Naledzi
- 3. Project Background and Prospecting Method by Samara
- 4. Overview of the EIA & Public Participation Process by Naledzi
- 5. Potential Impacts, legal implications as per EAP and Specialist Scoping
- 6. Planned EIA Study Specialist Investigations by Naledzi
- 7. Water Use License Application (Naledzi / Ages)
- 8. Discussions (All)
- 9. Way Forward (Naledzi)

# **Purpose of Meeting**

Provide legal background of applications

- □ Provide an **overview** of the **applications** and **location**
- Overview of the **EIA Process and Public Participation Process** followed
- Provide the potential biophysical and socio-economic environment impacts
- Detail any legal / project implications
- Give stakeholders **opportunity to seek clarity**
- **Solicit comments** from stakeholders for consideration in the EIA Study
- **Record comments** in the Final Scoping Report **for consideration by DMR**

# Legislative requirements



# **Application Summary**

■Samara has submitted two applications for environmental authorisation for alluvial diamond prospecting with bulk sampling to DMRE: Springbok on 22 July 2020. DMRE has 'accepted' the applications on 15 September 2020.

Table 1: Prospecting Right Application Areas (PRAA)

Application DMRE Ref	Property	Size
<b>PRAA 1</b> NCS 30/5/1/1/2/12664 PR	Left bank of the Orange River boundary to Portion of Remainder of Farm Richtersveld No. 11	987.98 Ha
<b>PRAA 2</b> NCS 30/5/1/1/2/12663 PR	Left bank of the Orange River boundary to Portion of the Remainder of Farm No. 18	690 Ha

□ If granted, the prospecting rights will be valid for five (5) years.

□ Samara is requesting for environmental authorisation for eight (8) years in case of renewal of the prospecting right for another three (3) years.

# **Location of Applications**

Ward 1 & 2 of the Richtersveld Local Municipality , Namakwa District Municipality , Northern Cape Province, South Africa

- On the left / south bank, below the floodline of the Orange River near Sendelingsdrift, on the border between South Africa and Namibia, approximately 30km north east of Alexander Bay.
- □ The high-water level on the northern bank of the Orange River demarcates the SA border (1890 treaty). Prospecting will thus take place in SA.

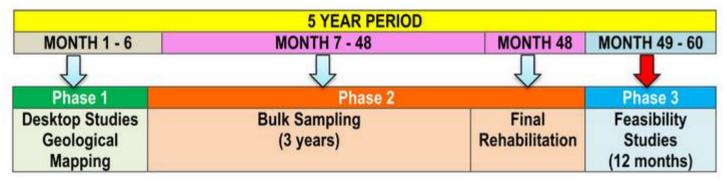
□PRAA 1 – 12664 PR is approximately 250m west of Sanddrift

- On Orange River within 10kmof Richtersveld Botanical and Cultural Landscape, Richtersveld National Park
- .....Scoping Report & PoS\Scoping Report 12664 PR PRAA 1\Finalised PRAA 1 PR 12664\PRAA 1 Appendix 3 Location Map REGULATION 2(2) - 12664.pdf
- □PRAA 2 12663 PR is approximately 10km northeast of Sendlingdrift
  - Located within the Richtersveld National Park, Richtersveld Cultural and Botanical Landscape World Heritage Site
  - Image: Appendix 3 Location Map REGULATION 2(2)[1] 12663.pdf

# **Prospecting & Bulk Sampling Details**

- Samara will prospect for alluvial diamonds from the bed, banks, active channel and various terraces along the Orange River, within the 1: 100-year flood line of the river.
- Bulk sampling will focus on several prospecting pockets within the two greater prospecting right areas (PRAA):
- □..\..\..\Prospecting Target Areas\new maps 20201207\OENA POCKETS.png

**DURATION:** The PWP will be conducted over a five (5) year period.



Phase 2 will include invasive Bulk Sampling (3yr) with concurrent rehabilitation

Positive results in Phase 3 = Samara apply for Mining Permit to start 'pilot mine'

## ORANGE RIVER – ILLUSTRATION OF POCKETS WHERE BULK SAMPLES ARE TO BE TAKEN

# Prospecting & Bulk Sampling Method

### **METHOD STATEMENT:**

□ Site preparation (doze off vegetation, topsoil)

Excavate **10 trenches** per application area, each 100m x 25m x 4m with each sample size being 10 000m3. Trenches will be excavated from prospecting pockets.

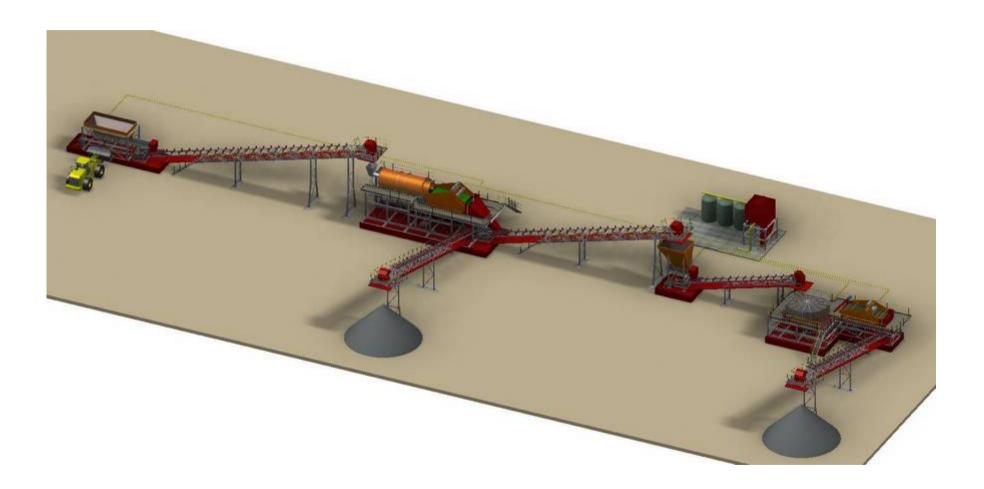
Load and haul samples to a Rotary Pan Plant to process, screen, concentrate samples and recover diamonds. No chemicals will be used in the process.

■ Minor temporary diversions of the river will be constructed to gain access to alluvial material. A channel way will be excavated from the current river flow on the dry side of the river bed. Open bottom and top entrances will be included to allow flow through new channel and include a cast bunt wall in the river to direct flow through the new channel.

Tailing and overburden will be backfilled (returned) into excavations, followed by topsoil.

Distributed areas will be appropriately rehabilitated according to environmental guidelines.

# **Rotary Pan Plant Design**

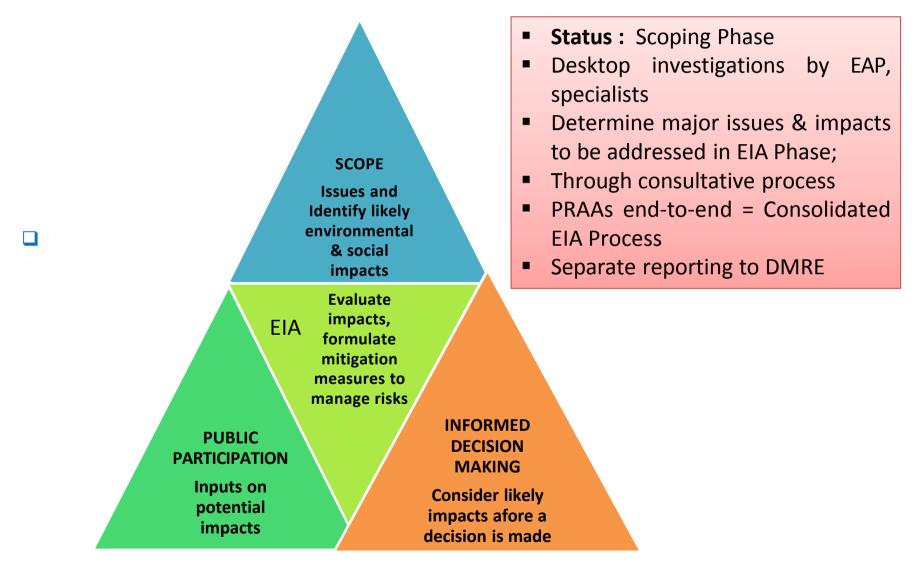


# **Prospecting & Bulk Sampling Details**

### □ INFRASTRUCTURE WILL INCLUDE:

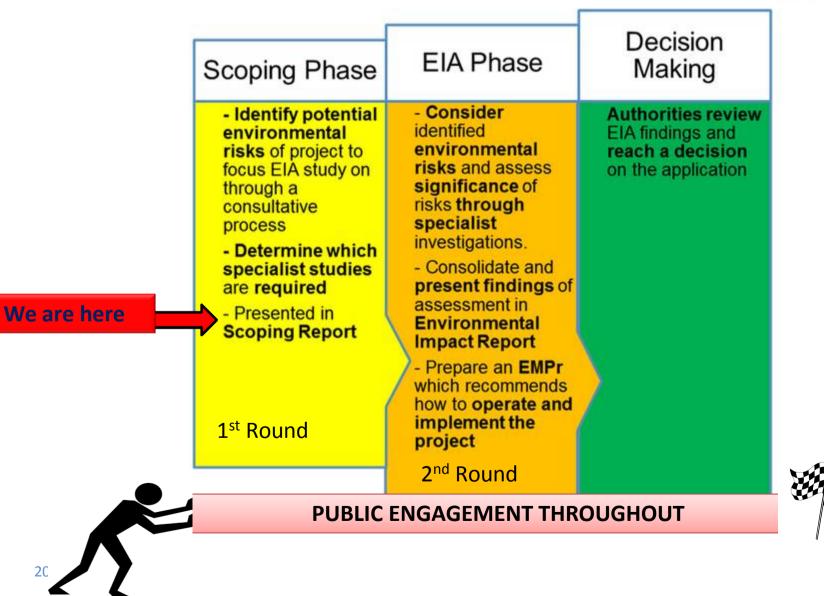
- □Ablution facilities;
- Access roads
- Diesel storage facilities
- Fences
- □Office sites
- □ Stockpiles
- Rotary Pan Plant
- □Contractor's camp
- □Vehicle parking areas.
- □ The Rotary Pan Plant will be located on the Orange River embankment below the 1: 100 year flood line, above the active channel, not less than 50m from the river bed. Only machinery and associated pumps will be located within the riverbed. No slimes dam will be constructed as part of the processing infrastructure.
- □The location of processing infrastructure must still be finalised based on the recommendations to be made by the specialist investigations;

# Scoping & EIA Process



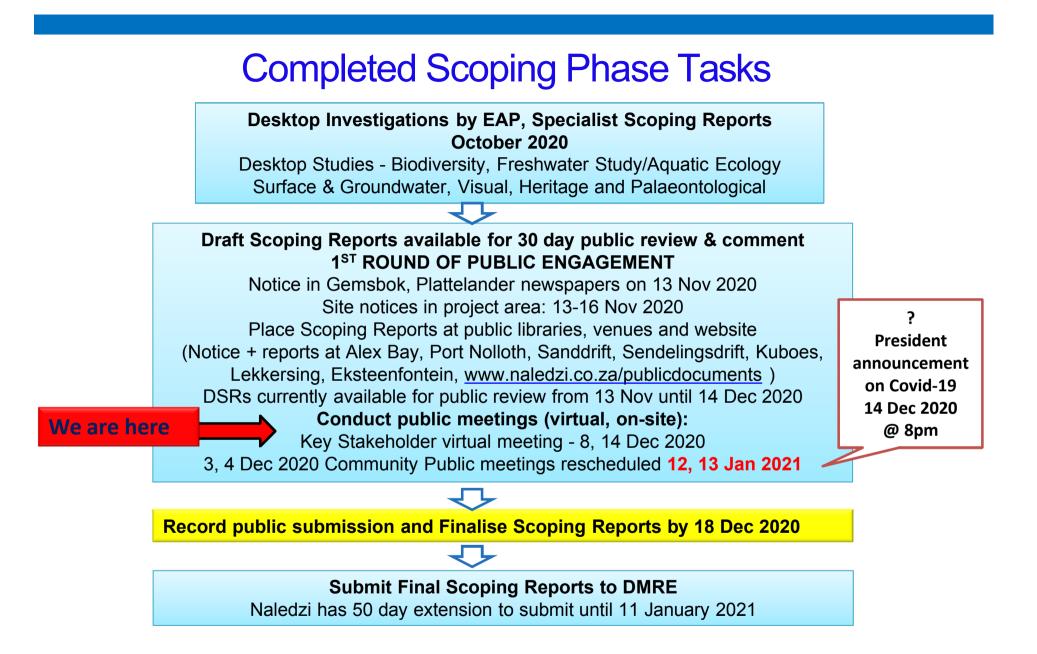






# **EIA Process Timeline**

	Requirement	Status / Anticipated date
HASE	Applications for Environmental Authorisation	<ul> <li>✓ Lodged 22 July 2020</li> <li>✓ Accepted 15 Sept 2020</li> </ul>
G PF	Prepared Scoping Reports PRAA 1 & 2	✓ November 2020
SCOPIN	Round 1 of Public Participation (SR 30 days public comment)	13 Nov 2020 until COB 14 December 2020
SC	Submit Final Scoping Reports to DMRE	By 8 January 2021 (law)
PHASE	Specialist Studies EIR & EMPR Reports PRAA 1 & 2 Closure & Rehabilitation Plan Financial provision for rehabilitation costs	End January - February 2021 March - April 2021
EIA	Round 2 of Public Participation (30 day public comment)	May 2021
	Submit Final EIR & EMPr reports to DMRE	June 2021
	Decision by DMRE: Springbok	September 2021



## Round 1 of public engagements

- DSRs hard copies are available at the following public venues:
  - Sendelingsdrift SANPARKS Offices
  - Sanddrift, Kuboes, Eksteenfontein and Lekkersing Public Library
  - Naledzi website: <u>http://www.naledzi.co.za/public-documents-naledzi.php</u>
- The availability has been announced through adverts, notice boards and emailed notifications to I&APs;
- Virtual meetings scheduled on 8, 14 December 2020
  - 8 Dec 2020 Local & district government, Key organs of state, I&APs
- 14 Dec 2020, 10am Key organs of state
  - 14 Dec 2020, 2pm Registered I&APs (all other parties registered on database can participate including downstream water users),
- Public Meetings with the affected communities scheduled for 3-4 Dec 2020 have been postponed until 12, 13 January 2021 due to claims of application overlapping existing LoR MRA and covid-19 risk in the Richtersveld;
- In consultation with Richtersveld LM & councillors January 2021 public meetings have been announced (notice boards, Whatsapp Group, email)

# Scoped issues, potential impacts - A

### **IMPLICATIONS**

□PRAA 2 is within a protected area (Richtersveld National Park, Richtersveld CBL World Heritage Site).

□ Applicant and I&APs notified of this issue on DSR availability letter.

**SPATIAL QUERY WITH DMRE** – Claims of Samara Prospecting Right Applications overlapping Lower Orange River Diamonds (Pty) Ltd and Oena Mine Mining Right Area (LOR already hold rights to diamonds).

NEC submitted spatial query to DMRE and notice of denied access on 4 Dec 2020;
 Samara, LOR and DMRE engaged on 11 Dec 2020 in this regard. (Samara provide outcome?)

EXISTING LAND USE: Existing diamond mining operations in PRAAs. Livestock farming and grazing along banks of Orange River (water, riparian vegetation).
 Samara to negotiate access or agreement with LoR & Oena Mine for placement of infrastructure.

Livestock farmers still require access to banks of Orange River for grazing

# Scoped issues, potential impacts - B

#### SIGNIFICANT FEATURES ONSITE & IMPACTS:

□Applications area are on the Orange River. Orange River along PRAA 1 is classified as being in a natural to good ecological condition (Class A/B), while the PRAA 2 portion of the Orange River is moderately modified (Class C), according to the NFEPA Database (2011).

□PES 1999 classification as well as the NBA (2018), the Orange River is considered moderately modified. This is mainly attributed to historic and ongoing anthropogenic activities taking place within close proximity to the Orange River i.e. historic and active sand and diamond mining, establishment of settlements and construction of a formal road on the Namibian side of the system. Significant impact from water abstraction from the system is also deemed likely.

According to the PES /EIS Dataset (DWS, 2014) the Orange River is host to numerous fish and macroinvertebrate species all of which may potentially be affected should any disturbance occur within the Orange River.

The bulk sampling activities will take place directly adjacent and within the delineated boundary of the Orange River and the potential impact on the river is significant.

■Water diversion and impedance to limit ingress of water to excavations would result in reduced river flow volume in the Orange River, which will impact on the functioning of the Orange River gauging weirs and affect their accuracy. Sedimentation and erosion control will be vital at focus areas. Changes in river flow volume will impact on downstream water users

□PRAA 1 & 2 are 30km upstream of the Orange River Mouth Ramsar Site – sedimentation from bulk sampling have the potential to affect the Orange River Mouth. Such impact, if regarded as significant, will be unacceptable.

### Scoped issues, potential impacts - C

- Bulk sampling activities have the potential to impact on the groundwater quantity by lowering static water level and localised dewatering;
- Groundwater contamination may take place due to petro-chemical spills, increased sediment loads and possible e-coli contamination from on-site sanitation.
- Applications located in the Gariep Centre of plant endemism and are associated with the endangered Lower Gariep Alluvial vegetation – listed as National Threatened Ecosystem, 2011;

Biodiversity: Several protected tree and floral species have the potential to be located within the prospecting focus areas;

□ Richtersveld National Park has high eco-tourism aspect. The prospecting activities will have the potential to have a significant impact on the ecotourism of the area (hiking, sport fishing, bird watching, river rafting, high biodiversity, camping sites)

□ Heritage Resources: Stone tool sites scattered along the Orange River banks are likely to be impacted by the prospecting and sampling activities. Any impact on these features will be permanent and non-reversible.

■PRAA 1 pockets in proximity to Jakkalsberg archaeological site. The site contains unique collection of artefacts attributed to ancestors of Nama herders. Jakkalsberg, an open site on the banks of the Orange River.

■ Palaeontological Sensitivity – Moderate, low to insignificant. Possibility for fossil finds still exist. The rocks of the Gariep Supergroup that underlie the sediments in the western part of the study site may contain stromatolites.

### Scoped issues, potential impacts - D

□ The Orange River System is extremely ecologically important and sensitive. The bulk sampling activities poses a very significant risk to the system. Essential that all aspects of bulk sampling activities are considered in extensive detail, and all aspects are exceptionally well planned and executed. It must also be noted from the outset that significant constraints are likely to be placed on the activity to conserve the environment, as a minimum, if the development is authorised to proceed at all.

#### □Visual Impact:

Area is naturally dark with limited/ no sources of nigh time-light. Activities likely to have a very high visual impact on the landscape character, sense of place and visual quality of the area, due to the sensitivity of the focus area situated within the Richtersveld National Park, not necessarily the nature and size of the operation.

□ Bulk sampling activities may have a potentially very significant negative visual impact on the camping sites within the Richtersveld National Park.

Sensitive Receptors include settlements Klipheuwel, Sendelingsdrif, Auchas, Sanddrift, and Skilpad. There are limited gravel roads on the SA side of the Orange River, however several roads are present on the Namibian side of the river; namely: the Daberas Pass, Auchas Pass, Niklaas Pass and the formalised C13 Road running along the Orange River.

A full list of potential impacts are included in the Scoping Reports for the applications and Specialist Scoping Reports and are subject to further indepth fields investigation by specialists and EAP

#### LEGAL IMPLICATIONS

□ PRAA 2 is located within a protected area (Richtersveld National Park, Richtersveld Cultural Botanical Landscape). According to NEMPAA these areas are legally protected, and mining herein is prohibited;

#### Other as per Biodiversity and Conservation Plans:

According to Northern Cape Critical Biodiversity Areas (2016) database, the focus area was identified as falling within a Critical Biodiversity Area (CBA1) and within a Protected Area

□PRAA 1 fall within a CBA1 area, whereas PRAA 2 pockets are located within a protected area.

Protected and CBA1 areas consist of intact, undisturbed ecosystems.

□ According to Namakwa Bioregional Plan in terms of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), strictly no mining is allowed within these regions.

□Mining and Biodiversity Guideline 2013 - PRAA 1 pockets 2, 3A and 3B are located in area of Highest Biodiversity Importance and therefore poses a high risk for mining. If the presence and significance of these biodiversity features are confirmed during the site assessment, it is deemed likely that these areas could also be considered no-go areas from a biodiversity perspective due to the high impact and potential loss of irreplaceable habitat.

### SPECIALIST INVESTIGATIONS REQUIRED

Study	Aspect
Terrestrial Biodiversity	Fauna, Flora, Avifauna
Freshwater Study	Aquatic Ecology, fish
Heritage and Palaeontological Study	Cultural, Heritage, Palaeontological resources
Surface and Groundwater Study	Impact on surface and groundwater
Visual Impact Assessment	Sense of place, landscape character, light pollution,

- Naledzi and specialists require access to prospecting right areas to conduct the above field investigations.
- The field investigations will allow Naledzi to determine evaluate the potential impacts and to produce well informed EIR and EMPR Reports for the application areas.
- The intention is to start field investigations in January 2021
- However due to spatial query, acess is still been sought to the bulk of the prospecting right areas from Lower Orange River Diamonds, bulk of sites only accessible from existing LOR mine roads..

### Water Use License Application

A WUL Application in terms of section 40 of the NWA will be submitted to the Department of Water and Sanitation: Orange Proto for Section 21 water uses (S21a, c, f, g, i) triggered by the diamond prospecting including an application for the relaxation of conditions imposed by GN704 (GG-20119), due to workings within the river flood line. Applicable water uses include:

□S 21a - Abstracting water from the Orange River

- S21c Diversion of the water course during the bulk sampling, impeding natural flow
- S21f Clarified water from the filtration process at the prospecting works will be released back to the river
- S21g Stockpiles (topsoil, product/alluvial gravel, waste material) and temporary on-site disposal of waste
- S21i Temporary altering of course of the water course, bulk sampling excavation and subsequent rehabilitation within the 1: 100 year flood line, release of clarified water back into the Orange River downstream of the workings
- Samara is still refining the prospecting method, designs and placement of site infrastructure before the WULA can be lodged.

### CONCLUSION

Samara Mining (Pty) Ltd values the environment and communities of the application areas and is therefore undertaking a high end environmental impact assessment process to:

Gauge the likely environmental impacts of the project;

- Formulate mitigations measures with the assistance of multi disciplined specialist team, to avoid and or manage the potential significant impacts of the prospecting and bulk sampling activities along the Orange River.
- □ It is Samara's intention to work in a phased (small-scale) manner with concurrent rehabilitation to minimise potential impacts and risk of degradation of the affected focus areas.



### PRESENTATION BY: DR. SMA DYWILI SERVICE BEYOND EXPECTATION 16A SMITSDRIFT ROAD WEST END KIMBERLEY 10 INDUSTRIAL ROAD BARKLY WEST

NORTHERN CAPE

### CURRENT STATUS QUO-FOOD FOR THOUGHT

A number of young people in the Richtersveld area are without jobs and critically affected by poverty and crime. Many are under the age of 20, with dependants, no social security system to tide them over, and with an even smaller chance of securing regular employment than the average person. In addition, there is little or no support offered to these young people and their families. Skills development remains a critical part of

job creation and poverty eradication.

## **JOB CREATION**

We are geared towards making a contribution in the following strategic objectives:

Samara will ensure 90% of employment will come from Koeboes, Sandrift,Lekkersing, Eksteenfontein and Sendilingsdrift. This will ensure local communities benefit maximally from job opportunities emanating from this prospecting right.

## SMALL ENTERPRISE DEVELOPMENT

As part of local development, Samara will avail land to local artisanal miners and support them with the necessary equipment to ensure their gradual growth and sustainable development.

Samara will also ensure gender balance in all opportunities created by this prospecting right. This will be done in partnership with local stakeholders to ensure a multi-disciplinary approach.

## AGRICULTURE

All agricultural land will remain protected for agricultural usage. Samara will also support local farmers through linking them to national and provincial institutions focusing on funding, skills development and training.

Samara will use the emerging farmers program as a tool to support and capacitate local farmers.

To ensure sustainability, Samara will set up a trust that will serve as a financial support system for agricultural development in the

## SOCIAL

Samara will partner with Provincial and Local Government to ensure;

Upgrade of local clinics and schools

- Give support to schools transportation and feeding schemes
- Revive community policing forums
- Support all Victim Empowerment Programs in the area
- Revive sports, arts and culture programs and upgrade all sporting facilities
- Capacitate all victim support facilities at local police stations
- Emphasize the participation of youth and women in all opportunities emanating from this prospecting right

Skills development remains critical in ensuring sustainable job creation. Samara will form a partnership with all the SETA's particularly the MQA and Agri-Seta to ensure proper skills development in the Richtersveld area.

SKILLS

One of our priority focus areas is the upgrade of the training centre in Alexanderbaai and establish a local trade test centre.

Our primary focus is to develop a state of

### CONCEPT

The strategy seeks to contribute maximally to the NDP vision that by;

"By 2030, South Africa will be a society in which all people Live in safe environments; Play a role in creating and maintaining the safe environment; feel and are safe from crime and violence and conditions that contribute to it; have equal access and recourse to high quality services when affected by crimeTandOviolerioeset out by the White Paper on Safety and Security

### STRATEGIC

PARTNERSHIPS

To ensure proper consultation, alignment and stakeholder relations a skills expo is scheduled to take place and will focus on the following:

Develop an integrated skills development

program

- To identify shortage of skills
- Design strategic focus areas and priorities
- Develop a coordination tool for all skills
  - development programs in the mining sector.
- Design a stakeholder relations program aligned
  - to the critical and scares skill development

centre.

# Questions?



Naledzi Environmental Consultants

### **Our Contact Details**

Naledzi Environmental Consultants
 Suite #320, Postnet Library Gardens
 Private Bag X9307, POLOKWANE, 0700



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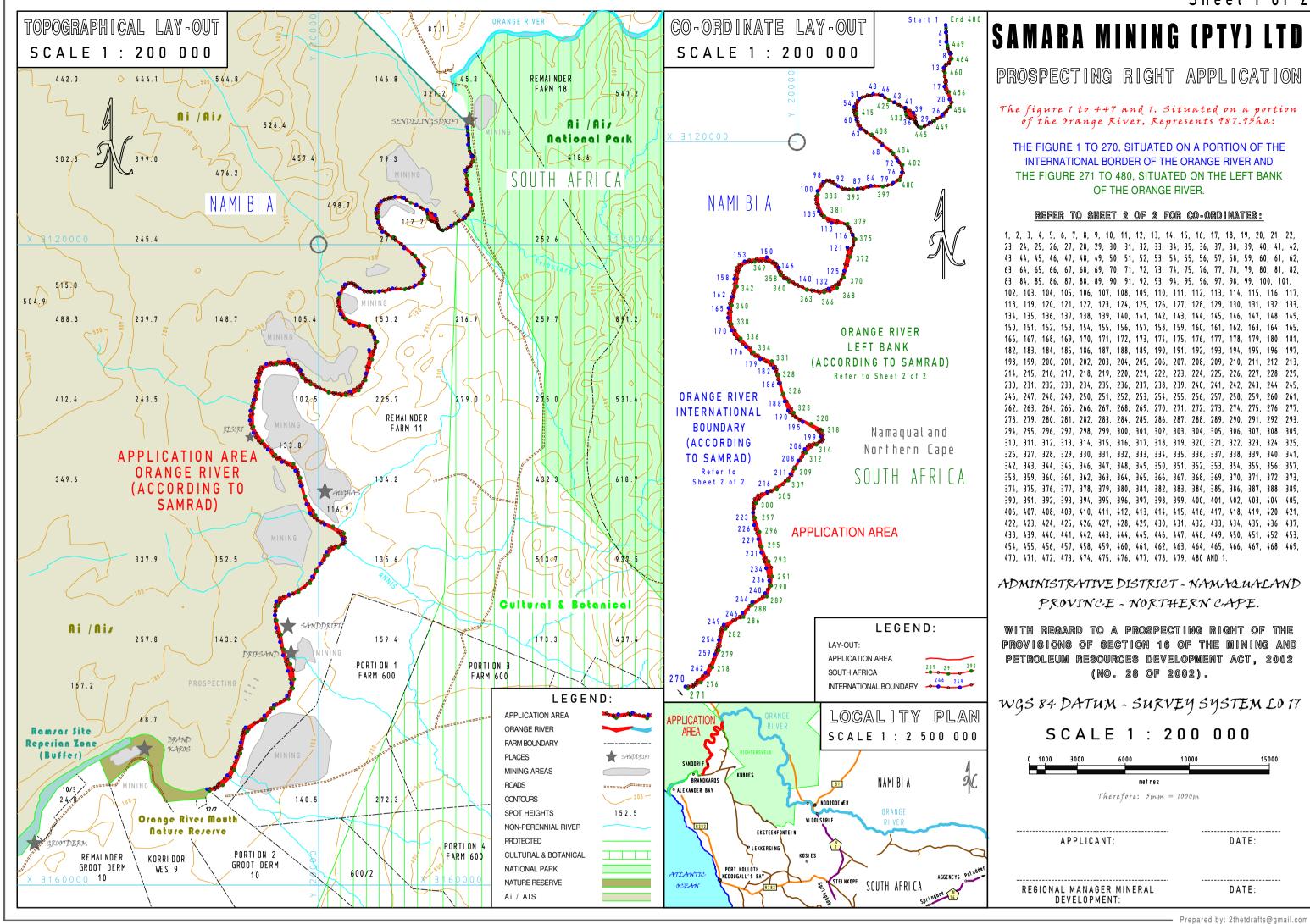
www.naledzi.co.za

### Way Forward

Prepare, distribute and finalise the minutes of the meeting;

- Incorporate all commenting authority and public inputs received during the Scoping Phase in a consolidated Issues and Response Report and into the Final Scoping Reports;
- Submit the Final Scoping Reports to DMR: Springbok by no later than 11 January 2021;
- DMR will notify the EAP within 43 days if the reports are accepted/rejected;
- Conduct public engagement meetings with communities in January 2021
- Commence with EIA Phase and specialist field investigations from January to February 2021
- Prepare EIR & EMPR Reports
- Conduct 2<sup>nd</sup> round of public engagements

Sheet 1 of 2



WGS 84 DATUM - SURVEY SYSTEM LO 17

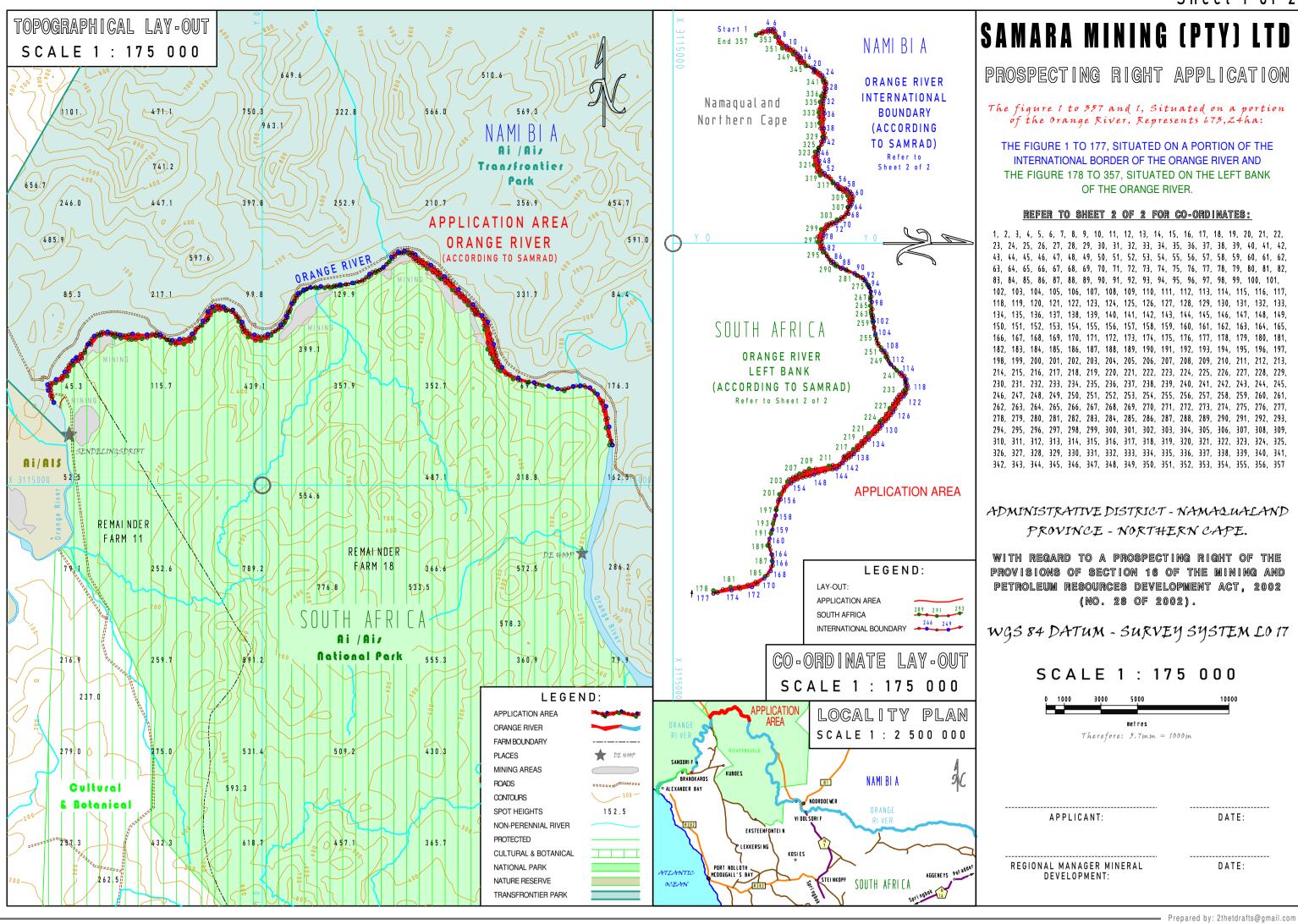
GIS CO-ORDINATES:

Sheet 2 of 2

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27       21.1009       10.480204       87       -28.240400       10.78024       207       -28.30134       10.78027       397       -23.21464       10.78027       397       -23.21464       10.78027       397       -23.21464       10.78027       397       -23.21464       10.78027       397       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.78026       388       -23.21464       10.7802       388       -23.21244       10.78026       388       -23.21248       10.78026       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.7802       388       -23.21464       10.78026<	25 -28.178110	16.889965	85	-28.219344				16.786238					16.731154	325				16.813053	445		16.875297
29.         21.         223.         19.         19.         23.         19.         19.         23.         19.         19.         23.         19.         19.         23.         19.         19.         23.         19.         19.         19.         23.         19.         19.         19.         19.         19.         19.         19.         19.         19.         19.         19. <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16.877507</td>									1					_							16.877507
9         -28.1324         16.48674         99         -28.2026         16.78674         29         -28.2026         16.78244         39         -28.2026         16.78244         39         -28.2026         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         39         -28.2028         16.78244         32         -28.2028         16.78244         32         -28.2028         16.78244         39         -28.2028         16.78244         33         -28.2028         16.78244         32         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.2028         16.78244         33         -28.202845         16.78244         33 <td></td> <td></td> <td>-</td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16.880340</td>			-											_							16.880340
19         28.1464/1         16.2755         10         28.2273         16.28464         15         28.2773         12         28.7737         10         28.7737         27         28.7334         10.77857         33         28.7384         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77453         29.23744         10.77414         29.22728         10.83464         45.27177         10.83744         10.77473         27.7777         27.3777         10.77471         29.237441         10.774173																					16.881871
1       -28. (1964)       16. (27190)       91       -28. (2006)       16. (27191)       21       -28. (1964)       16. (27192)       16. (2211)       16. (222111)       16. (22211)       16. (22211)																					16.883711 16.885653
12         -28.18119         16.27017         29.         -28.2074         16.27024         50.27023         16.27024         50.27023         16.27024         50.27023         16.27024         50.2703         50.27034         16.27024         16.27024         16.370														-							16.888022
3         -29.166/19         16.27362         93         -28.27244         16.27365         33         -28.37444         16.27365         33         -28.37444         16.27365         33         -28.37444         16.27365         33         -28.37444         16.27365         33         -28.37444         16.27365         334         -28.37444         16.27365         334         -28.37444         16.27365         334         -28.37444         16.27365         334         -28.37444         16.27365         334         -28.37464         16.27365         334         -28.37164         16.27365         334         -28.371644         16.27365         334         -28.371644         16.27365         334         -28.371644         16.27365         335         -28.371644         16.27365         335         -28.371644         16.27365         335         -28.371644         16.27365         335         -28.371647         16.373642         17.771         17.771         17.7721         27.77         -21.46407         16.27865         335         -28.30047         16.70815         397         -22.21961         16.85656         43         -28.71075         45.7576         42.75756         42.75756         42.75756         42.75756         42.75756         42.75756         42.75756																					16.889679
5         -28.13199         16.87122         99         -28.21869         16.87077         195         -28.2092         16.77027         215         -28.30078         19.77010         276         -28.409015         15.7716         276         -28.10100         10.760313         395         -28.218001         10.84283         455         16.771716         276         -28.40901         15.71803         395         -28.21801         10.78031         395         -28.21801         10.78031         397         -28.21801         10.78031         397         -28.21807         16.78031         397         -28.21807         16.78031         397         -28.21807         16.78031         397         -28.21807         16.78031         397         -28.21807         16.78031         397         -28.21807         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78031         397         -28.21801         16.78														_							16.891543
58         -28.12939         96         -28.21970         16.47729         15         -28.20495         16.77267         216         -28.18930         16.77071         236         -28.30482         16.78031         396         -28.20495         16.84920           37         -28.17190         16.81278         155         -28.28950         16.77267         271         -28.3151         67.77071         277         -28.494007         16.734501         337         -28.30468         16.75551         397         -28.219576         16.85510         48.2         -28.10766         16.8551         397         -28.10967         16.8551         48.2         -28.10766         16.8551         48.2         -28.10821         16.8551         48.2         -28.10821         16.8551         48         -28.10821         16.8516         497         -28.10821         16.8516         497         -28.10821         16.8516         497         -28.10821         16.8516         497         -28.10821         16.8516         497         -28.10821         16.8516         497         -28.10821         16.85164         497         -28.10821         16.85164         497         -28.10821         16.85164         497         -28.10821         16.750713         282         28.40874	34 -28.184479	16.872644	94	-28.217013	16.819722	154	-28.263215	16.759381	214 -28.388886	16.782733	274	-28.501330	16.729587	334	-28.312844	16.768520	394 -28.22	1226 16.834650	454	-28.174773	16.893885
1       -28. 18101       16. 81726       97       -28. 21676       16. 815299       16. 75840       217       -28. 48407       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       337       -28. 30067       16. 73801       437       -28. 16784       16. 74817       337       -28. 30067       16. 73817       107       -28. 16784       16. 78917       237       28. 48504       16. 74847       16. 74824       24       -28. 16574       16. 74817       16. 74817       16. 75784       24       -28. 16574       16. 75894       347       -28. 25681       16. 16.8619       40       -28. 16574       16. 75784       24       -28. 46504       16. 75694       347       -28. 25681       16. 75694       347       -28. 75674       16. 75784       347       -28. 25678       16. 75666       16. 75694       348 </td <td>35 -28.183169</td> <td>16.872182</td> <td>95</td> <td>-28.216354</td> <td>16.818737</td> <td>155</td> <td>-28.264902</td> <td>16.758099</td> <td>215 -28.390736</td> <td>16.779219</td> <td>275</td> <td>-28.500451</td> <td>16.731422</td> <td>335</td> <td>-28.310105</td> <td>16.766203</td> <td>395 -28.22</td> <td>1060 16.838426</td> <td>455</td> <td>-28.172136</td> <td>16.895097</td>	35 -28.183169	16.872182	95	-28.216354	16.818737	155	-28.264902	16.758099	215 -28.390736	16.779219	275	-28.500451	16.731422	335	-28.310105	16.766203	395 -28.22	1060 16.838426	455	-28.172136	16.895097
38         -28.173600         16.271490         98         -28.271537         16.76521         16.76521         38         -28.271537         16.76521         338         -28.29993         16.77551         38         -28.21911         16.851601           39         -28.17781         16.807374         99         -28.21865         16.15167         399         -28.21911         16.85160         455	36 -28.182869	16.872078	96	-28.215777	16.817195	156	-28.266820	16.757257	216 -28.391531	16.777001	276	-28.498970	16.734517	336	-28.304942	16.760313	396 -28.22	0045 16.841830	456	-28.166260	16.893099
9         -28.17736         16.80334         99         -28.218055         16.75814         219         -28.37165         16.76884         339         -28.28885         16.75349         399         -28.21853         16.86851           40         -28.17659         16.868341         100         -28.221851         16.705749         400         -28.21853         16.86181         400         -28.21853         16.86181         400         -28.175345           41         -28.175345         16.86144         102         -28.220815         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.21853         16.80182         401         -28.20725         16.85102         401         -28.20725         16.85102         401         -28.20725         16.85102         401         -28.20725         16.85102         401         -28.20725         16.85102         401         -28.20725         16.85102         401         -28.207102         16.85102         401	37 –28.181018	16.871796	97	-28.215803	16.815226	157	-28.269563	16.756648	217 -28.392489	16.773471	277	-28.494607	16.739501	337	-28.300687	16.756831	397 -28.21	9676 16.850910	457	-28.162394	16.891420
40         -28.17653         16.86341         100         -28.22901         16.75560         120         -28.3714         16.76313         16.76419         400         -28.21051         16.861641           41         -28.17569         16.86278         101         -28.220631         16.755122         221         -28.37654         16.76721         281         -28.486874         16.75628         342         -28.2150374         16.756783         401         -28.21031         16.861644         401         -28.21031         16.86164         401         -28.21031         16.86164         401         -28.21031         16.86164         401         -28.20128         16.86362         401         -28.20128         16.86362         401         -28.20128         16.86364         401         -28.20128         16.86362         401         -28.20128         16.86362         403         -28.20128         16.86364         403         -28.20128         16.86364         403         -28.20128         16.86364         403         -28.20128         16.86364         403         -28.20128         16.86364         403         -28.2018         16.86364         403         -28.2018         16.86364         403         -28.2018         16.86364         403         28.2018         16.863			-											-							16.891624
41       -28.175080       101       -28.22063       16.808295       161       -28.27465       16.752540       221       -28.46874       16.74827       541       -28.21500       16.75266       401       -28.21133       16.86074       461       -28.15329         42       -28.173343       16.861464       102       -28.226816       16.808129       162       -28.28104       16.75786       222       -28.46874       16.750240       343       -28.21748       16.7578473       402       -28.20319       16.85800       463       -28.15134         44       -28.170723       16.855166       104       -28.21818       16.758263       244       -28.46504       16.75892       344       -28.26581       16.758947       402       -28.20319       16.85801       464       -28.15723         45       -28.16812       16.85056       106       -28.234972       16.85261       467.75892       28       -28.45733       16.75754       447       -28.218930       16.75852       404       -28.20758       16.85764       466       -28.14426         46       -28.16812       16.86462       107       -28.23806       16.75852       405       -28.26181       16.76752       406       -28.195328       16.8507																					16.891401
42       -28.17333       16.861464       102       -28.22816       16.808129       162       -28.281633       16.75687       222       -28.409265       16.767846       282       -28.467743       16.757339       402       -28.207295       16.86502       462       -28.151344         43       -28.17186       16.555166       104       -28.23137       16.750210       223       -28.40773       16.751290       33       -28.27144       16.758913       403       -28.20107       16.85960       463       -28.105126       443       -28.17520       16.758913       403       -28.201744       16.758913       400       -28.20107       16.85960       463       -28.10520       16.850878       400       -28.20172       16.85092       463       -28.10520       16.75294       427.421.7520       445       -28.40723       16.75892       345       -28.206331       16.75895       400       -28.105226       465       -28.14620       457       -28.14823       16.75896       405       -28.159320       16.85077       466       -28.14420         47       -28.16743       16.84682       107       -28.23507       16.75247       227       -28.41996       16.70706       288       -28.56474       16.76743       346																					16.890564
43       -28.171980       16.858476       103       -28.29132       16.808462       163       -28.283546       16.75006       223       -28.40773       16.751289       343       -28.27148       16.758473       403       -28.201773       16.85996       443       -28.201723       16.85996       404       -28.201723       16.85996       463       -28.45073       16.75925       24       -28.45733       16.75925       24       -28.45575       16.75992       343       -28.2768915       16.75995       404       -28.201723       16.859766       465       -28.144686         45       -28.16820       16.85056       106       -28.23472       16.81127       166       -28.29070       16.75218       226       -28.46231       16.76943       347       -28.261042       16.76957       406       -28.19323       16.84007       467       -28.14420         47       -28.16743       16.84652       107       -28.23502       16.75247       227       -28.41203       16.77188       287       -28.45071       16.76743       347       -28.26104       16.76555       407       -28.19323       16.84007       467       -28.14420         48       -28.16733       16.840584       110       -28.236716       16.																					16.890527 16.891468
44         -28.170723         16.855166         104         -28.231618         16.69931         164         -28.23537         16.75255         224         -28.405749         16.768042         284         -28.46306         16.75895         16.758915         404         -28.20752         16.857268           45         -28.16922         16.852568         105         -28.233462         16.17234         16.752983         225         -28.46523         16.759942         345         -28.263642         16.750957         406         -28.14724           47         -28.16743         16.84682         107         -28.23569         16.81723         167         -28.29750         16.75249         228         -28.46731         16.76774         344         -28.26164         16.76555         407         -28.19323         16.84907         467         -28.14290           48         -28.16783         16.84499         108         -28.26704         16.76752         408         -28.16733         16.84983         10.75253         16.84998         16.75249         28         -28.45547         16.76752         408         -28.19015         16.84998         28.19015         16.84989         16.85686         407         -28.19325         16.84998         16.84998			-																		16.891468
45       -28.169250       16.852388       105       -28.233422       16.81020       165       -28.28783       16.752633       225       -28.460924       16.760984       285       -28.462531       16.759942       345       -28.266361       16.759666       405       -28.19302       16.850276         47       -28.167845       16.846662       107       -28.234972       16.81122       166       -28.20750       16.75250       0.7218       28       -28.462031       16.76174       346       -28.26402       16.760974       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       406       -28.19120       16.850786       408       -28.19101       16.850786       408       -28.19102       16.850786       409       -28.18133       16.84073       16.77130       28       28.65474       16.775680       350       16.775580       350       16.810731       16.81073       16.81073       16.81073       16.81073       16.81073       16.81073														-							16.894921
46         -28.168132         16.850555         106         -28.234972         16.811227         166         -28.290750         16.752198         226         -28.412064         16.768038         286         -28.462031         16.71731         346         -28.264042         16.76997         406         -28.19332         16.80778         466         -28.14240           47         -28.167435         16.844899         108         -28.236716         16.81293         167         -28.29352         16.75290         228         -28.41700         288         -28.455447         16.767074         344         -28.261801         16.769525         409         -28.19015         16.84392         468         -28.141492           49         -28.167345         16.841111         109         -28.29012         16.75467         230         -28.42120         16.77100         290         -28.44443         16.779255         350         -28.26150         16.775255         408         -28.19015         16.84111         -28.18735         16.84052         449         -28.18735         16.84052         440         -28.18735         16.84052         440         -28.18735         16.84052         440         -28.18735         16.84052         440         -28.18735         16.84052			-											-							16.894781
47       -28.167480       16.848662       107       -28.235690       16.811723       167       -28.93362       16.752277       227       -28.412703       16.769338       287       -28.457992       16.76473       347       -28.262180       16.76555       407       -28.19923       16.849067       467       -28.143921         48       -28.167345       16.844999       100       -28.236716       16.819256       168       -28.295705       16.75250       228       -28.414996       16.770260       288       -28.455447       16.76774       348       -28.262081       16.76525       408       -28.190151       16.843224       468       -28.141792         50       -28.168949       110       -28.240043       16.81257       170       28.029749       16.75467       229       -28.414221       16.771180       299       -28.454447       16.77652       349       -28.21845       16.769355       409       -28.18735       16.84052       470       -28.13921         51       -28.17010       16.835954       111       -28.240070       16.821594       171       -28.30291       16.756586       232       -28.431706       16.771706       352       -28.216145       16.77043       411       -28.187505       16.83						-															16.894374
49       -28.167873       16.841111       109       -28.239012       16.81025       169       -28.297949       16.75421       229       -28.418223       16.771188       289       -28.450561       16.776582       349       -28.261845       16.769365       409       -28.188735       16.840532       469       -28.140133         50       -28.168949       16.838089       110       -28.240043       16.818273       170       -28.300410       16.754677       230       -28.42120       16.77100       290       -28.44437       16.779455       350       -28.261607       16.772241       410       -28.187707       16.83971       470       -28.139218         51       -28.171010       16.835954       111       -28.240270       16.821594       171       -28.302941       16.756082       231       -28.432147       16.771308       291       -28.439229       16.780171       351       -28.261457       16.774043       411       -28.18707       16.83173       471       -28.139216         52       -28.172484       16.837692       113       -28.240919       16.755688       232       -28.43447       16.777918       353       -28.261467       16.778153       414       -28.180750       16.83577       473 <t< td=""><td></td><td></td><td>107</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td>467</td><td></td><td>16.894065</td></t<>			107											-					467		16.894065
50         -28.168949         16.838089         110         -28.240043         16.818273         170         -28.30040         16.75467         230         -28.42120         16.772100         290         -28.444437         16.779425         350         -28.261500         16.772241         410         -28.18777         16.839171         470         -28.139218           51         -28.17010         16.835954         111         -28.240270         16.821594         171         -28.302911         16.75608         221         -28.425710         16.77130         291         -28.439229         16.780171         351         -28.261467         16.774043         411         -28.188707         16.83972         471         -28.138217           52         -28.17025         16.834763         112         -28.24053         16.82959         173         -28.304901         16.75588         222         -28.43108         16.779706         352         -28.26168         16.778125         413         -28.18993         16.83657         473         -28.13786           53         -28.174432         16.832904         114         -28.243168         16.776281         233         -28.431058         16.775133         354         -28.266038         16.780293         414	48 -28.167345	16.844899	108	-28.236716	16.812936	168	-28.295705	16.752590		16.770260	288	-28.455447	16.767074	348	-28.262081	16.767252	408 -28.19	0151 16.843924	468	-28.141792	16.892544
51       -28.170110       16.835954       111       -28.240270       16.821594       171       -28.302941       16.756028       231       -28.425710       16.771300       291       -28.439229       16.780171       351       -28.261467       16.774043       411       -28.186750       16.837872       471       -28.138217         52       -28.171025       16.834763       112       -28.240553       16.826403       172       -28.304901       16.757688       232       -28.43140       16.777608       352       -28.261415       16.778125       412       -28.184933       16.836657       472       -28.13780         53       -28.172484       16.833692       113       -28.241491       16.827959       173       -28.305950       16.758931       233       -28.431058       16.775289       293       -28.430783       16.777918       353       -28.26186       16.778125       413       -28.183000       16.835573       473       -28.13692         54       -28.174432       16.832904       114       -28.306611       16.759687       234       -28.430256       16.777508       355       -28.26638       16.780230       414       -28.18050       16.834785       474       -28.136632         55       -	49 -28.167873	16.841111	109	-28.239012	16.816025	169	-28.297949	16.753421	229 -28.418223	16.771188	289	-28.450561	16.776582	349	-28.261845	16.769365	409 -28.18	3735 16.840532	469	-28.140133	16.892183
52       -28.171025       16.834763       112       -28.240553       16.826403       172       -28.304901       16.77568       232       -28.429447       16.774638       292       -28.43140       16.779706       352       -28.261415       16.776253       412       -28.184993       16.836657         53       -28.172484       16.833692       113       -28.241491       16.827599       173       -28.305950       16.758931       233       -28.431058       16.775289       293       -28.430783       16.777918       353       -28.26186       16.778125       413       -28.18300       16.835273       473       -28.136928         54       -28.174432       16.832904       114       -28.243136       16.89238       174       -28.306611       16.759687       234       -28.434624       16.776273       354       -28.262638       16.78023       414       -28.18070       16.834785       474       -28.136392         55       -28.175883       16.832577       115       -28.245425       16.830764       175       -28.308326       16.76134       235       -28.439256       16.777508       295       -28.42470       16.778577       355       -28.264703       16.782403       415       -28.178537       16.834788			110														410 -28.18	16.839171	470		16.891980
53       -28.172484       16.833692       113       -28.241491       16.827959       173       -28.305950       16.758931       233       -28.431058       16.775289       293       -28.430783       16.777918       353       -28.261986       16.778125       413       -28.183000       16.835273       473       -28.136928         54       -28.174432       16.832904       114       -28.243136       16.829238       174       -28.306611       16.759687       234       -28.430624       16.775289       294       -28.428298       16.775133       354       -28.261986       16.780293       414       -28.180750       16.834785       474       -28.136928         55       -28.175883       16.832577       115       -28.245425       16.830764       175       -28.308326       16.761634       235       -28.439256       16.777508       295       -28.422470       16.775567       355       -28.266900       16.784305       416       -28.178537       16.834318       475       -28.136451         56       -28.177829       16.832644       117       -28.248388       16.831001       177       -28.313691       16.767085       237       -28.441131       16.769136       357       -28.268162       16.784970       417 <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16.891760</td>														-							16.891760
54       -28.174432       16.832904       114       -28.243136       16.829238       174       -28.306611       16.759687       234       -28.434624       16.776271       294       -28.428298       16.776133       354       -28.262638       16.780293       414       -28.180750       16.834785       474       -28.136332         55       -28.175883       16.832577       115       -28.245425       16.830764       175       -28.308326       16.761634       235       -28.439256       16.777508       295       -28.422470       16.773567       355       -28.266703       16.782400       415       -28.178537       16.834785       475       -28.135451         56       -28.176697       16.832601       116       -28.246905       16.831606       176       -28.309842       16.763694       236       -28.441549       16.778216       296       -28.414131       16.772096       356       -28.266900       16.784305       416       -28.176343       16.834388       476       -28.134719         57       -28.177829       16.832644       117       -28.248388       16.831901       177       -28.315691       16.767085       237       -28.4442175       16.778473       297       -28.406143       16.768445       358 <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16.891762</td>														-							16.891762
55       -28.175883       16.832577       115       -28.245425       16.830764       175       -28.308326       16.761634       235       -28.439256       16.77508       295       -28.422470       16.773567       355       -28.264703       16.782240       415       -28.178537       16.834318       475       -28.135451         56       -28.176697       16.832601       116       -28.246905       16.831606       176       -28.309842       16.763694       236       -28.441549       16.778216       296       -28.414131       16.772096       356       -28.266900       16.784305       416       -28.176343       16.834388       476       -28.134719         57       -28.177829       16.832644       117       -28.248388       16.831901       177       -28.313691       16.767085       237       -28.442775       16.7778473       297       -28.406143       16.769136       357       -28.268162       16.784970       417       -28.174034       16.834480       477       -28.134196         58       -28.179023       16.833127       118       -28.250189       16.832019       178       -28.315692       16.777016       239       -28.444313       16.767845       358       -28.269409       16.785646       418 <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>16.891750</td>														_							16.891750
56       -28.176697       16.832601       116       -28.246905       16.831606       176       -28.309842       16.763694       236       -28.441549       16.778216       296       -28.44131       16.772096       356       -28.266900       16.784305       416       -28.176343       16.834388       476       -28.134719         57       -28.177829       16.832644       117       -28.248388       16.831901       177       -28.313691       16.767085       237       -28.442775       16.778473       297       -28.406143       16.769136       357       -28.268162       16.784970       417       -28.174034       16.834480       477       -28.134196         58       -28.179023       16.833127       118       -28.250189       16.832041       178       -28.315150       16.769407       238       -28.444313       16.778108       298       -28.403142       16.768445       358       -28.269409       16.786460       418       -28.169460       16.837371       478       -28.132522         59       -28.179922       16.833497       119       -28.216825       16.832019       179       -28.316822       16.77201       239       -28.446398       16.767035       299       -28.400823       16.768767       359														-							16.891745
57       -28.177829       16.832644       117       -28.248388       16.831901       177       -28.313691       16.767085       237       -28.442775       16.778473       297       -28.406143       16.769136       357       -28.268162       16.784970       417       -28.174034       16.834480       477       -28.13496         58       -28.179023       16.833127       118       -28.250189       16.832041       178       -28.315150       16.769407       238       -28.444313       16.778108       298       -28.400142       16.768445       358       -28.269409       16.785646       418       -28.169460       16.837371       478       -28.132522         59       -28.179922       16.833497       119       -28.251876       16.832019       179       -28.316822       16.772701       239       -28.446398       16.777366       299       -28.400823       16.768745       359       -28.271554       16.787744       419       -28.168935       16.839460       479       -28.131796														-							16.891732
58       -28.179023       16.833127       118       -28.250189       16.832041       178       -28.315150       16.769407       238       -28.444313       16.778108       298       -28.403142       16.768445       358       -28.269409       16.785646       418       -28.169460       16.837371       478       -28.132522         59       -28.179023       16.833497       119       -28.251876       16.832019       179       -28.316822       16.772701       239       -28.446398       16.777366       299       -28.400823       16.768745       359       -28.271554       16.787744       419       -28.168935       16.839460       479       -28.131796																					16.891728
59       -28.179922       16.833497       119       -28.251876       16.832019       179       -28.316822       16.772701       239       -28.446398       16.777036       299       -28.400823       16.768787       359       -28.271554       16.787744       419       -28.168935       16.839460       479       -28.131796																					16.891613
																					16.891513
																					16.891234

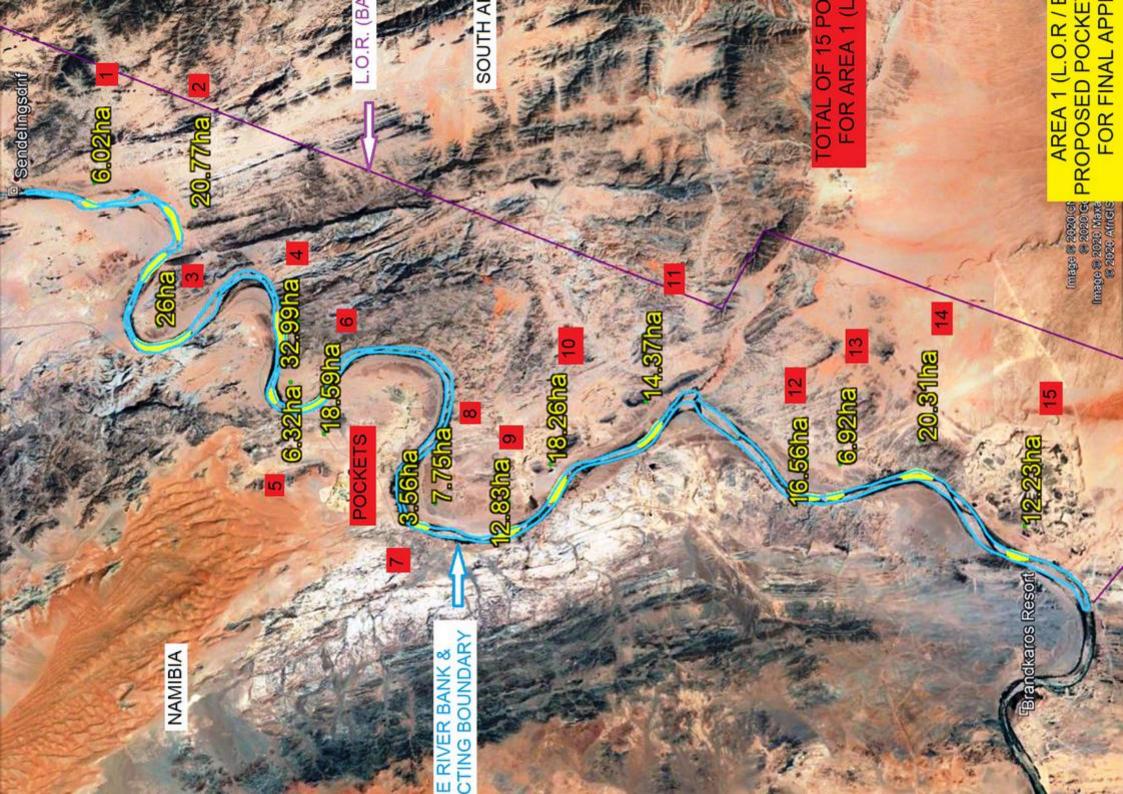
- Prepared by: 2thetdrafts@gmail.com 🚽

Sheet 1 of 2

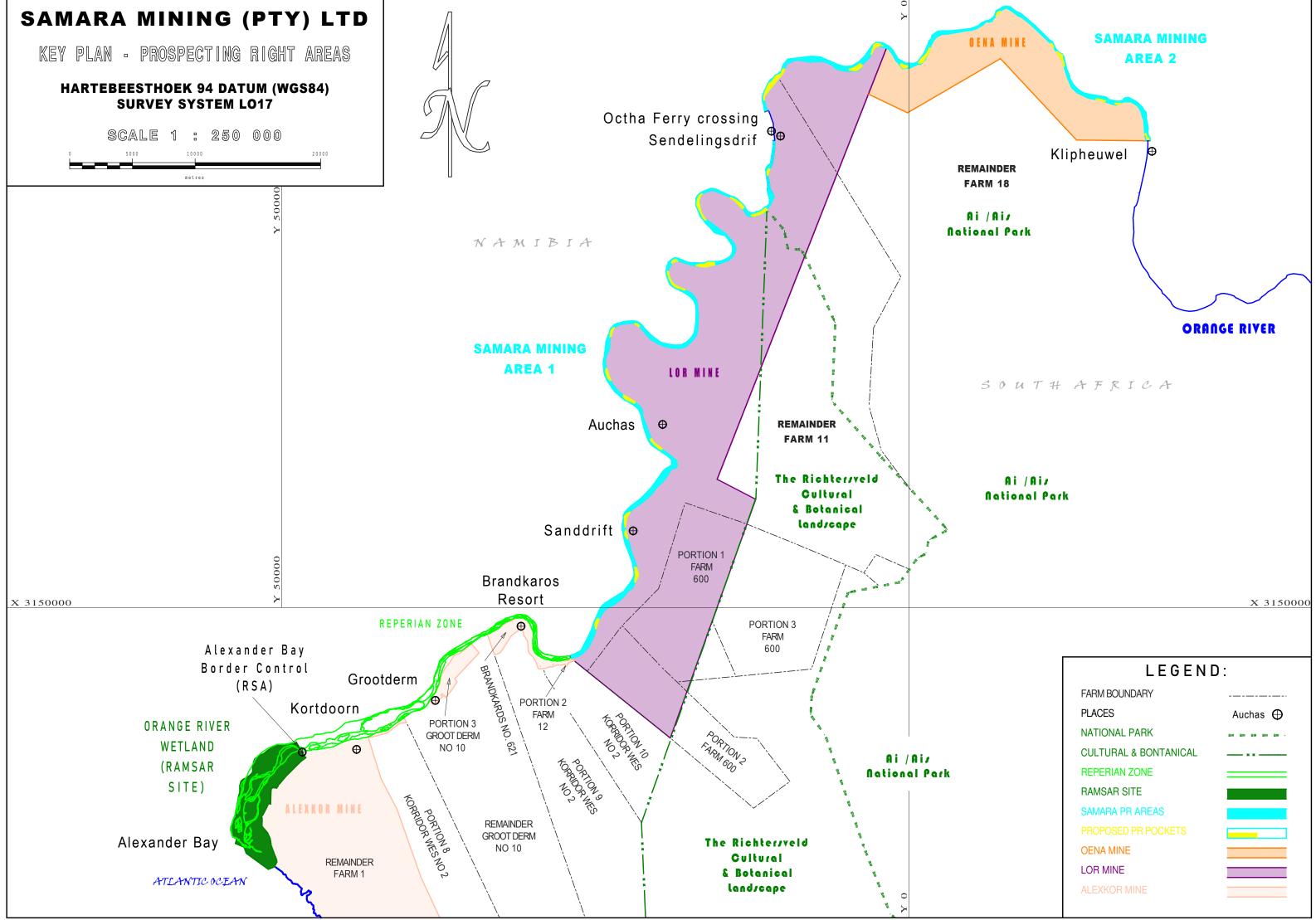


#### **GIS CO-ORDINATES:**

ld Lat	Long	l d	Lat	Long	l d	Lat	Long	١d	Lat	Long	l d	Lat	Long	Id	Lat	Long	١d	Lat	Long	١d	Lat	Long
1 -28.10851	16.88383	61	-28.06038	16.97389	121	-28.03478	17.08400				178	-28.1293	7 17.19332	238	-28.03490	17.07608	298	-28.07802	16.99617			
2 -28.10687	16.88285	62	-28.06060	16.97574	122	-28.03550	17.08519				179	-28.1277	0 17.19384	239	-28.03656	17.07386	299	-28.07623	16.99212			
3 -28.10509	16.88178	63	-28.06086	16.97688	123	-28.03697	17.08686				180	-28.1247	1 17.19255	240	-28.03763	17.07244	300	-28.07372	16.98935			
4 -28.10249	16.88075	64	-28.06129	16.97845	124	-28.03815	17.08913				181	-28.1208	9 17.19137	241	-28.03895	17.07069	301	-28.07218	16.98872			
5 -28.10123	16.88059	65	-28.06181	16.97944	125	-28.03960	17.09208				182	-28.1168	7 17.19098	242	-28.03933	17.07018	302	-28.07082	16.98817			
6 -28.09961	16.88038	66	-28.06254	16.98080	126	-28.04068	17.09389				183	-28.1124	6 17.18994	243	-28.04041	17.06902	303	-28.06851	16.98676			
7 -28.09884	16.88181	67	-28.06279	16.98348	127	-28.04169	17.09556				184	-28.1086	0 17.18832	244	-28.04178	17.06756	304	-28.06630	16.98536			
8 -28.09702	16.88520	68	-28.06284	16.98358	128	-28.04312	17.09754				185	-28.1038	1 17.18530	245	-28.04204	17.06728	305	-28.06379	16.98277			
9 -28.09536	16.88838	69	-28.06460	16.98524	129	-28.04432	17.09902				186	-28.1008	4 17.17988	246	-28.04243	17.06658	306	-28.06319	16.97996			
10 -28.09338	16.88994	70	-28.06593	16.98647	130	-28.04621	17.10134				187	-28.1004	5 17.17674	247	-28.04306	17.06542	307	-28.06315	16.97980			
11 -28.09186	16.89093	71	-28.06716	16.98746	131	-28.04714	17.10308				188	-28.1008	2 17.17326	248	-28.04372	17.06422	308	-28.06294	16.97614			
12 -28.09007	16.89212	72	-28.06886	16.98884	132	-28.04849	17.10454				189	-28.1026	6 17.16819	249	-28.04438	17.06303	309	-28.06324	16.97344			
13 -28.08903	16.89321	73	-28.07028	16.98942	133	-28.04993	17.10610				190	-28.1018	0 17.16437	250	-28.04574	17.06063	310	-28.06327	16.97332			
14 -28.08786	16.89442	74	-28.07166	16.98998	134	-28.05269	17.10920				191	-28.1010	0 17.16142	251	-28.04661	17.05918	311	-28.06542	16.97140			
15 -28.08681	16.89570	75	-28.07314	16.99156	135	-28.05462	17.11099				192	-28.1007	0 17.15981	252	-28.04789	17.05702	312	-28.06699	16.96997			
16 -28.08618	16.89648	76	-28.07452	16.99302	136	-28.05597	17.11281				193	-28.1000	2 17.15612	253	-28.04870	17.05567	313	-28.06706	16.96993			
17 -28.08444	16.89885	77	-28.07509	16.99556	137	-28.05796	17.11501				194	-28.0996	2 17.15450	254	-28.04904	17.05373	314	-28.06773	16.96955			
18 -28.08273	16.90109	78	-28.07515	16.99567	138	-28.06009	17.11730				195	-28.0992	8 17.15312	255	-28.04952	17.05111	315	-28.06789	16.96943			
19 -28.08097	16.90210	79	-28.07551	16.99733	139	-28.06157	17.11880				196	-28.0988	6 17.15141	256	-28.05010	17.04794	316	-28.06893	16.96825			
20 -28.07980	16.90279	80	-28.07593	16.99937	140	-28.06265	17.11956				197	-28.0985	4 17.14824	257	-28.05033	17.04656	317		16.96647			
21 -28.07905	16.90343	81	-28.07546	17.00133	141	-28.06402	17.12055				198	-28.0984	4 17.14724	258	-28.05069	17.04448	318	-28.07392	16.96278			
	16.90428	82	-28.07479		_	-28.06548					199		7 17.14382	259			319		16.96210			
23 -28.07687	16.90511	83			-	-28.06724	17.12443				200			260	-28.05103	17.04256	320		16.96028			
24 -28.07567	16.90644	84	-28.07294	17.00729	144	-28.06870	17.12553				201	-28.0968	4 17.13964	261	-28.05127	17.04112	321	-28.07970	16.95637			
	16.90811	85	-28.07159	17.00908	145	-28.07063	17.12596	_			202	-28.0946	8 17.13563	262	-28.05143		322	-28.08002	16.95190			
26 -28.07382	16.91011	86	-28.07025		146	-28.07451	17.12704				203	-28.0929	1 17.13256	263	-28.05166		323		16.94901			
27 -28.07357	16.91125	87	-28.06878		147		17.12797	_			204			264	-28.05187	17.03736	324		16.94700			
	16.91390	88	-28.06580		_		17.12879	_			205			265	-28.05196		325					
29 -28.07392		89	-28.06388		-	-28.08180	17.12952				206			266	-28.05205		326		16.94649			
	16.91807	90			-	-28.08377	17.12996				207			267		17.03038	327					
31 -28.07468	16.91927	91	-28.05573		151		17.13048				208			268	-28.05194	17.02910	328		16.94081			
	16.92076	92			_	-28.08786	17.13149				209			-		17.02724	329		16.94075			
	16.92225		-28.05393		-	-28.08968	17.13243				210						330		16.93595			
34 -28.07527	16.92378	94			-	-28.09109	17.13359				211			271	-28.05189		331					
35 -28.07485	16.92578	95			155		17.13776				212			272	-28.05257	17.02479	332		16.92957			
36 -28.07461	16.92777	96			_	-28.09624		_			213		6 17.12265				333		16.92717			
37 -28.07478		97	-28.05134		_	-28.09820							9 17.11878	-	-28.05285		334	-28.07748		_		
38 -28.07495	16.93583	98	-28.05121		158						215				-28.05352		335	-28.07682				
	16.93624	99			159		17.15939				216			-	-28.05463		336					
	16.93863	100									217		6 17.11455	-	-28.05539		337		16.91693			
41 -28.07400		101				-28.10191					218				-28.05688		338					
	16.94318	102				-28.10162					219			-		17.01796	339		16.91354	_		
	16.94513	103			_	-28.10117					220		9 17.10763	280	-28.05848		340		16.91042			
44 -28.07744		104				-28.10042							7 17.10574 6 17.10180		-28.05852		341					
45 -28.07753		105			-	-28.10010								-	-28.05860		342					
46 -28.07775 47 -28.07795	16.94989	106	-28.04796		_	-28.10007					223		4 17.09971 6 17.09886		-28.05983		343					
47 -28.07795		107			-	-28.09995					224		8 17.09886		-28.06248		344		16.90298			
48 -28.07724		108	-28.04398		-	-28.10104					225		2 17.09483	-	-28.06352		345					
	16.95883		-28.04338		-	-28.10238	17.18666				220			-			347					
	16.95979		-28.04338		-	-28.10759					227		4 17.08930	287	-28.06665	17.01409	348		16.89766			
	16.96085		-28.04173		-	-28.11033					220		0 17.08713				349			-		
	16.96266		-28.04175		-	-28.11622					229		9 17.08564	-	-28.06921		350					
54 -28.07139	16.96397		-28.03663			-28.12040		-			230		2 17.08407	-	-28.07017		350			-		
55 -28.07019	16.96567		-28.03504		-	-28.12727					231			-	-28.07139		352			-		
56 -28.06817	16.96689		-28.03304			-28.12935					232				-28.07139		353		16.88493			
57 -28.06434	16.96933		-28.03393			-28.12938					233		9 17.07862				353		16.88249			
58 -28.06357	16.96988		-28.03362		1//	20.12300	17.100UT				234		6 17.07735			17.00493	355			-		
	16.97107		-28.03325								235		3 17.07634		-28.07691		355					
60 -28.06127			-28.03426		1			-					3 17.07631		-28.07796		_	-28.10843		-		
20.0012/		120	20.00720								237	20.0077		231	20.07730	10100021		20.10040	10.00107			







LEGEN	D:
FARM BOUNDARY	
PLACES	Auchas 🕀
NATIONAL PARK	200 200 200 200 200 -
CULTURAL & BONTANICAL	× ×
REPERIAN ZONE	
RAMSAR SITE	
SAMARA PR AREAS	
PROPOSED PR POCKETS	
OENA MINE	
LOR MINE	
ALEXKOR MINE	