mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

FINAL SCOPING REPORT – PRAA 2

SAMARA MINING (PTY) LTD APPLICATION FOR ALLUVIAL DIAMOND PROSPECTING WITH BULK SAMPLING ON THE LEFT BANK OF THE ORANGE RIVER, BOUNDARY TO PORTION OF THE REMAINDER OF THE FARM NO. 18 AND FARM NO. 11 RICHTERSVELD, NAMAQUALAND DISTRICT, NORTHERN CAPE PROVINCE

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 ~~AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008~~ IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED)

NAME OF APPLICANT: Samara Mining (Pty) Ltd, Contact Dr Anthony Dywili
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DMR FILE REFERENCE NUMBER (SAMRAD): NC30/5/1/1/2/12663 PR

REPORT DATE: 8 January 2021

SUBMISSION TO DMRE : SPRINGBOK

IMPORTANT NOTICE:

In terms of the Mineral and Petroleum Resources Development Act (MPRDA), No. 28 of 2002 as amended, the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment". Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment (EIA) and an Environmental Management Programme (EMP) report in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of Regulation 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of Regulation 17(1)(c) the competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or a permit are submitted in the exact format of, and provide all the information required in terms of, this template.

Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

OBJECTIVE OF THE SCOPING PROCESS

1. The objective of the scoping report is to, through a consultative process:

   a) Identify the relevant policies and legislation relevant to the activity

   b) Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location

   c) Identify and confirm preferred activity and technology alternative through an impact and risk assessment and ranking process;

   d) Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic and cultural aspects of the environment

   e) Identify the key issues to be addressed in the assessment phase

   f) Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and

   g) Identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

SCOPING REPORT

2. Contact person and correspondence address

a) Details of:

(i) The EAP who prepared the report

NDI Geological Consulting Service (Pty) Ltd (*hereinafter NDI)* has been appointed by Samara Mining (Pty) Ltd (*hereinafter Samara*) to provide geological and environmental management services for the application for a prospecting right with bulk sampling for alluvial diamonds on the left bank of the Orange River, boundary to a Portion of the Remainder of Farm No. 18 and Farm No. 11, on the Lower Orange River in the Richtersveld within the Northern Cape Province of South Africa.

Naledzi Environmental Consultants (Pty) Ltd (*hereinafter Naledzi*) has been appointed to represent NDI as the independent environmental assessment practitioner (EAP) and conduct the Scoping and EIA process for project. This Scoping Report has been prepared by Naledzi.

Details of NDI Geological Consulting Services (Pty) Ltd (agent to Samara):
Mrs Ndivhadzannyi Mofokeng
Telephone no.: +2753 842 0687 / +2782 760 8420
Fax no.: 086 538 1069
Email address: atshidzaho@gmail.com

Name of Practitioner who prepared the report:
Mrs Marissa Botha, Naledzi Environmental Consultants (Pty) Ltd
Telephone no.: +2715 296 3988 / +2784 226 5584
Fax no.: +2715 296 4021
Email address: botham@naledzi.co.za

(ii) Expertise of the EAP

1) **Qualifications of EAP**

Mrs Marissa Botha has 14 years working experience in environmental management and is a registered Environmental Scientist with the South African Council for Natural Scientific Profession (SACNASP), Registration No. 117526. (**Appendix 1 - SACNASP Registration Certificate**)

2) Summary of EAPs experience

Ms Marissa Botha is the assigned EAP to drive the EIA process, compile the subject reporting and conduct a consolidated public participation process. She has extensive experience in EIA assignments related to prospecting and mining and comprise the following (not exhaustive);

- 2018: Prospecting Right with Bulk sampling for several minerals including graphite on unsurveyed stated land located west of the Kruger National Park at Gumbu, Musina District of Limpopo – Samin Group Pty Ltd. Responsible for conducting the EIA Process, management of specialists and associated public participation process.
- 2015 – 2017: Integrated EIA, Water Use License Application and Waste Management License for the application for a Mining Right for the proposed Geluk Mine, an iron and vanadium ore surface mine on the farms Geluk 512KS, Geluk Oos 513KS and Ironstone 847KS, south-west of Steelpoort, Sekhukhune District of Limpopo Province;

- 2014: Prospecting Right Application for limestone at Kalkbank, between Dendron and Polokwane, District of Aganang in Limpopo. Responsible for EIA Process and associated public participation process;
- 2014: Prospecting Right Application for coal, iron ore and copper, northeast of Alldays on the farms Polton, Salton and Hosselappe, District of Musina in Limpopo Province.
- 2013: Prospecting Right Application for iron ore at Koedoeskop, District of Thabazimbi in Limpopo Province for Bakwena Ba Phalane Traditional Community and Mantra Mineral Development. Responsible for conducting the EIA Process and associated public participation process.
- 2012: Prospecting Right Application by Tanduko Mineral (Pty) Ltd for coal north of Louis Trichardt and Soutpansberge, east of N1 National Toll Route, District of Makhado in Limpopo. Responsible for conducting the EIA Process and associated public participation process.

(Refer to **Appendix 2 for a CV of the EAP**)

b) Property Description

Table 1: Property Description

Farm name:	The land under application includes the left bank of the Orange River, boundary to a Portion of the Remainder of Farm No. 18 and Farm Richtersveld No. 11 (Namaqualand RD)
Application area (Ha):	690 Hectares (total extent of application area)
Prospecting focus area:	175 hectares Prospecting activities will focus on several prospecting pockets on the Orange River within the greater prospecting application area.
Mineral:	Alluvial Diamonds
Magisterial District:	Namaqualand RD
Distance and direction to nearest town	The application area is 10km northeast of Sendlingdrift and 90km from Alexander Bay. The area can be accessed from the Sendlingdriftt dirt road, unsurfaced mine roads and 'Halfmens Pass'.
21 digit Surveyor General code for each farm portion	C05300000000001800000 C05300000000001100000 (Application is to prospect on a portion of the Orange River).

c) Locality Map

(Show nearest town, scale not smaller than 1:250000 attached as **Appendix 3**).

Samara has applied for two prospecting right applications. The prospecting right application areas (PRAA's) are end-to end along the Orange River and are referred to as PRAA 1 and PRAA 2. THIS REPORT DETAILS THE INFORMATION RELEVANT TO PRAA 2.

LOCALITY:

PRAA 2 is situated on the left bank of the Orange River within the Richtersveld National Park (RNP) on the border between South Africa and Namibia. The site is approximately 90km from Alexander Bay and 10km from Sendlingsdrif in the Northern Cape Province of South Africa.

Please refer to **Figure 1** for a Regional Context Map and **Figure 2** for the Local Setting. The Regulation 2(2) Map and Application Sketch Plan is included under **Appendix 3 (3.1 – 3.3)**.

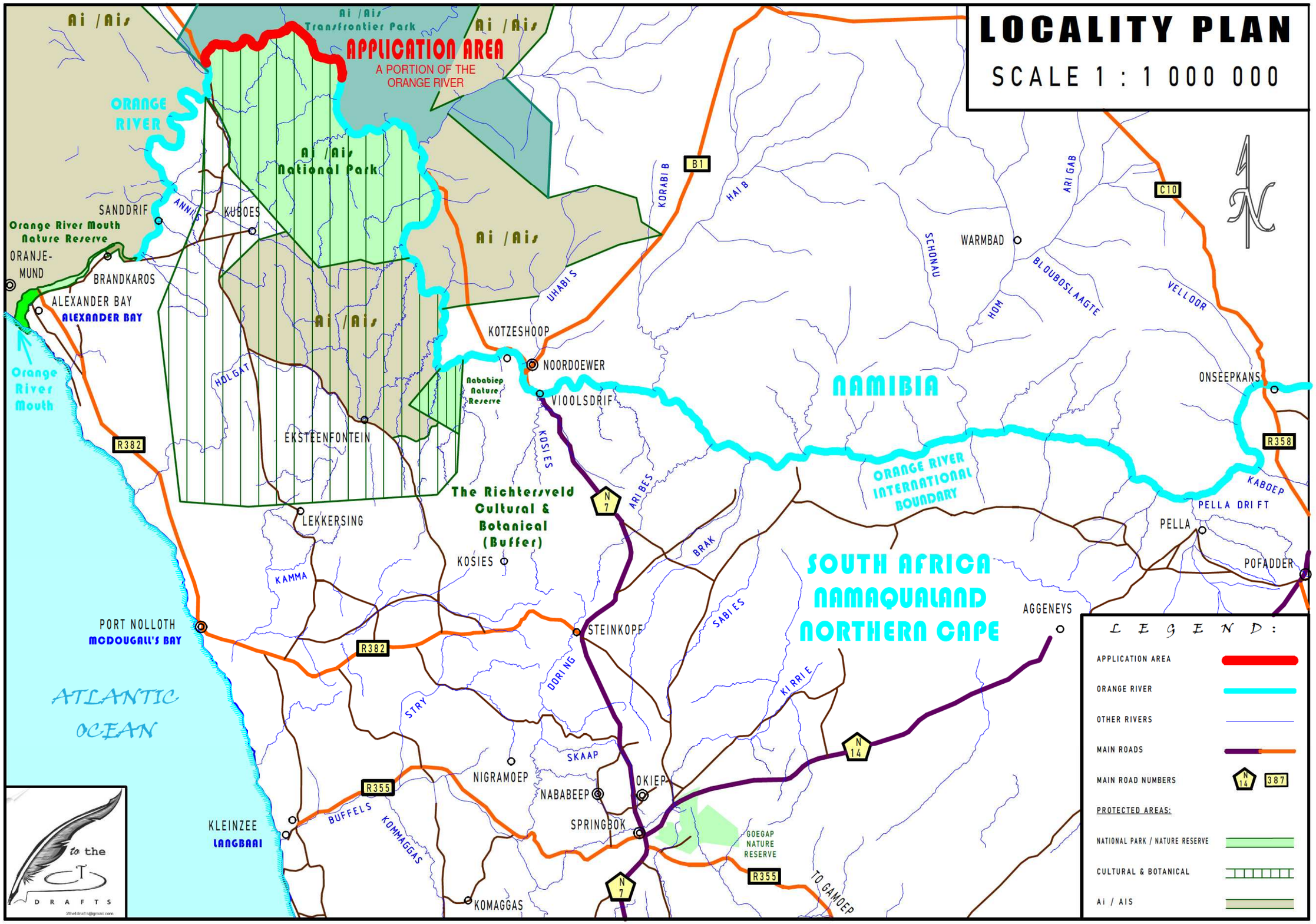

Figure 1: Regional Context Map showing application area PRAA 2 (red) along Orange River and within the RNP and Richtersveld Cultural and Botanical Landscape

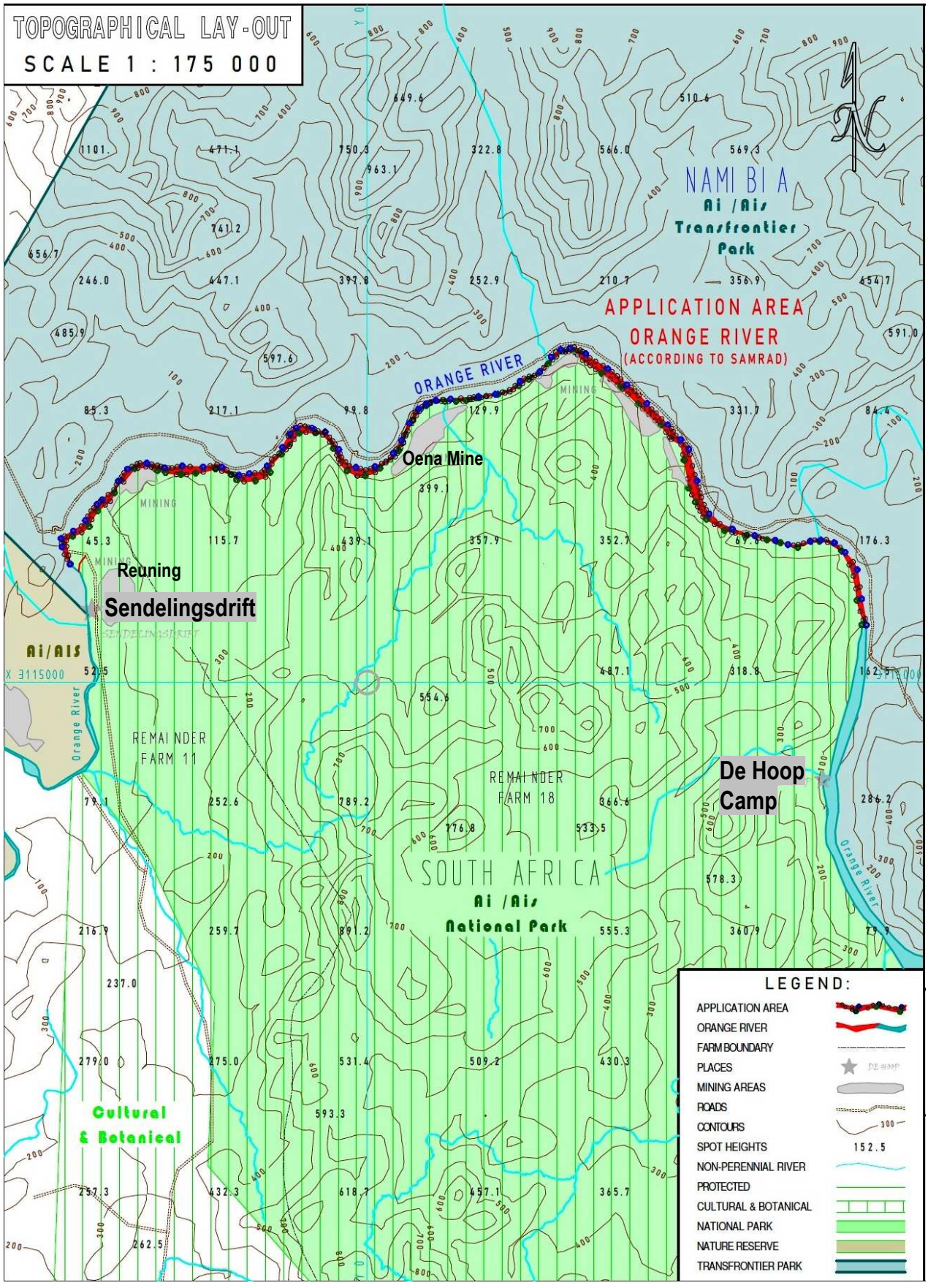

Figure 2: Local Setting

Samara is applying to prospect for alluvial diamonds within the flood line of the Orange River. Prospecting will focus on three (3) prospecting pockets (pockets 4, 5 and 6)[1] within the riverbed and active channel. These pockets are considered the prospecting 'focus area[2]' and border the Farm No. 18 and Farm Richtersveld No. 11. The location of the prospecting pockets is illustrated in **Figure 3, 4 and 5**.

PROPERTY-OWNER:

The land under application is held in trust by the Minister of Land and Rural Development and is in the process of being handed over to the Richtersveld Communal Property Association (CPA). The Richtersveld CPA represents the communities of Kuboes, Sanddrift, Lekkersing and Eksteenfontein. The communities are therefore, the informal landowners in terms of the Interim Protection of Information Land Rights Act (Act 31 of 1996 (IPILRA).

As stated PRAA 2 falls within the RNP and is managed as a contractual park by SANParks and the Richtersveld community, through the Richtersveld Joint Management Committee / Richtersveld Gesamentlike Bestuurs Komittee (RGBK).

The application area therefore has a legal implication for prospecting wherein prospecting and mining is prohibited with a protected area (RNP) proclaimed in terms of the National Environmental Management Protected Areas Act (Act 57 of 2003) (NEMPAA).

In addition, the Richtersveld CPA have a land claim against the TransHex Mineral Lease Area (presently Lower Orange River Diamonds Mineral Right Area) in the Land Claims Court.

EXISTING MINING RIGHT AND MINERAL LEASE AREAS

PRAA 2 is located on the limit of the existing diamond mining right areas of Lower Orange River Diamonds (Pty) Ltd (LOR) and Oena Diamond Mine. The left bank of the Orange River is the limit for the existing mining right areas and the limit for Samara's PRAA 2.

Please refer to **Appendix 3** (**3.4**) for the Key Plan showing the location of Samara's PRAA's in relation to existing diamond mining rights in the local area. The existing mining right areas include LOR, Oena Mine with Alexkor Mine being further downstream.

LOR has confirmed that they currently hold the mining rights for alluvial diamonds on the area which the PRAA 2 covers. A spatial query has been lodged with the DMRE: Springbok and Kimberley on 3 and 7 December 2020 respectively to verify the claim. The verification result from the DMRE is still pending.

In the interim, Samara has engaged LOR and agreed to enter into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining, between the 1: 100-year flood line and the left bank of the Orange River, within the area of the current LOR License. **The confirmation letter of this agreement from LOR is included under Appendix 3 (3.5).**

Oena Mine has consulted and has not objected to the application next to its mineral right area.

[1] Prospecting pockets 1 – 3 are located within PRAA 1. Pockets 4, 5 and 6 are located within PRAA 2.

[2] Samara will focus their prospecting and bulk sampling efforts to a total prospecting focus area of 175 hectares. The currently identified focus areas still need to be refined and may vary between the Scoping Report and Environmental Impact Report. The focus area extent will however remain the same. The final prospecting pocket site plan has been drafted presented at meetings however will only be confirmed in the Environmental Impact Report, should the application proceed to the next phase.

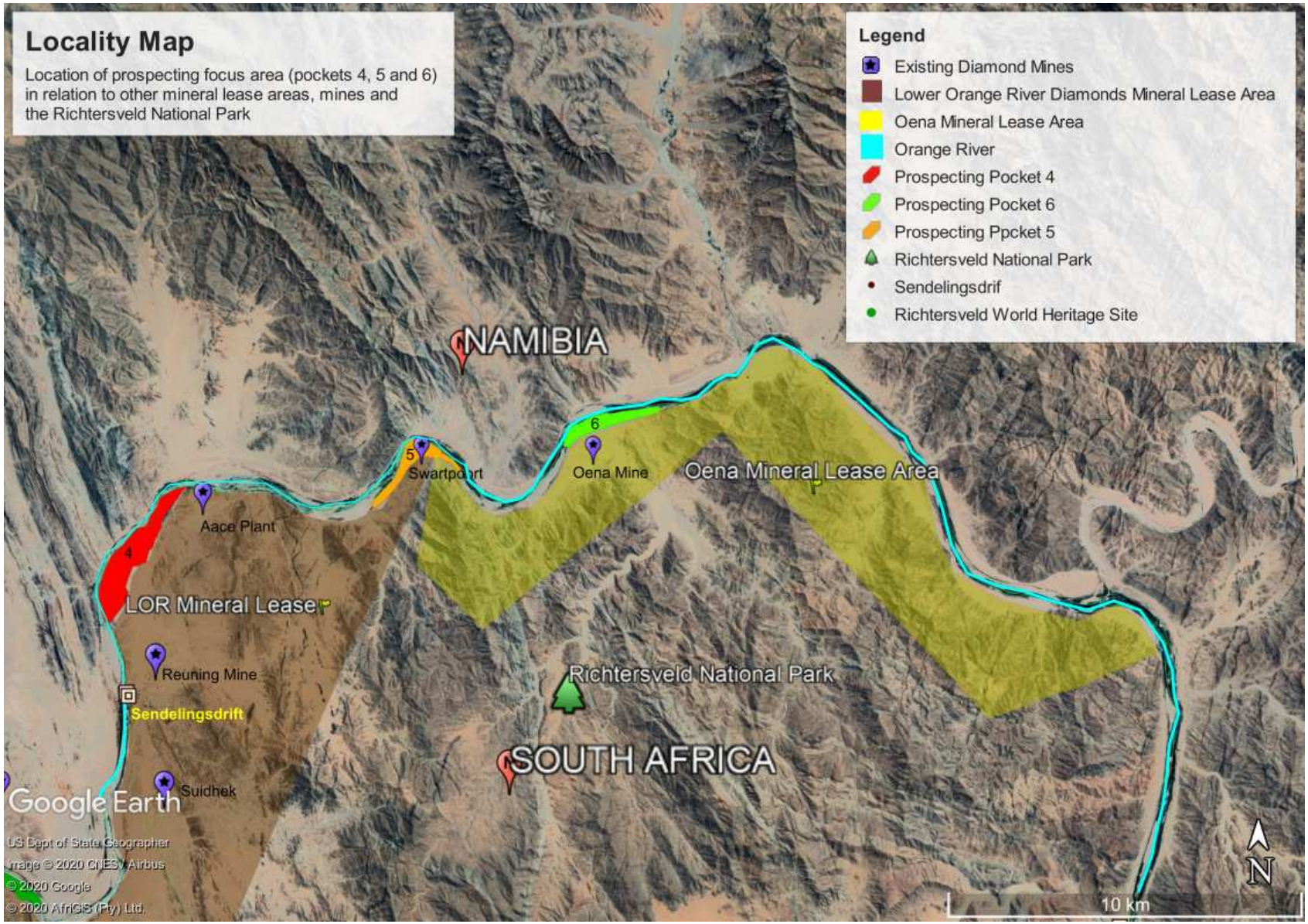

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Figure 3 : Locality Map showing location of PRAA 2 focus area (pocket 4, 5, 6) in relation to Oena and LOR mineral lease areas

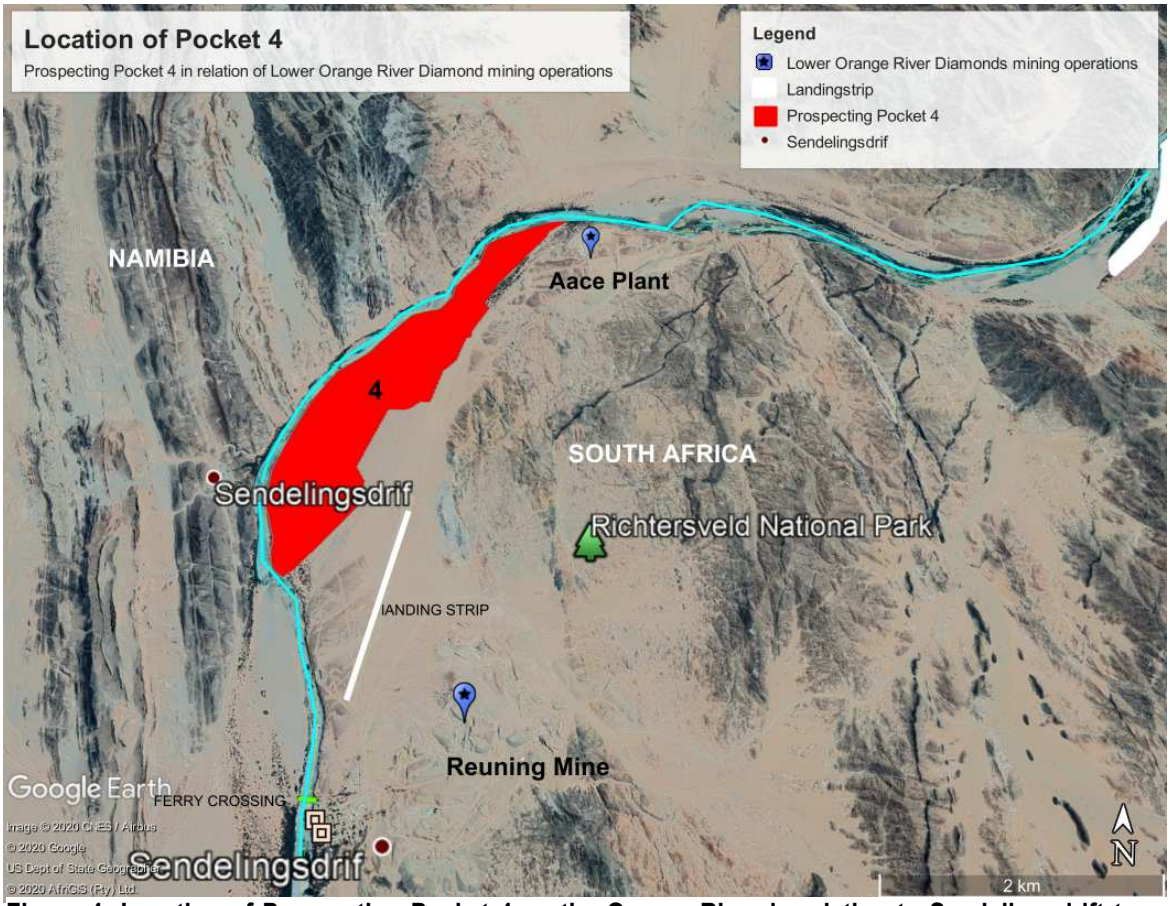
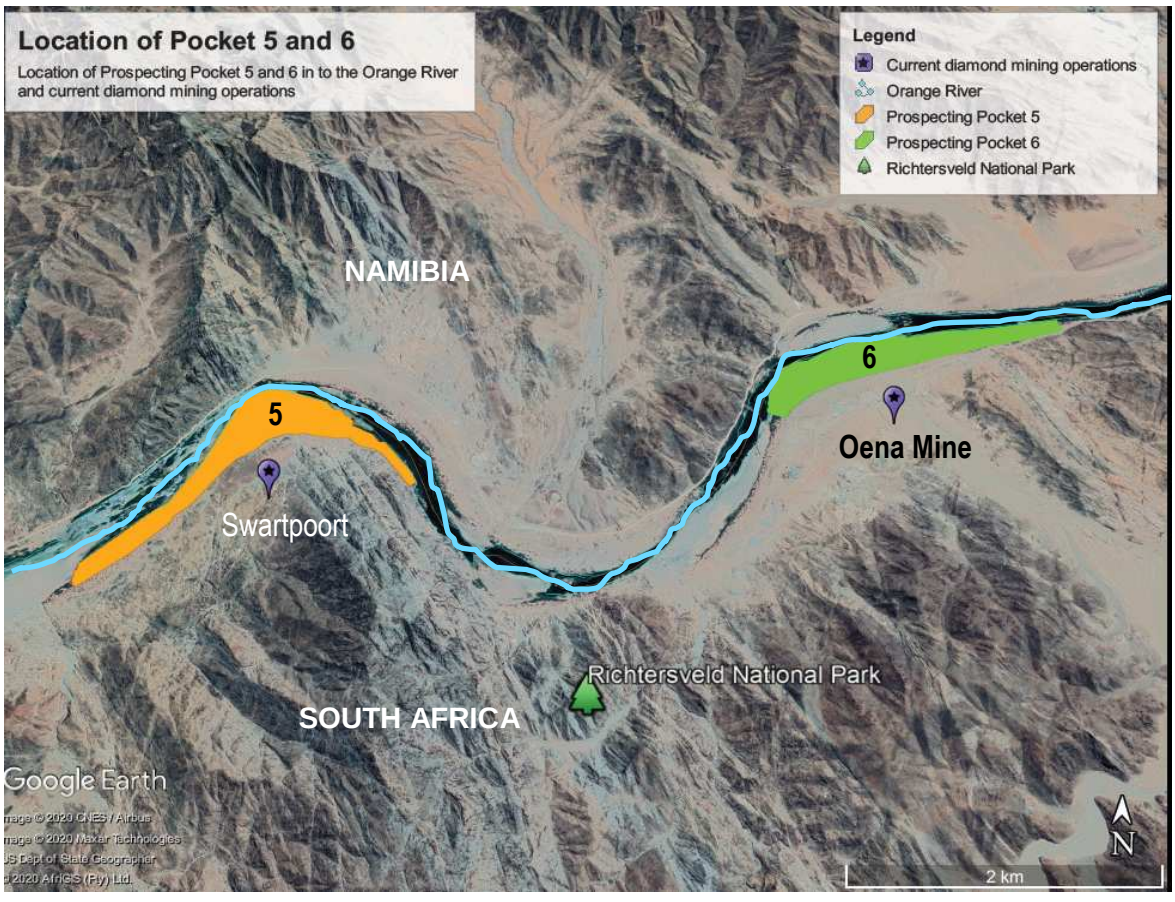


Figure 4: Location of Prospecting Pocket 4 on the Orange River in relation to Sendelingsdrift town and current diamond mining operations



Fin**Figure 5: Location of Prospecting Pockets 4 and 5 on the Orange River and in relation to current diamond mining operations**

d) Description of the scope of overall activity

(i) Listed and specified activities

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on-site and attach as Appendix 4)

Prospecting will include only non-invasive activities limited to a desktop study, a site geological mapping excursion to visit target areas and to confirm the target locations for bulk sampling.

Invasive activities will involve bulk sampling. Bulk samples will be excavated from ten (10) trenches below the Orange River's flood line. The trenches will be excavated from the riverbed and active channel from prospecting pockets 4, 5 and 6 as illustrated in Figures 3, 4 and 5. . The estimated total extent of the prospecting focus area/pockets will be approximately 175 hectares. No drilling programme will be undertaken.

Processing infrastructure will include a Rotary Pan Plant (mounted on skid frame) to 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. (This is explained in more detail under 'description of activity, Section 2 (d) (ii).)

The likely prospecting focus area within PRAA 2 is presented on a **Site Plan attached as Appendix 4**.

It is important to note that the position of the focus area is still subject to finalisation. Similarly, the location of of processing infrastructure must still be finalised based on the recommendations to be made by specialists in the field of freshwater, biodiversity, visual, hydrological and geohydrological in order to avoid/minimise impacts on the riverbed, embankments and active channel. A more detailed Site Plan[3] illustrating the confirmed prospecting focus area and location of processing infrastructure will be included in the draft Environmental Impact Report for the application.

Specified listed activities are included in Table 2 overleaf. A more comprehensive description has been provided in the table than required by the DMRE to demonstrate the applicability of the listed activities to the application and geographical area.

[3] The potential final Site Plan has been discussed at the virtual authorities and stakeholder meetings held on 14 December 2020. But will formally be included in the draft EIR & EMPR since it might still be subject to further amendments.

Table 2: Specified Listed Activities

NAME OF ACTIVITY (All activities including activities not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, stormwater control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent (Ha or m²)**	**LISTED ACTIVITY**	**APPLICABLE LISTING NOTICE** (GNR 327, 325, 324 325 [4] / NOT LISTED	**WASTE MANAGEMENT AUTHORISATION** (Indicate if an authorisation is required ito Waste Management Act). **(Mark with an X)**
Prospecting Right Application in terms of Section 16, 20 and Regulation 7(1) of the Mineral and Petroleum Resources Development Act (MPRDA).	690	**x**	***Activity 20 (GNR 327)-*** *Any activity including operation of activity that requires a prospecting right in terms of section 16 of the MPRDA, including associated infrastructure, structures, earthworks, directly related to prospecting of a mineral resource; and the primary processing of a mineral including winning, extraction, classifying, concentrating, crushing, screening or washing.* DMR has accepted Samara's application for a prospecting right with bulk sampling. DMR Mineral Regulation Ref no. NC 30/5/1/1/2/12663 PR. **Activity 19 (GNR 325)** *The removal and disposal of minerals in terms of section 20 of the MPRDA including (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or (b) The primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening and washing.* Ten (10) bulk samples of 10 000m^3 each (2500m^3 overburden, 7500m^3 ore) will be removed from the Orange River riverbed and active channel (below the 1:	N/A

[4] Please note that the NEMA EIA Regulations of 2014 and its associated list of scheduled listed activities have been amended on 7 April 2017 and are now referred to as GNR 327 (Listing Notice 1), 325 (Listing Notice 2), 324 (Listing Notice 3). Specified activities above have been itemized based on the amended 2017 listing notices.

			100 year flood line).	
Phase 1 - Non-Invasive Activities (Preparations)				
▪ iterature review and desktop investigations of remotely sensed data; ▪ ite geological mapping excursion to visit prospecting target areas. A geological map will be produced; ▪ etermine / confirm bulk sample locations.	690	N/A	NOT LISTED	N/A
Phase 2 – Invasive Activities – BULK SAMPLING				
Vegetation clearance at prospecting focus areas and processing infrastructure (inclusive of contractor's camp, ablution facilities, stockpile areas, site offices, fences, vehicle parking areas, diesel storage)	< 20 Ha	x	**GNR 327 – Activity 27** *Clearance of an area of 1 Ha or more, but less than 20 Ha of indigenous vegetation.* Less than 20 ha of Richtersveld-, Southern Namib Desert vegetation including riparian vegetation will be cleared for prospecting focus areas and infrastructure areas. ***GNR 324 – Activity 12(g) (ii)*** *Clearance of area of 300 m^2 or more of indigenous vegetation (g) Northern Cape (ii) within critical biodiversity areas identified in bioregional plans.* Clearance of 20 ha or less vegetation within a critical biodiversity area (ecological support unit - terrestrial migration corridor as per the Northern Cape Critical Biodiversity Area, Namaqua District Bioregional Plan and formal in a protected area namely the Richtersveld National Park.	N/A
Small temporary diversion, re-alignment of the watercourse to gain access to alluvial material for excavation (prospect in blocks with concurrent rehabilitation)	> 100m^2	x	**Activity 12 (GNR 327)** *Development of infrastructure/structures with physical footprint of 100m^2 or more where such development occurs (a) within a watercourse.* **Activity 14 (GNR 324)** *Development of structures/infrastructure with physical footprint of 10m^3 or more (a) within a watercourse (g) within the Northern Cape, (ii) outside urban areas (aa) in Protected area in terms of NEMPAA and (ff) critical biodiversity area in terms of bioregional plan.*	N/A

			Excavate a channel way 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 a new channel. This will take place within the Orange River riverbed, and active channel categorised as a critical biodiversity area and is situated within the Richtersveld National Park. Both activity 12 and 14 are applied for since the exact dimensions of the river diversions cannot be confirmed at this stage.	
Excavation of ten (10) trenches with Excavator to obtain bulk samples from Orange River riverbed and active channel (within 1:100 year flood line) and concurrent rehabilitation.	Trench size: 100x25mx4m **=0..25 Ha** / 2500m^2 **10 Trenches = 2.5 Ha** Bulk sample size / trench 2500m^3 overburden 7500m^3 gravel	x	**Activity 20 (GNR 327) -** Prospecting **Activity 19 (GNR 327)** *The infilling / depositing of any material of more than 10 m^3 into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10m^3 from a watercourse.* Excavation of ten (10) bulk samples of 10 000m^3 each (2500m^3 overburden, 7500m^3 ore) from the Orange River riverbed and active channel (below the 1: 100-year flood line). A total of 100 000m^3 will be removed. The rocks, pebbles, gravel material left after screening and sorting will be backfilled into the trenches as part of the concurrent rehabilitation works. **Activity 19 (GNR 325)** *The removal and disposal of minerals in terms of section 20 of the MPRDA including (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or (b) The primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening and washing.* Ten (10) bulk samples of 10 000m^3 each (2500m^3 overburden, 7500m^3 ore) will be removed from the Orange River riverbed and active channel (below the 1:	N/A

			100-year flood line). Eighty per cent (80%) of the riverbed will be worked dry. A total of 100 000m^3 will be removed. **GNR 324 – Activity 12(g) (ii) V**egetation clearance 300m^2 or more at prospecting focus areas, which are located in a critical biodiversity area and Richtersveld National Park.	
Stockpiling of topsoil within the 1:100 year flood line / Topsoil Stockpile	3 Ha	N/A	NOT LISTED	N/A
Processing Plant (8x18 feet Rotary Pans)	500m^2	x	**Activity 20 (b) (GNR 327)** *The primary processing of a mineral including winning, extraction, classifying, concentrating, crushing, screening or washing.* **Activity 19 b (GNR 325)** *The primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening and washing.* Bulk material reduction at the Rotary Pan Plant for screening and final recovery of alluvial diamond.	N/A
Ablution facility	<6m^2	N/A	NOT LISTED	N/A
Access roads	5 Ha	**x**	**Activity 24 (GNR 327) – Listing Notice 1** *Development of a road (ii) with a reserve wider than 13.5m / where no reserve exist where the road is wider than 8 metres and which is* 1 kilometre or longer. **Activity 4 (GNR 324) – Listing Notice 3** *The development of a road wider than 4 metres with a reserve less than 13.5metres in the (g) Northern Cape (ii) outside urban areas (aa) A protected area identified in terms of NEMPAA, excluding disturbed areas.(ee) critical biodiversity area as per bioregional plan.* Access roads of various widths and lengths to cater for machinery (excavators, dump truck), single-, and double cab bakkies will be required. Haul road from	N/A

			trenches to stockpile and processing plant and another to the contractor's camp would also be required. The exact dimensions, lengths of each road are still to be determined.	
Diesel Storage	1Ha Either > 30m^3 or > 80m^3	x	**Activity 14 (GNR 327) – Listing Notice 1** *The development/operation of facilities, for storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 80m^3 or more but less than 500 m^3.* **Activity 10 (g) (ii) (aa) (ee) (gg) (GNR 324) – Listing Notice 3** *The development and related operation of facilities/infrastructure for storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80m^3 in (g) the Northern Cape (ii) outside urban areas (aa) in a protected area (ee) in a critical biodiversity areas (gg) with 10km from national parks or world heritage sites.* Diesel will be stored onsite in storage tank/s including oil in containers. The combined capacity cannot be confirmed at this stage. Both activities will be applied to cater for either a combined capacity of 30m^3 but less than 80m^3 or more than 80m^3.	N/A
Fence	5Ha	N/A	NOT LISTED	N/A
Site Office	1 Ha	x	Activity 27 (GNR 327) Activity 12 (g) (ii) (GNR 324)	N/A
Vehicle Parking area	1 Ha	x	Activity 27 (GNR 327) Activity 12 (g) (ii) (GNR 324)	N/A
Contractors' Camp (Fly Camp will be used which will be moved between one working are to the next).	1 Ha	x	Activity 27 (GNR 327) Activity 12 (g) (ii) (GNR 324)	N/A
PHASE 3 – Non-invasive activities				
Feasibility Studies to produce Feasibility Study Report	690	N/A	NOT LISTED	N/A

(ii) **Description of activities to be undertaken**

(Describe Methodology or technology to be employed, and for a linear activity, a description of the route of the activity)

On 7 September 2020, the DMRE accepted Samara's application for a prospecting right with bulk sampling for alluvial diamonds on the Orange River (NC 30/5/1/1/2/1 2663 PR). The application covers a prospecting right area of 690 hectares on a 43 km section of the Orange River in the area of De Hoop Camp Site (RNP) to Sendelingsdrift (RNP)[5].

Samara's intends to identify whether there are economically exploitable concentrations of alluvial diamond within the application area. A Prospecting Works Programme (PWP) will be followed to assess the potential to feasibly mine alluvial diamonds along this specific stretch of the Orange River. According to the PWP, the aim is to prospect in the lower suite of the gravel terraces, below the flood line of the river.

The PWP will be implemented over a five (5) year period. Thus if granted, the prospecting right will be valid for five (5) years. After the expiry of five years, Samara may request renewal for a period of no longer than three (3) years.

Over the five year period, Samara will follow a three-phased prospecting programme as illustrated in **Figure 6**.

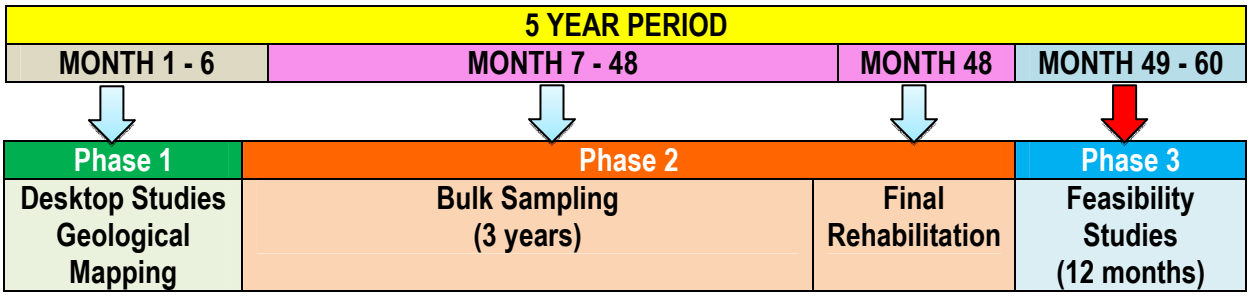


Figure 6: Illustration of three prospecting phases

The various phases are described in detail in the below section.

Phase 1 – Non-Invasive Prospecting

Desktop Study (month 1 – 3):
The mineral resource and its distribution will be determined through a desktop study where historical data will be extrapolated with the new proposed prospecting area.

Geological Mapping (Month 1 – 6):

- The geologist will conduct a site geological mapping excursion to visit prospecting target areas to determine the site's physical component. A geological map will be produced.
- Positive geological mapping results will allow the geologist to determine/confirm the bulk sample locations, and a trench plan will be produced. Next, bulk sampling can begin.

[5] The Richtersveld National Park is referenced as RNP through the report and is a legally protected national park in terms of the National Environmental Management: Protected Areas Act (Act 57 of 2003)

Phase 2 – Bulk Sampling (Month 7 - 48 months) – 3 years

Samara will prospect for alluvial diamonds within the 1: 100-year flood line of Orange River from the riverbed and active channel with prospecting pockets 4, 5 and 6. The total extent of the prospecting focus area is 175 hectares. Ten (10) trenches, each 100m x 25m x 4m, will be excavated from these pockets. The volume of gravel bearing resources to be abstracted per trench is 7500m^3 and 2500m^3 of waste/overburden. Bulk sampling will be conducted over a period of three (3) years.

The prospecting methodology will include the following:

- A fly camp (contractor's camp), site office including ablution facilities and equipment storage areas will be established. Areas designed for infrastructure will be cleared of vegetation (if any) and fenced off. All relevant equipment will be brought to site i.e. Excavator, dump trucks, geological equipment, machinery (pumps) and Rotary Pan Plant.
- Small temporary diversions / re-alignment of the river will be constructed to access alluvial material for excavation. 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 the new channel and include a cast bunt wall in the river to direct flow through a new channel. The process would include the diversion, abstraction and filtration of the river water, with release of the clarified water back to the river channel downstream of the workings.
- Vegetation (if any) will be cleared by dozer from trench sites, followed by topsoil which will be stockpiled at the perimeter of trenches for rehabilitation of mined-out areas.
- An excavator will be used to dig trenches and collect bulk samples of diamondiferous gravels.
- Next, the samples will undergo a reduction and recovery process - Excavated samples will be processed in an 8 x 18 feet rotary pan operation within a closed circuit for pan porrel. The rotary pan will have a minimum and maximum tonnage of 45 and 56 respectively, subject to the Gravel Specific Gravity.
- The concentrate will be transferred to an x-ray sorter (Bourevestnik / BV) via a conveyor belt system for further processing and diamond recovery. No chemicals will be used in the process.
- All slimes from the scrubber and pan will be pumped to a Vacuum Claridisk Filter System to clean the water for repump into the Scrubber unit and to remove the silt/mud. The silt/mud removed from the process water will be collected in a bottom pan to be backfilled into the excavations. The filter system has been put in place to replace the need for a slimes dam.
- 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.
- Water for the processing operation will be abstracted from the Orange River. The 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 pumping it into municipal reservoirs (to be confirmed during engagement process). Please refer to **Appendix 4 for the Processing Plant flow chart and Design Plan.**
- The entire Rotary Pan 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.

- Tailing (silt/mud) from the process plant and overburden will be backfilled (returned) into excavations, followed by topsoil. Distributed areas will be appropriately rehabilitated according to environmental guidelines.

The proposed mining and Rotary Pan Plant technique is innovative wherein it includes a filter and clarification system for the porrel mud to be filtered out from process water and backfilled into trenched out areas. This method replaces the need for a slimes dam, unlike the methods of the existing diamond mining operations.

The following associated infrastructure will be development in support of the prospecting activities:

- Ablution facilities;
- Access roads;
- Diesel storage facilities;
- Fences;
- Office sites;
- Plant sites; and
- Contractor's camp
- Vehicle parking areas.

The Orange River's active channel is 30 – 40m wide; however, the riverbed is approximately 300 – 400m wide. It is proposed that eighty per cent (80%) of the riverbed be worked dry. Samara will make small temporary diversions in the river to gain access to the alluvial material (worked in a phased manner with concurrent rehabilitation). No blasting will be required as part of prospecting activities, and there will be no processing in the riverbed only on the Orange River active channel embankment or within 50 m thereof. Only machinery and associated pumps will be located within the riverbed.

Final Rehabilitation (Month 48) – 1 month

- Once excavations, sampling and processing is complete, infrastructure and equipment will be removed from the site (Rotary Pan Plant removed in 6 hours);
- Final trench sites will be backfilled, spoil material, topsoil replaced and landscaped;
- The contractor's camp, offices, plant, ablution facility, diesel storage tanks and fences will be removed from site, and disturbed areas ripped to promote rehabilitation to pre-prospecting state;
- Any bare soils left post prospecting will be re-vegetated
- River bank stabilisation efforts

Phase 3 – Pre-Feasibility Study (Month 49 -60) – 12 months

During the final year of the PWP data will be interpreted, summarised, evaluated and modelled to determine the diamond resource on the property. This will be a continuous process through the prospecting works. Each phase of the prospecting programme will be followed by desktop studies involving interpretation and modelling of all data gathered and how the Samara will proceed with the work program in terms of activity, quantity, resource, expenditure and duration. A pre-feasibly study will be conducted to determine the economic viability of mining the resource and whether the results can support a mining permit application.

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 commercial-scale mine.

e) Policy and Legislative Context

(a description of the policy and legislative context within which the development is proposed including identification of all legislation, policies, plans, guidelines, spatial tools, municipal planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)

No	APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process);	HOW DOES THIS DEVELOPMENT COMPLY AND RESPOND TO THIS LEGISLATION
	NATIONAL LEGISLATION	
E1	**Constitution of Republic of South Africa Act (Act 108 of 1996)** The Constitution placed people at the centre of environmental management. Section 24 states that every person has the right to an environment that is not harmful to their health or well-being and to have the **environment protected** for the benefit of present and future generations through legislative measures that prevent pollution, environmental degradation, promote conservation and secure ecologically sustainable development.	NEMA is designated within the framework of the Constitution. A full EIA process is being followed in terms of NEMA to determine the potential impact of the project on the social (people) and environmental aspects of the application area. The deliverable from the EIA process will be an approved Environmental Management Programme (EMPr) and Environmental Authorisation. The prospecting and bulk sampling activities will be managed in accordance with the approved EMPR to reduce environmental impacts on the prospecting focus area and ensure rehabilitation of affected areas to pre-prospecting state. The EIA will engage in an assessment of the available methods of rehabilitation and probability of success. The entire objective of the process is to ensure that the environment is protected. I&APs are being engaged as part of the EIA Process public participation process to ensure that the public is aware of the activity, has access to the details of the prospecting application and its potential impacts and are provided the opportunity to voice their opinions and concern regarding the application.
E2	**National Environmental Management Act (Act 107 of 1998) (NEMA)** NEMA has been designated within the framework of the Constitution to promote sustainable development. It requires that development must be socially, environmentally and economically sustainable by taking measures to prevent pollution and ecological degradation; promote conservation and secure ecologically sustainable development while promoting environmental justice. It requires that social, economic and environmental impacts of	The principles of NEMA have been considered. An application for environmental authorisation has been lodged to the DMRE by NDI under Ref no. NCS 30/5/1/1/2/1 (12663) PR, which specify triggered listed activities in terms of section 24 (5) of NEMA. A full EIA process is being followed to identify potential environmental and social impacts of the triggered activities. The Scoping Report has been prepared and provides a scope of the potential environmental and social impacts that need to be investigated as part of the EIA and is prepared in compliance with the NEMA. The Scoping report has been subjected to a 30-day public comment period from 13 November to

	activities are considered, assessed and evaluated, and the impact on people must be anticipated and prevented. Section 28 of NEMA imposes the 'polluter pays' principle whereas the person who causes the pollution must pay for its remediation. Section 24 (5) of NEMA provides for specific listed activities which require environmental authorisation prior to their commencement. Environmental impacts of such activities must be considered, assessed, evaluated and where possible managed, minimized or prevented. The regulated activities and subject application processes have been published under the 2014 NEMA EIA Regulations (GNR 326).	14 December 2020. The inputs from key stakeholders and interested and affected parties have been incorporated into the report and details any further in-depth investigations required to evaluate the environmental risks further. Specialist Scoping Reports for Visual, Freshwater, Wetland, Terrestrial Biodiversity, Hydrology and Geohydrology have been prepared and included in the DMRE Scoping Report to screen the potential impacts from the prospecting activities on the environment.
E3	**2014 NEMA Environmental Impact Assessment (EIA) Regulations** (as amended on 7 April 2017) The EIA Regulations (GNR 326) and its associated listing notices 1 (GNR327), notice 2 (GNR 325) and notice 3 (GNR 324) lists developments which require authorisation. Prospecting right activities inclusive of bulk sampling are regulated activities in terms of the GNR 327 (Activity 20-Prospecting) and GNR 325 (Activity 19-Bulk sampling) and require environmental authorisation. The application for environmental authorisation is subject to a full Scoping and EIA Process. The Scoping and EIA Process is regulated in terms of Regulation 21-26 and Regulation 39-44 and sets out the minimum requirements for the process. The applicant must submit the following to the DMRE Springbok for decision making: ▪ pplication for Environmental Authorisation ▪ **roof of Public Participation Process** ▪ **coping Report** ▪ nvironmental Impact Report & Environmental Management Programme (EIR & EMPr).	The application for environmental authorisation was submitted to the DMRE and accepted on 15 September 2020 (NCS 30/5/1/1/2/1 (12663) PR) and is subject to a full Scoping and EIA Study in terms of the EIA Regulations. A Scoping Report (this document) has been compiled. The triggered listed activities have been specified in Table 2. The Scoping Report has been subjected to a 30-day public review and comment period from 13 November to 14 December 2020. The public submissions have been incorporated into this finalised Scoping Report for submission to the DMRE. The report finds that this prospecting right application is in conflict with the prohibitation on prospecting and mining in protected areas as contained in Section 48 of NEMPAA. The competent authority must therefore reach a decision in line with Section 22(b)(ii) of the EIA Regulations to within 43 days of receipt of the scoping report, to refuse environmental authorisation and not allow the application to proceed beyond the scoping phase. Samara however insists that the application process proceed based on the economic development the activity will bring to the Richtersveld.

	losure and Rehabilitation Plan inclusive of a quantum calculation to cater for the required rehabilitation costs. Furthermore Regulation 22(b)(i) specifies that a competent authority must, within 43 days of receipt of a scoping report, accept a Scoping Report if it complies with all the necessary requirements or (ii) refuse environmental authorisation if "the proposed activity is in conflict with a prohibition contained in legislation" or any applicable protocol, or requirements.	
E4	**Mineral and Petroleum Resources Development Act (Act 28 of 2002) (MPRDA) and its amendments** The MPRDA recognises the need for sustainable development of mineral and petroleum resources while simultaneously promoting economic and social development, local and rural development and the social upliftment of communities affected by mining. The MPRDA requires that all mining-related activities require environmental authorisation, rights and or permits before any mineral is removed or activity commenced with. Prospecting activities with bulk sampling require a prospecting right application in terms of Section 16 and 20 of the MPRDA with the imperative of an impact assessment process as set out in the NEMA. The MPRDA and NEMA have been aligned with specific environmental legislation associated with mining activities to provide for one environmental system. The DMRE is, therefore the authorising authority for environmental authorisations. DMR has a predetermined Scoping Report template that needs to be completed for prospecting or mining right applications and submitted within a specified timeframe. However, subject to **section 48 of the MPRDA no prospecting right, mining right may be granted or mining permit issued in respect of** – **Section 48** c) **any land** being used for public or government purposes or	The application for a prospecting right has been submitted to the DMRE in terms of Section 16 and 20 of the MPRDA (Reference NC 30/5/1/1/2/12663 PR). The application for environmental authorisation was lodged simultaneous to the prospecting right application and has been accepted by the DMRE on 15 September 2020. The Scoping Phase has gathered data from desktop investigations, specialist inputs and key stakeholder inputs which conclude that PRAA 2 and prospecting pockets 4, 5 and 6 fall within a proclaimed protected area (Richtersveld National Park and Richtersveld Cultural and Botanical Landscape World Heritage Site) in terms of the NEMPAA and prospecting and mining herein is prohibited. The prohibitation set out in Section 48 (c) of the MPRDA on mining and prospecting on land reserved by any other law is therefore applicable to PRAA 2. Although existing diamond mining is undertaken in the park, these companies have existing lawful mining rights issued prior to the enactment of NEMPAA and may proceed with their operations in terms of section 48 (2), (3) and (4) of NEMPAA subject to strict environmental management. This Scoping Report has been prepared as per the predetermined DMRE Scoping Report template requirements. Based on the report findings the application is not permitted to proceed since the application is in conflict with the prohibitation contained under Section 48 of NEMPAA and MPRDA. Samara insists that the application proceed based on the economic growth it will bring to the Richtersveld – and cross border communities.

	reserved in terms of any other law (d) Areas identified by the Minister by notice in Gazette in terms of Section 49. Section 49 specifies the Minister's power to prohibit or restrict prospecting or mining in certain areas. The Minister may, having regard to the national interest, prohibit or restrict granting of prospecting right, mining right or permit in respect of land identified by the Minister for a period and on such terms and conditions as the Minister may determine.	
E5	**National Water Act (Act 36 of 1998)** (NWA) The principles and objectives of the NWA are to guide the protection, use, development, conservation, management and control of water resources in a sustainable and equitable manner for the benefits of all persons. Section 19 of the NWA deals with prevention and remedying effects of pollution in particular where pollution of water resources occur/might occur as a result of activity on land. The person who owns controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources. Chapter 4 of the NWA requires licensing of 11 listed water uses which are captured in Section 21 which require application for a water use license (WULA).	The project triggers the following Section 21 water uses, and if the application proceeds, a WULA will be lodged with the Department of Water & Sanitation: Orange-Proto Catchment Management Agency: ▪ Section 21a – abstracting water from the river, or from boreholes; ▪ Section 21c – The temporary diversion of the watercourse during bulk sampling. Natural flow may also be impeded depending on the methodology employed. ▪ Section 21f – Clarified water from the vacuum and filtration process at the prospecting works will be released into the river resource; ▪ Section 21g – Overburden stockpile, Diamondiferous material stockpile from bulk sampling excavation, Diamond depleted stockpile (waste material) from process plant and temporary onsite disposal of waste; ▪ Section 21 i – Temporary altering the course of the watercourse, bulk sampling excavation in the flood line (both bed and banks), rehabilitation of the bed and banks after excavations. A WULA Procedure will be followed in terms of the WULA and Appeals Regulations of 2017 (GNR 267). A Hydrological and Geohydrological Scoping Report has been prepared to scope the potential water uses and potential impacts, including aspects for further investigation. The WULA will be submitted to the DWS once the prospecting focus areas and infrastructure sites have been determined. The details of the WULA are currently being included as part of the overall EIA public participation process.
E6	**Mine Water Regulations 704 of 1999 (GG – 20119) – Section 26 – Regulation of the Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources** The "Mine-water Regulations" is aimed at ensuring the protection of water resources through restrictions on locality, material, and the	Excavation, bulk sampling activities and infrastructure will be located within the 1: 50 and 1: 100-year flood line of the Orange River. An application for exemption/relaxation of the condition imposed by GN 704 will be submitted as part of the overall WULA submitted to the DWS: Upington Regional Office.

	design, construction, maintenance and operation of separate clean and dirty water systems related to mining activities. Restrictions to locality refers specifically to the placement of mine infrastructure and pollution control above the 1: 50 and 1: 100-year flood zones or within a horizontal distance of 100m of any watercourse or estuary, borehole or well. Detailed regulations on the use of water for mine-related activities were issued in 1999 under the National Water Act framework.	
E7	**National Environmental Management: Protected Areas Act (Act 57 of 2003) (NEMPAA) (effective 2004)** Chapter 2, section 9 of the NEMPAA sets out kinds of protected areas which include: (a) special nature reserves, **national parks**, nature reserves (including wilderness areas) and protected environments; (b) **world heritage sites;** (c) marine protected areas; (d) specially protected forest areas, forest nature reserves and forest wilderness areas declared in terms of the National Forests Act, 1998 (Act No. 84 of 1998); and(e) mountain catchment areas declared in terms of the Mountain Catchment Areas Act, 1970 (Act No. 63 of 1970) NEMPAA provides in Chapter 4 Section 48 that, despite other legislation, no person may conduct prospecting or mining activities in special nature reserves or protected areas without the prior consent of the Ministers of Mineral Resources and Environmental Affairs. This prohibition extends to a protected area that was immediately before NEMPAA's enactment, reserved or protected in terms of provincial legislation for any purpose for which an area could in terms of NEMPAA be declared as a nature reserve or protected environment. NEMPAA binds all state organs and trumps other legislation, including the Minerals and Petroleum Resources Development Act, No 28 of 2002 (MPRDA), in the event of a conflict concerning the development of protected areas.	As stated under Item E4; PRAA 2 and prospecting pockets 4, 5 and 6 are located within a protected area and NEMPAA, prohibits mining and prospecting herein. Naledzi will apply for written permission in terms of section 46 to access the RNP for the EIA specialist field investigations, should the application proceed. Samara will seek written approval from SANPARKS and the RGBK in terms of Section 50 (5) during the EIA Phase.

	In terms of Section 48 (2), the minister of environment, after consultation with Cabinet members responsible for minerals and energy, must review all mining activities which were lawfully conducted in a protected area prior to 2004. Section 48 (3) states the minister must prescribe conditions for mining activities conducted in protected areas, declared after the commencement of NEMPAA under which those activities may continue in order to reduce or eliminate the impact of those activities on the environmental or for the environmental protection of the area concerned. Any prospecting and mining rights/ concessions which lawfully took place in a protected area prior to the enactment of the NEMPAA, may continue in such a protected area. However any new prospecting or mining-related activities by new mining companies are prohibited in protected areas. Further to the above, Section 46 of NEMPAA, related to access to a national park and world heritage site, states that: (1) espite any other legislation, no person may without the written permission of the management authority of a national park, nature reserve or world heritage site enter or reside in the park. The interpretation is that the EIA team (EAP, specialists) require written permission from the RNP management to conduct the PRAA 2 EIA field investigations in the RNP and World Heritage Site. In addition, Section 50 of NEMPAA deals with commercial and community activites in a national park, nature reserves and world heritage sites and is applicable to the application areas with specific emphases on Section 50 (5) of NEMPAA wherein it is stated that no development may be permitted in a national park, nature reserve or world heritage site withouth the prior written approval of the management authority.	

E8	**Richtersveld National Park Proclamation (Government Notice 1969 / Government Gazette 13457 dated 16 August 1991)** The RNP was proclaimed in August 1991 in terms of the National Parks Act No. 57 of 1976,. **The park is managed in accordance to a Management Plan approved by Minister Edna Molewa in terms of Section 39 and 41 of NEMPAA**. The motivation for establishing the park is attributed to the requirement to preserve a representative sample of the Succulent Karoo. SANPARKS manages the park alongside the RGBK. The Minister of Minerals and Energy Affairs gave permission, in terms of Section 2B (1)(a) of the National Parks Act No. 1976 for the proclamation of the park with the following conditions: ▪ xisting exploration and mining rights must continue to exist and not be affected by the proclamation of a national park; and ▪ uture applications for exploration and mining in the park after the proclamation will be considered on merit. Diamond mining currently takes place in the park at Aace plant, Grasdrift, Jakkalsberg, Oena and Sendelingsdrif. Current mining activities are managed according to section 48 of NEMPAA. Old mine dumps act as gravel source, used for maintenance purposes. However the RNP management Plan refers to mining as a "threat" and the LOR mining areas are zoned as "mining rehabilitation areas". Current mining activities within the Park are carefully monitored to prevent any damage to cultural, conservation or tourism related matters, in liaison with the Minister of DEFF.	This application is for a prospecting right within a proclaimed protected area and is thus in conflict with the management objectives of the RNP Management Plan. The plan considers mining as a threat and has been recorded as such in the Scoping Report.
E9	**National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEM:BA)** The NEMBA provides for the management and conservation of South Africa's biodiversity within the framework of NEMA and the	The National Threatened Ecosystem Dataset has been studied. The prospecting pockets 4, 5 and 6 fall within a threatened ecosystem namely Lower Gariep Alluvial Vegetation and is considered endangered. Clearing of vegetation will be required for trench sites and associated prospecting infrastructure.

	protection of species and ecosystems that warrant national protection. A list of threatened and protected species, categorised as critically endangered (CR), endangered (EN), and vulnerable (VU) or protected has been issued in terms of Section 56 (1) of the NEMBA. South Africa also uses the internationally endorsed World Organisation-International Union for Conservation of Nature (IUCN) **IUCN Red List Categories and Criteria** in the Red List of South African plants. A list of threatened and protected ecosystems was gazetted in 2011 in terms of Section 52 (1) of the same act. The ecosystems are categorised as critically endangered (CR), endangered (EN), and vulnerable (VN) or protected.	Several flora species listed under section 56 (1) may be present at the site. Several Faunal Species of Conservation Concern in terms of the Threatened and Protected Species list of 2015 as it relates to NEMBA has potential distribution ranges that encompass the focus area. A Biodiversity Scoping Report has been compiled to screen the potential impact of the prospecting activities on fauna, flora and avifauna including potential presence of possible threatened or protected species and including list of species potentially present at the focus area. It also details all applicable legislation. It prescribes the methodology to conduct a field assessment and the full Biodiversity Impact Assessment during the EIA Phase. The specialist will present findings and management measures if conservation concern species do exist on site. A licence to disturb protected flora will be obtained from the Northern Cape Department of Environment and Nature Conservation (DENC). Protected flora outside of the prospecting focus and infrastructure areas will be marked and left intact as much as possible.
E10	**National Forest Act, (Act 84 of 1998)** In terms of Section 7 (1) no person may cut, disturb, damage or destroy any indigenous, living tree in, or remove or receive any such tree from, a natural forest except in terms of- a license issued under subsection (4) or section 23. In terms of Section 15(1) of the act, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated. If any indigenous tree in a natural forest or protected trees require removal from a development site a permit needs to be obtained in terms of Section 7(1) and Section 15(1) from the Department of Environment, Forestry and Fisheries (DEFF) prior to such removal.	The prospecting and bulk sampling activities may require the removal of indigenous trees forming part of the Orange River riverine forest. Several protected tree species, *Boscia albitrunca (Shepards Tree)*, *Vachellia erioloba (Camelthorn)* and *Euclea pseudebenus (Cape Ebony)* are likely to be located throughout the focus area and within the prospecting pockets. The prospecting activities would avoid removal of indigenous and protected trees as far as possible. Instances where it cannot be avoided, the relevant permits for removal will be obtained from DEFF. DEFF: Forestry Management and Regulation will be consulted as part of the Public Particiation Process to determine the permit requirements for potential removal of riverine forest (riparian vegetation) at prospecting focus areas.
E11	**National Environmental Management: Waste Act (Act 58 of 2008) (NEM:WA)**	The backfilling of process material back into trenches do not require a waste management license. No slimes dam will be constructed. No waste rock dumps will be created. Topsoil and

	NEMWA is the principal act governing waste management within South Africa since 2009. The objectives of the act involve the protection of health, wellbeing and the environment. It provides measures for to avoiding and minimising the generation of waste, reducing, recycling and recovering waste, and treating and safely disposing of waste. It further requires that all waste management activities must be licensed. Schedule waste management activities which require a WML are included under Section 19 (GNR 921) of the NEMWA and GNR 633/2015 recently inserted residue deposits resultant from prospecting as a Category A activity which requires a WML under the provisions of NEM: WA. Accordingly, no person may undertake a waste management activity without a waste management license. The DMR is the authorising authority for waste management activities related to prospecting, exploration and or mining.	material stockpiles will be backfilled into trenches as soon as the bulk samples have been collected (concurrent rehabilitation).
E12	**National Heritage Resources Act (Act 25 of 1999) (NHRA)** NHRA protects all structures and features older than 60 years (Section 24), archaeological sites and material (Section 35) and graves and burial sites (Section 36). Section 38 indicates that any person intending on undertaking any form of development which involves the activities listed below must, at the earliest stage of initiation, notify the South African Heritage Resources Association (SAHRA): Construction of road, wall, power line, pipeline, canale/similar form of linear development/barrier exceeding 300m in length; • Construction of a bridge/similar structure exceeding 50m in length • Any development or other activity which will change the character of the site- o Exceeding 5000m^2 in extent or o Involving 3 or more existing erven / subdivision thereof or;	A desktop Heritage and Palaeontological Scoping has been conducted for PRAA 2 and notes that several heritage resources may be present in the PRAA 2 along the Orange River banks namely Stone Age lithics, middens, rock engravings, graves, historical buildings and places of conflict and are likely to be impacted by the prospecting and bulk sampling activities. The Heritage and Palaeontolgoical Scoping Reports is attached under Appendix 6 of this Scoping Report. A full Heritage and Palaeontological Impact Assessment Study will be conducted during the EIA Phase, if the application is to proceed. Essentially, the Heritage and Palaeontological Scoping study found that PRAA 2 and prospecting pockets 4, 5 and 6 fall within the Richtersveld Cultural and Botanical Landscape World Heritage Site. A world heritage site is a proclaimed protected area in terms of NEMPAA. Section 48 read with section 9 (b) of NEMPAA states that no prospecting or mining is permitted in a world heritage site.

	o The re-zoning of a site exceeding 10 000m^2 in extent; or o Any other category of development provided for in regulations by SAHRA / provincial heritage resources agency. A Heritage Impact Assessment Study must be conducted and must comply with section 38 (3) of the NHRA. The assessment of the archaeological resources must be completed by a qualitifed archaeologist and comply with the SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components and Impact Assessment Reports.	
E13	**World Heritage Convention Act 1999 (Act 43 of 1999) (WHCA)** The WHCA incorporates Word Heritage Convention into SA law and regulates the recognition and establishment of World Heritage Sites and management thereof. The act recognises that cultural heritage and the natural heritage are irreplaceable possessions, not only of the Republic, but of humankind as a whole and acknowledges that the loss, through deterioration, disappearance or damage through inappropriate development of any of these most prized possessions, constitutes an impoverishment of the heritage of all the peoples of the world and, in particular, the people of South Africa.	A Heritage and Palaeontological Scoping Report has been prepared and found that the prospecting pockets 4, 5 and 6 fall within the Richtersveld Cultural Botanical Landscape (UNESCO World Heritage Site) which has full legal protection since 2007. Prospecting or mining near or in World Heritage Sites requires robust assessment based on ICOMOS Guidance. If the application proceeds, a full Heritage and Palaeontological field assessment and impact assessment is required for the application and must follow the ICOMS Guideline published in January 2011 by the International Council for Monuments and Sites. The ICOMS offers guidance on HIA's for World Heritage properties in order to evaluate the impact of potential development on the Outstanding Universal Value (OUV) of properties effectively. The South African Heritage Resources and McGregor Museum have been consulted during the Scoping Phase and have provided their comment on the application. Both these authorities including the Northern Cape Heritage Authority and the Northern Cape Dept. of Sports, Arts and Culture (dSAC) will be consulted during the EIA Phase.
E14	**National Environmental Management: Air Quality Act (Act 39 of 2004) (NEM: AQA)** NEM: AQA regulates air quality to protect the environment by providing measures for prevention of pollution and ecological degradation and securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring. Government Notice 893 of 22 November 2013 provides a list of atmospheric emission activities in terms of Section 21 of	No Air Emission License (AEL) will be required for the prospecting activities as no listed activities are triggered under NEM:AQ.

	NEM: AQA which require licensing. The notice further establishes minimum emission standards for the listed activities. NEMAQA places the responsibility for air quality management on district authorities tasked with baseline characterisation, management and operation of ambient monitoring networks, licensing of listed activities and emission reduction strategies.	
E15	**Interim Protection of Informal Land Rights Act (Act 31 of 1996) (IPILRA)** Section 2 (1) of the act states that no person may be deprived of any informal rights to land without his or her consent. IPILRA therefore requires the informed consent of a community which has informal rights in land before the community may be deprived of such rights. Communities therefore have a veto right. MPRDA and IPILRA should be read together.Communities and other holders of custormary rights, have the right to be consulted under the MPRDA, as well as to give free, prior and informed consent, before prospecting or mining rights can be granted by the DMRE/Minister of Mineral Resources.	The land covered by PRAA 2 is held in trust by the Minister of Rural Development and Land Reform and is in the process of being handed over to the Richtersveld Community i.e. community members of Sanddrift, Kuboes, Lekkersing and Eksteenfontein as the informal land rights holders of PRAA 2. The land is to be registered to the Richtersveld Communal Property Association (CPA). The Richtersveld CPA is currently under administration and an administrator has been appointed to deal with matters on their behalf. The Richtersveld community, CPA and CPA administrator have been informed of the project. The The Scoping Report was placed in the project area for public review and comment. Public meetings were scheduled to take place on 3 and 4 December 2020 but were postponed to 12 – 13 January 2021 due to the covid-19 risk in the Richtersveld area. Inline with the latest Covid-19 regulations of 29 December 2020 gatherings are not permitted until 15 January 2021, after which the provision will be reviewed. The communities will thus be engaged after 15 January 2021 and during the EIA Phase. This will also initiate the process for Samara to seek community consent in terms of IPILRA, which is a separate matter to the EIA Process.
	PROVINCIAL LEGISLATION	
E16	**Northern Cape Nature Conservation Act, 2009 (Act 9 of 2009) (NCNCA)** NCNCA was written to consolidate environmental management legislation in the Province. It includes regulations which call for the protection of indigenous plants, animals which require a permit from the provisioning authority, NCNCA for its pick, sell, removal, donate, in and or export in the province. Schedule 2 (Protected Species) of the NCNCA lists several species that are protected within the	A Biodiversity Scoping Report has been compiled for the project. Based on desktop analysis several floral species (e.g. *Astridia herrei* (a Critically endangered endemic) and *Conophytum bilobum* (a near threatened endemic) that are protected under Schedule 2 have the potential to be located within the focus area and within all the prospecting pockets. The potential list of species has been included in the Biodiversity Scoping Report. A comprehensive biodiversity field assessment and impact assessment will be undertaken to determine the presence, and the possibility of occurrence for all protected species, and the impact on overall terrestrial ecology including biodiversity priority areas will be considered.

	Northern Cape Province.	No indigenous faunal species may be removed from the site without the necessary permits from DENC. This includes the removal of bird nests, especially raptor sites, and no animals (including snakes) may be hunted (poached), trapped, injured or removed in any way without the necessary permits. Permits must be obtained from DENC for any indigenous vegetation which is protected under the NCNCA, or the DEFF for protected tree species under the NFA.
	Legally binding Conventions / Treaties and Protocols relevant to Orange River, Orange River Mouth and TFCA	
E17	**1890 Treaty between Britain and Germany on the International Border between South Africa and Namibia** The Orange River forms the international border between South and Namibia. However the two countries disagree over the exact location of the border namely either: • entre line of Orange River; or • igh-water level of the northern bank of the Orange River A treaty between Britain and Germany, concluded in 1890, sets the demarcation at the high-water level of the northern bank of the Orange River. Article 1 (4) of the Namibian Constitution Act 1990 states that the Namibia's southern boundary shall extend to the middle of the Orange River. South Africa seeks to maintain the border location as specified in the treaty of 1890, in accordance with the legal principle of *uti possidetis*. Uti possidetis is a principle of international law which provides that newly-formed sovereign states should retain the internal borders that their preceding dependent area had before their independence. The two countries thus disagree over the exact location of this border.	The PRAA 2 includes the left bank of the Orange River and boundary to a portion of the Remainder of the Farm 11 and Farm 18. Prospecting will focus on prospecting pockets within the flood line of the Orange River within the river bed and active channel. The right bank of the Orange River is the limit of the PRAA 2, according to the treaty the boundary to the International border of Namibia as recognised by South Africa. Given the a highly contentious issue on the international border; the Department of International Relations and Cooperation (DIRCO) will be engaged in January 2021 as part of the EIA Phase public participation process to verify the border line and position of the prospecting application in terms of the border to avoid a possible international incident.

E18	**Convention on Wetlands (RAMSAR, 1971 enforced 1975)** The Convention on Wetlands, Ramsar Convention, is an environmental treaty established in 1971 by UNESCO. It provides for national action and international cooperation regarding the conservation of wetlands, and wise sustainable use of their resources. Ramsar lists wetlands of international importance across the world. The Orange River Mouth was declared a Ramsar site in 1991, as was the Namibian side of the mouth in 1995. Together they form the Orange River Mouth Transboundary Ramsar Site. Due to server degradation of the salt marsh by mining activities, the site was placed on the Monteux Record in 1995, for wetland sites where changes in ecological character have occurred. The Orange River Mouth was designated internationally important as it supports several fish and bird species listed in Nambian, South African and international red data books. Its importance is largely linked to its importance as a site for migratory birds. The Ramsar Convention's broad aims are to halt the worldwide loss of wetlands and to conserve, through wise use and management, those that remain. This requires international cooperation, policy making, capacity building and technology transfer.	PRAA 2 prospecting pockets are located approximately 80-90km north of the estuary known as the Orange River Mouth RAMSAR Site. The Orange River Mouth is also designated as an Important Bird Area (IBA). The proposed prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thus the RAMSAR wetland system. A Freshwater Scoping Report and Biodiversity Scoping Report has been compiled and included in this Scoping Report to describe the baseline conditions of the affected environment and screen potential impacts and risks from the prospecting on the RAMSAR wetland system. A field assessment and full Freshwater-and Biodiversity Impact Assessment Studies will be conducted during the EIA Phase to confirm the potential impacts and required mitigation measures. Where impacts are likely to be significant, restrictions will be placed on the prospecting activities. The assessments will include a Wetland Assessment, Fish Assessment and Avifaunal Assessment. Stakeholder comments received from BirdLife South Africa require that the estuary be considered in both the Freshwater and Biodiversity Assessments, with impacts on avifauna being assessed by an avifaunal specialist. The species impact assessments must investigate all project areas of influence, not only the prospecting focus areas.
E19	**Convention of Migratory Species (CMS) / Bonn Convention** This treaty of the United Nations provides a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.	Species of conservation concern expected to occur within the project's area of influence (e.g. the Lappet-faced Vulture) are listed under the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and is therefore applicable. Biodiversity and Freshwater Scoping Reports have been compiled to screen the likely impacts of the project on fauna, avifauna, fish and their habitat and to set out the plan of study for EIA for the full specialist investigations. The Specialist Scoping findings have been included in this report. A full Biodviersity Impact Assessment inclusive of fauna, flora and avifuana will be conducted during the EIA Phase including a Freshwater Impact Assessment. The avifauna 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 assessed. The potential impacts and required mitigation measures to conserve the terrestrial, aquatic, fauna and avifauna will be included in the EMPr and Samara will undertake continuous monitoring to confirm the adequacy of the mitigation and management measures.
E20	**Convention of African Eurasian Migratory Waterbird (AEWA)** AEWA was developed under the framework of the CMS and is an intergovernmental treaty dedicated to the conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago. AEWA is administered by the United Nations Environment Programme (UNEP). AEWA aims to establish coordinated conservation and management of migratory waterbirds throughout their entire migratory range. AEWA covers 255 species of birds ecologically dependent on wetlands (including Orange River Mouth) for at least part of their annual cycle, including many species of divers, grebes, pelicans, cormorants, herons, storks, rails, ibises, spoonbills, flamingos, ducks, swans, geese, cranes, waders, gulls, terns, tropic birds, auks, frigate birds and even the South African penguin. The AEWA Action Plan specifies different measures to be undertaken by Contracting Parties to warrant the conservation of migratory waterbirds within their national boundaries. These include species and habitat protection and the management of human activities as well as legal and emergency measures.	The Orange River Mouth (RAMSAR site) is an important habitat for migratory birds. Many of the species supported by the estuary are covered by the AEWA. South Africa is obligated to maintain these species. An Avifauna Impact Assessment will be included as part of the overall Biodiversity Impact Assessment and 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 assessed. Mitigation and management measures will be included in the application EMPR and Samara will undertake continuous monitoring to confirm the adequacy of the mitigation and management measures. The AEWA Secretariat will be consulted as part of the EIA public participation process in January 2021.
E21	**International treaty of Ais Ais Richtersveld Transfrontier Park (ARTP) of 1 August 2013.** A Transfrontier Conservation Area (TFCA) is defined in the SADC Protocol on Wildlife Conservation and Law Enforcement (1999). The Ais Ais Richtersveld Transfrontier Park was formally established in 2003. The park was established with similar and varying management priorities. Therefore an international treaty was signed	The application is for prospecting within the ARTP which encompasses several protected areas including the RNP and Cultural and Botanical Landscape World Heritage Site. In terms of Section 48 of NEMPAA mining is prohibited within this protected area. The DEFF Transfrontier Conservation Area has been consulted. Namibia Ministry of Environment and Tourism have been notified and will be consulted during January 2021.

	between the governments of Namibia and South Africa on 1 August 2013 The ARTP is recognised as a significant conservation initiative with the aim to establish a large conservation and wildlife area not only through the integration of vast landscapes and reconnecting ecological systems, but also through development of cross-border tourism linkages. Mining remains the largest challenge to the park, with several areas along the river under Exclusive Prospecting Licenses.	
E22	**Orange-Senqu River Commission (ORASECOM) Agreement** The agreement was formalized by the Governments of Botswana, Lesotho, Namibia and South Africa through the signing of the 'Agreement for the Establishment of the Orange-Senqu Commission' on 3 November, 2000. The agreement recognizes the following agreements; • UN Convention on Non-Navigational Uses of International Watercourses (1997) • The SADC Revised Protocol on Shared Watercourse Systems (2000) ORASECOM promotes the equitable and sustainable development of the resources of the Orange-Senqu River. ORASECOM provides a forum for consultation and coordination between the riparian states to promote integrated water resources management and development within the basin.	The prospecting activities will take place on the Orange River on the border between South Africa and Namibia and is a shared water resource with Namibia at the section of the proposed prospecting activities. The prospecting and bulk sampling will entail several Section 21 water uses namely abstraction of water, diversion of watercourse, impeding of flow, release of clarified water back into the river system, temporary altering of the course of the watercourse. It is understood that the net 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. 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. A Hydrological, Hydrogeological and Freshwater Impact Assessment Studies will be commissioned as part of the EIA Phase to gauge the significance of the potential impacts on the Orange River and its effect on downstream water users. The initial specialist inputs have been included in this Scoping Report Section 2(d)(iv)(a)(a) under subsection 1.5 under Appendix 6.
E23	**SADC Revised Protocol on Shared Watercourse Systems (2000)** The revised SADC Protocol on Shared Watercourse Systems was signed in 2000 and came into force in 2003. The SADC Protocol on Shared Watercourses promotes the establishment of shared watercourse agreements and institutions	The prospecting and bulk sampling activities below the floodline of the Orange River poses a very significant risk to the Orange River system. The overall potential impacts from the mining operation is sedimentation to the river and the changes in the flow dynamics of the Orange River in and around the bulk sampling sites. All aspects of the proposed prospecting and bulk sampling activities will be considered in extensive detail, and all aspects will be exceptionally well planned and executed. Significant

	and enshrines the principles of reasonable use and environmentally sound development of the resource. It supports Integrated Water Resource Management (IWRM) and the Regional Strategic Action Plan for Integrated Water Resources Development and Management (RSAP-IWRM). The substantive obligations are: watercourse states may utilize an international watercourse in an equitable and reasonable manner; they should not cause significant harm to other states using the same watercourse; and they have to protect international watercourses and their ecosystems.	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. A Hydrological, Hydrogeological and Freshwater Impact Assessment Studies will be commissioned as part of the EIA Phase to gauge the significance of the potential impacts on the Orange River and its effect on downstream water users. The initial specialist inputs have been included in this Scoping Report Section 2(d)(iv)(a)(a) under subsection 1.5 under Appendix 6. The SACD Protocol will be a key protocol for consideration in the aquatic and hydrological related specialist studies including the WULA, if the application proceeds.
	PLANS	
E24	**2016 Northern Cape Critical Biodiversity Areas** Northern Cape DENC is the custodian of the environment in the Northern Cape Province and primary implementing agent of the Northern Cape CBA plan. This is done by providing a map of biodiversity priority areas, referred to as Critical Biodiversity Areas (CBAs) with accompanying land-use planning and decision making guidelines.	The prospecting focus area falls within a protected areas (RNP, Richtersveld Cultural and Botanical Landscape). Together with CBAs, the protected area ensure a viable representative sample of all ecosystems types and species can persist. The management objectives of the protected area are contained in the 2018 – 2028 Richtersveld Management Plan. A Biodiversity Scoping Report has been compiled to screen the potential biodiversity impacts (incl. CBAs) and is included in the Scoping Report. A full Biodiversity field assessment and impact assessment will be conducted during the EIA Phase.
E25	**Namakwa Critical Biodiversity Areas 2016 (Bioregional Sector Plan)** The Namakwa CBA serves as the Bioregional Sector Plan and shows both aquatic and terrestrial CBA's and ecological reserve areas in the Northern Cape: Richtersveld, Nama Khoi, Kamiesberg, Hantam, Karoo Hoogland and KhGi-Ma.	The prospecting pockets according to the Bioregional Plan, fall within an Ecological Support Areas (ESA) related to the Orange River Terrestrial Migration Corridor. A Biodiversity Scoping Report has been compiled to screen the potential biodiversity impacts (incl. CBAs) and is included in the Scoping Report. A full Biodiversity field assessment and impact assessment will be conducted during the EIA Phase to determine the impact on the ESA.
E26	**2017 Strategic Water Source Areas for Surface Water** Surface water SWSAs are defined as areas of land that supply a disproportionate (i.e. relatively large) quantity of mean annual surface water runoff in relation to their size. They include transboundary areas that extend into Lesotho and Swaziland.	The focus area is not located within 10 km of a Strategic Water Source Area.
E27	**Mining and Biodiversity Guideline 2013 (MBG)** The MBG identifies and categorizes biodiversity priority areas	The MBG 2013 has been consulted through the SANBI BGIS online mapping system. Prospecting pockets 4, 5 and 6 are located in a legally protected area attributed to the location of

	sensitive to mining in order to mainstream biodiversity issues in decision making into the mining sector. It provides direction as to where mining-related impacts are legally prohibited, where biodiversity priority areas may present high risks for mining projects, and where biodiversity may limit the potential for mining.	the pockets both near the Orange River and within the protected area. According to the guideline, mining cannot commence as mining is legally prohibited in protected areas, it may only be allowed in protected environments if both the Minister of Mineral Resources and Minister of Environmental Affairs approve it. A Biodiversity Scoping Report has compiled and has considered the MBG and included in this report. The Biodiversity report has thus been used to inform the biophysical environment characterisation in this report.
E28	**Richtersveld National Park Protected Area Management Plan 2018 - 2028** The RNP Management Plan serves as a reference to the management and development of the KNP in its current and envisaged future form with information on the background, biophysical context, desired state, programmes at strategic and operational levels and costs.	The prospecting pockets fall within the RNP. Mining is prohibited in National Parks and its buffer zones due to its significant negative effects on the environment, water resources and biodiversity. The plan describe mining as a "threat" and the old Trans Hex Group mining areas are zoned as "mining rehabilitation areas". The RNP Management Plan has been considered in the compilation of this Scoping Report.
E29	**SANPARKs Richtersveld Conservation Development Framework**	Mining and rehabilitation zones have been proposed in the SANPARK's Richtersveld Conservation Development Framework. Mining is considered a threat in the RNP and old mining areas are zoned as 'mining rehabilitation areas'. The prospecting activities are thus in conflict with the objectives of the conservation area.
E30	**GN 35020, 8 Feb 2020 - A Biodiversity Policy and Strategy for South Arica: A strategy of Buffer Zones for National Parks** The purpose of a national park buffer zone is to protect the purpose and values of the national park as defined in the management plan.	The proposed activity falls within the approved expansion footprint and buffer area of the RNP.
	MUNICIPAL AND PROVINCIAL PLANNING FRAMEWORKS AND PLANS	
E31	**Richtersveld Integrated Development Plan 2018/2019** The Integrated Development Plan is a strategic tool for governance and planning at the municipal sphere of government. It is used as a delivery tool that integrates the functions of three spheres of government in a given municipal space. As such, IDPs are a collective expression of the	The IDP has been consulted in the preparation of this Scoping Report. The IDP targets economic growth but is silent regards to mining in the Richtersveld Local Municipality. The prospecting activities will meet the targets of the IDP in that it will create jobs for local and cross border communities. Samara has developed a Social Development Plan for their PRAA's along the Orange

	developmental intentions of all three spheres of government in a given municipal space based on local needs.	River. In developing the SDP they have 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. The prospecting right application aims to ensure economic development in the 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 for the SDP.
E32	**Richtersveld Spatial Development Framework** The Richtersveld Local Municipality currently does not have a valid Spatial Development Framework.	Refer to E33.
E33	**Northern Cape Provincial Spatial Development Framework, 2012** The NCPSDF is a provincial strategy applies sustainable principles to all forms of land use management through NC and facilitates practical results, as it related to the eradication of poverty and inequality and the protection of the integrity of the environment.	The prospecting focus is is located with the Gariep Centre (GC) of plant endemism which encompasses the Richtersveld and extends northwards into Nambia's Spergebiet and supports 355 endemic plant species. The prospecting activities do not fall within a specified development corridor set out for the Northern Cape Province.
	SPATIAL TOOLS	
E34	**DEA Environmental Screening Tool** **https://screening.environment.gov.za/screeningtool/#/app/screen_tool/** Submission of a report generated from the national web-based environmental screening tool, as contemplated in Regulation 16(1)(b)(v) of the Environmental Impact Assessment Regulations, 2014, is compulsory when submitting an application for environmental authorisation in terms of regulation 19 and regulation 21 of the Environmental Impact Assessment Regulations, 2014.	DEA Environmental Screening Tool has been consulted and the national-web based environmental screening report has been generated for PRAA 2. The Environmental Screening Report is attached under Appendix 6 and is herewith submitted to the DMRE as part of the application documentation. The Screening Report confirms the legal implication of the PRAA being located in a protected area. It further higlights very high environmental sensitivity themes for biodiversity, archaeology and cultural heritage and aquatic ecology; and a medium sensitivity for plant species and Palaeontological features; and then low sensitivity in terms of agriculture and animal species. The report requires the following specialist studies to form of the EIA Process based on the site sensitivity: • Visual -, Archaeological and Heritage -, Terrestrial Biodiversity -, Aquatic

	The screening took allows the applicant/EAP/competent authority to study the environmental sensitivities of a chosen site with regard to a proposed activity or development.	Biodiversity, Hydrology – and Socio Economic Impact Assessment inclusive of plant and animal species assessments. The Scoping Report highlights the legal implication of the application area and the above specialist studies have been included in the Plan of Study for EIA to be commissioned in the EIA Phase, except for the Socio Economic Assessment, should the application proceed. The desktop specialist scoping reports have been included in this Scoping Report under Appendix 6.
E35	**SANBI BGIS Online Mapping System (www.bgis.sanbi.org)** Online biodiversity mapping system by SANBI used to determine sensitive environmental features across South Africa, which is sensitive to surface impacts from developments.	The SANBI BGIS system has been used to determine the baseline environmental conditions of the project site.
	ENVIRONMENTAL THEME SPECIFIC PROTOCOLS REQUIRED FOR SPECIALIST STUDIES AS PER THE DEA SCREENING TOOL	The application area corresponds to very high environmental sensitivity themes for biodiversity, archaeology and cultural heritage and aquatic ecology; and a medium sensitivity for plant species and Palaeontological features; and then low sensitivity in terms of agriculture and animal species. The following specialist studies are required as part of the EIA Process based on the site sensitivity • Visual -, Archaeological and Heritage -, Terrestrial Biodiversity -, Aquatic Biodiversity, Hydrology – and Socio Economic Impact Assessment inclusive of plant and animal species assessments.
E36	**GNR. 320 of 20 March 2020, Procedures for the Assessment of Minimum Criteria for Reporting on Identified Environmental Themes** The protocols have been published in terms of Section 24 (5)(a) and (h) 44 of the NEMA and is applicable when applying for environmental authorisation. The Protocols prescribe the general requirements for undertaking an site sensitivity verification and for protocols for assessment and minimum report content requirements of environmental impacts for environmental themes for activities requiring environmental authorisation.	Specialist Studies have been commissioned for: • Visual Impact Assessment • Heritage Impact Assessment & Palaeontological Impact Assessment • Terrestrial Biodiversity • Aquatic Biodiversity • Hydrology and Hydrogeological The following protocols under this gazette is therefore applicable: • Site Sensitivity Verification Requirements Where a Specialist Assessment is required but no Protocoal has been Prescribed • Protocol for the Specialist Assessment and minimum report content requirements for environmental impacts on Aquatic Biodiversity • Protocol for the specialist assessment and minimum report content requirements for environmental impacts on Terrestrial Biodiversity

E37	**GNR 1150 of 30 October 2020 - PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL PLANT SPECIES**	Both protocols are applicable and are to be applied in the Terrestrial Biodiversity Impact Assessment Study commissioned for the application area.
E38	**GNR 1150 of 30 October 2020 - PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL ANIMAL SPECIES**	
E39	**SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports**	The Heritage and Palaeontological Impact Assessment Reports will be compiled to comply with the SAHRA 2007 Minimum Standards.
E40	**ICOMOS Guidance** The guidance is a tool to encourage managers and decision-makers to think about key aspects of heritage management and to make decisions based on evidence within the framework of the 1972 World Heritage Convention. The Prospecting or mining near or in World Heritage Sites requires robust assessment based on ICOMOS Guidance.	The Heritage and Palaeontological Scoping Reports recognise the requirement to follow the ICOMOS Guidance in the preparation fo the full Heritage and Palaeontological Impact Assessment Studies.

f) Need and Desirability of the proposed activities

(Motivate the need and desirability of the proposed development, including the need and desirability of the activity in the context of the preferred location).

Need

The prospecting focus area is located on the left bank of the Orange River within the Richtersveld National Park within a well-established alluvial diamond-mining province 50km upstream of Namdeb's Auchas and Daberas alluvial diamond mines, and 15km and 60km upstream of Lower Orange River Diamonds Pty Ltd's (former TransHex) Reuning and Baken alluvial diamond mines, respectively, located on the south bank of the Orange River.

The geology of the PRAA 2 comprises distinctly different aged diamondiferous bearing palaeochannel gravels namely:

- Proto-terraces (dated as Miocene and 17-19 mybp in age) are higher –level and are located greater than 40 metres above the current Orange River level;
- Meso-terraces – (dated as Pliocece arid Pleistocene and are 2 – 5 mybp in age) which are lower-level and are located between 10m to 12m above the current Orange River level.

There are five meso-terraces on the PRAA 2 including the Oena, Sandberg, Blokwerf, Fishriver and Kabies Sections. Most of the historical exploration has been concentrated on the Oena and Sandberg Sections. All the above current mining activities are focussing on alluvial gravel above the flood line of the Orange River. According to the PWP, the highest concentration of diamonds are located in the lowest basal levels of the gravels (at the interface of the gravel and bedrock), this being below the flood line of the river. Samara has thus identified the need to explore the potential diamond resources available from alluvial pockets within the flood line of the Orange River.

To explore the potential resource, Samara needs to conduct prospecting and bulk sampling activities to confirm historic mineral information including occurrence of a viable diamond resource; and if a viable deposit exists within these prospecting pockets. The bulk sampling will confirm the information obtained through field mapping, desktop studies and literature review. It will allow the preparation of Geological Modeling and a resource estimation which confirms if the alluvial diamond resource can be feasibility mined in future in an environmentally, socially and economically viable manner.

If it can be proven that the alluvial diamond deposit can be optimally mined, a new small scale commercial mine (pilot mine) will be developed with the potential to contribute to the provincial and local economy and generate employment for both local and cross-border communities.

Samara intends to pair their prospecting works with a Social Development Plan (SDP) with the aim to ensure economic development in the Richtersveld area.

Young people in the Richtersveld, many under the age of 20, are without jobs and critically affected by property and crime. Current diamond mining operations bring workforce from outside areas 'inkommers' because the local communities are not skilled enough to work on the mines. Therefore skills development remains a critical part of job creation and poverty eradication in the Richtersveld area.

Local engagement and community participation are considered critical in obtaining the prospecting rights. 90% of Samara's labour force will be sourced from the local communities of Sanddrift, Kuboes, Lekkersing, Eksteenfontein and Sendelingsdrift. This will ensure that local communities benefit from job opportunities emanating from the prospecting right. Samara also intends to avail land to local artrisanal miners and support them with equipment to ensure gradual growth and sustainable development.

Samara also intends to support local farmers through linking them to national and provincial institutions focus on funding, skills development and training. Samara will use the emerging farmers' program as a tool to support and capacitate local farmers. Samara intends to set up a trust that will serve as a financial support system for agricultural development in the Richtersveld area. Existing strategies in the area will not be duplicated but enhanced.

Samara will formulate the SDP, its strategies and goals in consultation with the Richtersveld communities.

Please refer to **Appendix 3.6 for the Motivation for Prospecting Right by Samara Mining (Pty) Ltd** for a full discussion on the need and desirability of the project.

Desirability

The prospecting pockets are located within a protected area (Richtersveld National Park, Richtersveld Cultural Botanical Landscape World Heritage Site). According to NEMPAA these areas are legally protected, and mining herein is prohibited. Prospecting within a protected area is not desirable since the objectives of prospecting and mining and that of conservation areas are not compatible.

Diamond mining currently takes place in the park at Aace plant, Grasdrift, Jakkalsberg, Oena and Sendelingsdrif and are managed according to section 48 of NEMPAA. In terms of NEMPAA only existing lawful mining concessions operating before 2004 may proceed within a protected area subject to strict environmental management. Samara does not have an existing lawful mining concession/right in the area. The RNP Management Plan describe mining as a "threat" and the old Trans Hex Group mining areas are zoned as "mining rehabilitation areas".

Samara is, however of the view that the Orange River can bring forth much needed economic development critical in the Richtersveld area to eradicate poverty.

g) Period for which the environmental authorisation is required

Samara requires an environmental authorisation valid for 8 years. This period will allow for the five (5) year validity period of the prospecting right and potential renewal for another three (3) years.

h) Description of the process followed to reach the proposed preferred site

NB!! – This section is not about the impact assessment itself; It is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result.

i. Details of all alternatives considered.

With reference to the site plan provided as Appendix 4 and the location of the individual activities on-site, provide details of the alternatives considered with respect to:

(i) The property on which or location where it is proposed to be undertaken

Samara has applied for two prospecting applications along the Orange River, namely PRAA 1 (12664 PR) and PRAA 2 (12663 PR). PRAA 1 comprises prospecting pockets 1, 2, 3A & 3B on the left bank of the Orange River, boundary to a Portion of Remainder of the Farm Richtersveld No. 11 under DMR ref. NC30/5/1/1/2/12664 PR. PRAA 2 comprises prospecting pockets 4, 5 and 6, on the

left bank of the river, boundary to a Portion of Remainder of Farm No. 18 and Farm No. 11 under DMR ref. NC30/5/5/1/1/2/12663 PR.

No property alternatives have been considered for the PRAA 2. Samara has submitted PRAA 1 downstream from PRAA 2.

Samara has engaged LOR with regards to the application area overlapping the existing mining right area held by LOR for alluvial diamonds. Samara will enter into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining, between the 1: 100-year flood line and the south bank of the Orange River, within the area of the current LOR License.

(ii) The type of activity to be undertaken

No activity alternatives were considered. Trenching and bulk sampling are the recognised methods of prospecting for alluvial diamonds within the application area. Similar methods have been applied by previous contractors between 1995 – 2000.

(iii) The design or layout of the activity

The prospecting and bulk sampling activities' location is determined by the location of alluvial gravel pockets to be explored and sampled along the Orange River. Processing infrastructure will be placed in relation to the position of the bulk sampling activities. Thus, the Rotary Pan Plant will need to 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.

The Orange River is extremely ecologically important and sensitive, and prospecting and bulk sampling activities pose a very significant risk to the system. It is thus deemed essential that all aspects of the proposed prospecting and bulk sampling activities are considered in extensive detail, and all aspects are exceptionally well planned and executed. It is likely that significant constraints will be placed on the activity to conserve the environment, as a minimum. This may also relate to the design and layout of activities.

Alternative positions will be considered for the processing infrastructure based on the outcome of freshwater, biodiversity, visual, hydrological and geohydrological specialist investigations in order to avoid/minimise impacts on the riverbed, embankments and active channel.

The specialist investigations will ensure that all planning of the proposed development is cogently considered and all project plans and designs can adequately consider the characteristics of the river system.

As long as the prospecting and bulk sampling activities do not to take place within the active channel of the Orange River; and are undertaken in the low flow season with all rehabilitation completed before the rising of the river, the risk to the system can be significantly reduced. These mitigatory measures, combined with other design management mechanisms and with well-managed construction and implementation practices, could potentially lead to significantly reduced impacts.

(iv) The technology to be used in the activity

Samara will employ the latest diamond recovery technologies (**Figure 7**) in their operations. Bulk X-ray sorter (Bourevestnik) will be used for further processing and diamond recovery. The X-ray units make diamond recovery more efficient and limit product theft and shrinkage.

In order to limit pollution on the Orange River, Samara has excluded the use of a Dense Media Separation (DMS) technology since it requires chemical to separate heavy from light material in the processing plant and can pose a potential pollution risk to the Orange River.

Furthermore, Samara will keep its operations small and conduct current rehabilitation (rehabilitate quicker). All aspects of the prospecting and bulk sampling activities will be considered in extensive detail, and all aspects will be well planned and executed.

Modern Technology Applications for Successful Junior Diamond Mining

	Equipment	Applications	Comments
1	Modern Drone Technology	Accurate survey, surface elevations to identify terraces and channels	Very useful on old deflated deposits
2	Reverse-Circulation Drilling	Accurate mine planning to identify minable gravels and stripping levels	
3	Digital Elevation Modelling	Modelling of drill bedrock data to identify scours where heavy minerals would concentrate	
4	Geographical information Systems (GIS)	Manage large volumes of surface elevation, survey and drill data.	
5	3D-Moddeling packages	Used to identify potential high-grade areas	
6	In-Pit Screening Units	Efficient removal of the oversize at the face has led to large cost savings	Large cost, water savings
7	High-frequency De-sanding Screening	Efficient removal of the 3 mm to 6 mm fraction has revolutionised the industry.	Allows the mining of ultra-low grade, high diamond value deposits
8	Modern diamond X-Ray Recovery systems eg. Bourevestnik (BV) technology (Russian)	Primary and concentrate diamond recovery	Modular and containerized units; high security
9	X-Ray Tomography Mineral Particle Sorters (XRT)	Efficient recovery of large and Type II diamonds	One of the reasons why so many large stones have been recovered in the past 5 years
10	Remote CCTV Security and Site-Monitoring Technology	Remote monitoring of sensitive areas on mines as well as access routes have cut diamond theft significantly	

Figure 7: Modern Technology Applications for Successful Diamond Mining

(v) The operational aspects of the activity;

Alternative operational aspects being considered include:

- Water for the processing operation will be abstracted from the Orange River. The vacuum and filter system will remove the dirt, filter the water to drinkable standard release it back into the river; or
- Supply communities with water by pumping it into municipal reservoirs (to be confirmed during Scoping Phase).

No other operational alternatives have been considered. Operational alternatives may, however, prevail during EIA Phase based on specialist inputs and more in-depth field investigations.

(vi) The option of not implementing the activity / No-go activity

The no-go alternative is considered the most preferred option given the legal protection status of PRAA 2. Prospecting and mining is prohibited in the RNP. Prospecting and mining are conflicting land uses within a national park and pose a significant threat to its conservation objectives.

More importantly, bulk sampling is proposed within the Orange River's regulated area and poses a very significant risk to the system and is located approximately 60km north of the estuary known as the Orange River Mouth RAMSAR Site. The saltmarsh component of the estuary collapsed, and the rapid degradation was the result of adjacent diamond mining activities (Alexander Bay) and flow regulation of the Orange River as a result of dam construction and water consumption. Further diversion of flow in the Orange River's headwaters is likely to further reduce water availability in the Orange River Mouth. The planned prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thus the RAMSAR wetland system. Such impact, if at all significant, would be regarded as unacceptable. (*SASS Freshwater Scoping, 2020*).

However, a socio-economic component to consider wherein statistics indicate a significant decline in South Africa's diamond production from 15.8 million carats in 2005, with consequent negative impacts on the economy, foreign earnings, employment and communities in key mining provinces and areas. Specifically true for the Namaqualand area. It is believed that there is still a widespread and voluminous alluvial diamond deposit in Namaqualand. By selecting the no-go option several socio-economic spinoffs would not be realised such as much-needed job opportunities for both local and cross border communities.

The no-go option is therefore preferred from a legislative point, but not from a socio-economic point of view.

ii. Details of the Public Participation Process followed

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

The Public Participation Process (PPP) forms the cornerstone for detailing the Scoping Report. The PPP is conducted in accordance with Regulation 41 to 44 of Government Notice R326 of the NEMA Regulations. The objective of the EIA process is to engage the public in the decision-making process linked to the proposed project by doing the following:

- Identifying potential interested and affected parties (I&APs) on the project;
- Soliciting inputs and comments pertaining to the activities from such parties by providing them with an opportunity to express their views on the environmental and social impacts of the application;
- Consolidating the public submission into the environmental reporting and submitting the outcomes to the DMRE for informed decision making;
- Stakeholders are engaged in the two stages of the EIA Process i.e. Scoping Phase and EIA Phase;

A consolidated EIA Process and PPP is being followed for the two Samara prospecting right applications along the Orange River, namely PRAA 1 (12664 PR) and PRAA 2 (12663 PR). The application properties are end-to-end along a 70km stretch of the lower Orange River and the affected parties to be consulted are identical.

The EIA Process requires the submission of a Scoping Report and an EIR & EMPr for each application, to the DMRE for decision making, which have been subjected to a 30 day public comment period. Once the Scoping Report is accepted by the DMRE, the preparation of the EIR & EMPR reports will follow. The Scoping Report is, therefore, the first point of engagement with I&APs on the EIA Process.

A Water Use License Application (WULA) is also required for the prospecting activities and the particulars of the triggered Section 21 water uses in terms of the NWA including the details of WULA form part of the EIA Process PPP. The WULA will however only be formally submitted during the EIA Phase and its Technical Report will also be subject to a 60-day public review and comment period.

This section summarises the PPP activities completed during the Scoping Phase of the EIA Process.

A Scoping Report was prepared for each application area and made available for public review and comment period from 13 November to 14 December 2020. During this period, I&APs were afforded the opportunity to register on the project database and review the available reports. During the public review period, several public engagements took place to facilitate comments on the draft Scoping Reports by conducting virtual meetings, sending emails, direct phone calls, including WhatApp communication. The local communities (informal land rights holders) will be consulted during the EIA Phase of the project, since it has not been possible to engage with them through public gatherings due to the covid-19 risk in the Richtersveld area and latest covid-19 regulations issued on 29 December 2020 which prohibit public gatherings until 15 January 2021.

The public submissions received and the outcomes of the alternative public engagements measures undertaken during the Scoping Phase have been recorded in the Scoping Report under Section iii 'Summary of Issues Raised by I&APs'. All the proofs of public consultation and copies of comments received from I&APs are attached to this report under **Appendix 5**.

The sections below detail the public participation tasks conducted for the Scoping Phase of the application.

a. Identification and Registration of Interested and Affected Parties (I&APs)

Regulation 42 of the NEMA EIA Regulations of 2014 requires that a register of interested and affected parties is opened and maintained and such is to be submitted to the decision making authority, it must (a) contain all persons, who as a consequence of the PPP conducted in respect of the application, have submitted written comments or attended meetings (b) all persons who have requested, in writing for their names to be placed on the register; and (c) all organs of the state which have jurisdiction in respect of the project.

Regulation 41 (2)(b) of the EIA Regulations of 2014 requires that the PPP involves giving written notice, in any manner provided for in Section 47D of NEMA to-

- Registered landowners
- Occupiers of the application site
- Person in control of the application site
- Owners, persons and occupiers of land adjacent to the site where the activity is to be undertaken;
- Municipality in which the activity falls (local and district)

- Municipal councillor of the ward in which the site is situated
- Organisations of ratepayers that represent the community in the area;
- Every state department that administers a law relating to the project;
- All organs of state which have jurisdiction in respect of the activity;
- All potential, or, where relevant registered interested and affected parties
- Any other party as required by the decision making authority.

As per the requirements of the regulations, an interested and affected party database was opened for the project and landowners, organs of state, occupiers of the land, mining right holders, adjacent landowners, local and district authorities including organs of state were pre-identified and registered on the project database from 2 – 11 November 2020.

A project announcement and draft Scoping Report availability newspaper advertisement was published for both application areas and called for registration of I&APs from 13 November to 14 December 2020. During this period, the I&AP database was maintained and updated. (See **Appendix 5.1** for the project I&AP Database)

Project information notifications and documents for review forming part of the EIA process were distributed to pre-identified and registered I&APs only.

The following key stakeholders and I&APs have been identified and included on the I&AP Database:

a) Landowners:
   a. Minister of Rural Development and Land Reform: The land is held in trust by the Minister to be handed over the Richtersveld community.
   b. Richtersveld Sida!Hub Communal Property Association (Informal land rights holders): The Richtersveld CPA is the communal landowner representing the communities of Sanddrift, Kuboes, Lekkersing and Eksteenfontein. The CPA is currently under administration.
   c. Honey & Associates Incorporated: Honey Inc. are acting as the Richtersveld CPA Administrator.

b) Person in control of the application site
   a. SANPARKS
   b. Richtersveld Joint Management Committee: The RNP is managed as a contractual park by SANPARKS and the Richtersveld community
   c. Ais Ais Richtersveld Transfrontier Park (ARTP

c) Lawful occupiers of land
   a. African Star Minerals (Pty) Ltd (Oena Diamond Mine);
   b. Lower Orange River Diamonds (Pty) Ltd (LOR)

   PRAA 2 is situated on the border of existing diamond mining right areas of LOR and Oena Diamond Mine. The left bank of the Orange River is the limit of the existing mining right areas and also the limit for Samara's PRAA 2.

d) Owners, persons and occupiers of land adjacent to the site
   a. NamWater Namibia Water Corporation (north bank of Orange River)
   b. Rosh Pinah Township (Pty) Ltd (Namibia)
   c. Trevali Mining Corporation
   d. Richtersveld Sida! Hub CPA
   e. Alexkor SOC Limited
   f. LOR
   g. Namdeb Diamond Corporation (Orange River Mines, north bank of Orange River, Namibia)

   h. Oranjemund Town Council (Namibia)
   i. Guesthouses / Resorts along Orange River (Op My Stoep, Sheperd Lodge, Brandkaros, Namibian Wildlife Resorts, Wilderness Safaris Namibia)
   j. Richtersveld Growers
   k. Orange River Downstream water users (Richtersveld CPA, Alexkor SOC Ltd, Namdeb, Namwater, Oranjemund Town Council, Richtersveld Growers, Rosh Pinah, Trevali Mining).

e) Municipality in which the activity falls (local and district)
   a. Richtersveld Local Municipality
   b. Namakwa District Municipality

f) Municipal Councilor and Ward in which site is situated
   a. Ward 1 – Willem Links (Kuboes, Lekkersing, Eksteenfontein)
   b. Ward 2 – Anna Bock (Sanddrift, Alexander Bay)

g) Organisations
   a. Peace Parks Foundation (Ai-Ais Transfrontier Park)
   b. Namibia Chamber of Environment
   c. Namibia Chamber of Commerce and Industry
   d. Earthlife Namibia
   e. Africa-Biota
   f. Birdlife South Africa
   g. Northern Cape Wetland Forum
   h. Orange-Senqu River Commission (ORASECOM)
   i. South African Commission for UNESCO
   j. RAMSAR

h) State department that administers a law
   a. National Department of Environment, Forestry and Fisheries (Protected Areas, Transfrontier Conservation Areas)
   b. National Department of Water and Sanitation (Pretoria)
   c. Department of International Relations and Cooperation (DIRCO)
   d. Namibia: Ministry of Agriculture, Water and Rural Development
   e. Namibia: Ministry of Environment & Tourism
   f. Namibia: Ministry and Mines and Energy

i) Organs of State
   a. Department of Mineral Resources: Kimberley and Springbok (CA)
   b. Department of Water and Sanitation: Orange-Proto (Upington)
   c. Northern Cape Department of Environment and Nature Conservation (DENC-Springbok)
   d. Northern Cape Department of Agriculture, Rural Development and Land Reform
   e. Northern Cape Heritage Resources Agency
   f. South African Heritage Resources Agency
   g. National Heritage Council of Namibia
   h. Northern Cape Department of Immigration
   i. South African Police Service (SAPS)

j) Communities
   a. Sanddrift, Kuboes, Lekkersing, Eksteenfontein

k) All other potential I&APs
   a. Om Dis Town Transformation Agency (Oranjemund)
   b. Richtersveld Growers

The following methods were implemented to announce, notify and engage I&APs and Stakeholders about the project:

b. Consultation with DMRE

The applications for environmental authorisation for both PRAA 1 and PRAA 2 were submitted to the DMRE via the Samrad Online system on 22 July 2020 and were accepted on 15 September 2020 by DMRE: Springbok. (See **Appendix 5.2** for the application acceptance letters).

A request for extension of the timeframe to submit the final Scoping Reports was submitted to the DMRE: Springbok on 21 October 2020 and was subsequently granted on 10 December 2020 (See **Appendix 5.3** for the granted extension email from DMRE).

A Spatial Query was lodged to the DMRE: Springbok on 3 December 2020 requesting verification on the claim of the applications overlapping existing mining rights. The response from DMRE is still pending.

c. Prior notifications and project announcement to National DEFF: Protected Areas and DWS

On 22 October 2020, Naledzi notified the National DEFF: Protected Areas authority of the application and the legal protection status of the PRAA 2. On both 20 October and 18 November 2020 the application was brought to the attention of the Department of Water and Sanitation: Orange-Proto in Upington.

Refer to **Appendix 5.4** for Proof of prior notification to DEFF: Protected Areas and DWS.

d. Newspaper Advertisements

Regulation 41, 2(c) of the NEMA EIA Regulations of 2014 requires that an advertisement is placed in (i) one local newspaper or provincial Government Gazette and (ii) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the metropolitan or district municipality.

A newspaper advertisement was published in the Plattelander and Gemsbok newspapers on 13 November 2020 to call for registration of I&APs and notify the public of the availability of the draft Scoping Reports for 30 days public review and comment from 13 November to 14 December 2020.

Please refer to **Appendix 5.4** for the Platteland and Gemsbok Newspaper Tear Sheets.

e. Site Notices

Regulation 41 (2) of the NEMA EIA Regulations of 2014 requires a person conducting PPP to take into account any relevant guidelines applicable to PP as contemplated in section 24J of the Act and must give notice to all potential I&APs of an application or proposed application which is subject to PP by - (a) fixing a notice board at places conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of (i) the site where the activity to which the application or proposed application relates; and (ii) any alternative site.

During the public registration and availability of the Draft Scoping Reports for public comment, site notices and posters were placed in Sanddrif, Sendlingsdrif, Eksteenfontein, Kuboes, Alexander Bay, Lekkersing, Port Nolloth and Springbok between 13 – 16 November 2020. Site notices placed at the following venues:

- Ais Ais Richtersveld National Park Reception
- Sendelingsdrift
    - Sendelingsdrift Port of Entry SAPS
    - Kafee Kleinbegin Mini Mark at Reuning (Sendelingsdrift)
    - Sendelingdrft Total Filling Station
    - Richtersveld National Park Gate
- Kuboes, Lekkersing and Eksteenfontein Richtersveld Municipal Satelite Offices
- Saad Afzal 2 Shop in Kuboes
- Sanddrift
    - Saamwerk Winkel & Drankwinkel in Sanddrift
    - Shannon's Liquor Store and Shop in Sanddrift
    - Saad Afzal Traders in Sanddrift
- Lekkersing:
    - Lekkersing Clinic and Community Hall
    - Lekkersing Family Shop
- Eksteenfontein
    - Saad Afzal Traders Eksteenfontein
- Alexander Bay
    - Alexander Bay Police Station,
    - Post Office
    - Engen Filling Station
    - Alexander Bay Hoerskool
    - Alexander Bay Tourism and Info Centre
    - Alexander Bay Sentra Weskus Supermark,
    - Alexander Bay Shop
- Port Nolloth
    - Chemist
    - Spar
    - Freestyle Fashion
    - Richtersveld Municipal Building
    - Police Station
    - Siraphesheedine Trading
- Springbok
    - Namakwa District Municipality Offices
    - Post Office, Police Station
    - Superspar, Shoprite
    - Nama Khoi Youth Centre
    - Taxi Rank and Library

Please refer to **Appendix 5.5** for Photographic evidence of Site Notice Placement.

f. Direct Notification to I&APs of Draft Scoping Report Availability

The draft Scoping Reports were prepared and made available for public review and comment for 30 calendar days from 13 November until 14 December 2020. Electronic versions of the reports and a comment sheet were available from 13 November 2020 from the Naledzi website **http://www.naledzi.co.za/public-documents-naledzi.php**. Hard copies of the Scoping Reports were placed in the project area from 13 – 16 November 2020 and were available at the following public venues:

- Sanddrif-, Kuboes-, Lekkersing-, Eksteenfontein- as well as Alexander Bay Public Library
- Sendelingsdrif SANPARKS Office

The availability of the draft Scoping Reports from the Naledzi website and public venues was announced through newspaper advertisements in Gemsbok – and Plattelander Newspapers (Section b) on 13 November 2020, site posters placed in the project area between 13-16 November 2020 (as per section c) as well as the distribution of emailed Stakeholder Notification letters on 13 November 2020 to the list of registered I&APs (section a).

Electronic and hard copies of the Scoping Reports were submitted to organs of state including local and district authorities either by hand or courier between 13 – 18 November 2020. The reports were however available electronically from the Naledzi to these parties from 13 November 2020.

Refer to **Appendix 5.6** for Proof of Draft Scoping Report placement on the Naledzi website, hard copy distribution and for proof of emailed notifications to I&APs.

I&APs were given the opportunity to comment on the draft Scoping Reports by completing the comment sheet (available on the Naledzi website and or at above-mentioned locations), writing a letter, sending an email or contacting the EAP **on or before 14 December 2020**.

On 15 November 2020, the Richtersveld Local Municipality also placed a notice of the availability of the draft Scoping Reports and electronic copies of the reports on the Richtersveld Nuus official Facebook page as an additional measure to notify community members.

Please refer to **Appendix 5.6** for proof of notification placed on the Richtersveld Nuus Official Facebook page.

e) Scoping Phase Public Engagements

Several public engagements were scheduled and took place during the Draft Scoping Reports' public review period from 1 December to 14 December 2020 and were communicated to I&APs via email, phone calls, and via WhatsApp messages.

Public meetings were scheduled with the Richtersveld Communities as follows:

- 3 and 4 December 2020

Three virtual stakeholder engagement meetings took place as follows:

- 8 December 2020 at 14:00 via Zoom
- 14 December 2020 at 10:00 and 14:00 via Zoom

All public engagements were arranged in consultation with the Richtersveld CPA Administrator and are detailed below.

- Public Meetings with communities of Sanddrif, Kuboes, Lekkersing and Eksteenfontein

Public meetings were scheduled for the Richtersveld Communities for 3 and 4 December 2020. Meeting notifications were placed in Afrikaans at the municipal satellite offices of Sanddrif, Kuboes, Lekkersing and Eksteenfontein and sent out via email to registered I&APs.

However upon arrival in Port Nolloth on 1 December 2020, NEC was notified of the covid-19 risk in the Richtersveld area. In consultation with the Richtersveld CPA Administrator and project area Ward Councillors, the decision was made to postpone the public meetings until January 2021. Public meeting cancellation notifications were sent to municipal satellite offices and emailed to registered I&APs. Councillor Willem Links for Ward 1 and Anna Bock from Ward 2 was informed of the cancellations and Councillor Links was engaged on 1 December 2020 in a one-one consultation to discuss the public engagement with communities and the way forward.

The public meetings were thereafter rescheduled for 12 and 13 January 2021 and the meeting notification in this regard was again posted in the project area by the respective municipal satellite offices and placed on the Richtersveld Nuus Official Facebook page. A shared 'Naledzi Publieke Deelname' Whatsapp Group was also initiated to share project information and the meeting arrangements with the Richtersveld Community Members. Community members took to the WhatsApp Group to raise issues regarding the project which was responded to by NEC and Samara, via the WhatsApp Group. The WhatsApp consultation is not seen as an official engagement yet an initial screening of potential issues from communities. The WhatsApp Chats are not repeated or included in this report rather the issues raised by community members.

On, 28 December 2020, the president issued new regulations to prevent the spread of covid-19 in which gatherings (social, political, tradition council etc) are prohibited until after 15 January 2021. To this effect, the public engagements have been postponed once more. **The Richtersveld Communities will, therefore, be consulted through public meetings during the EIA Phase.**

Refer to **Appendix 5.7** for:

- Proof of meeting invitations and cancellation notifications to I&APS
- Meeting notes for the one-on-one discussion with Councillor Links
- Copy of the WhatsApp Group Chats with community members

• Local Authorities Focus Group Meeting on 8 December 2020 at 14:00 via Zoom

A virtual Focus Group Meeting took place on 8 December 2020 via Zoom from 14:00 – 16:00 with the Richtersveld Local Municipality, Ward Councillors, Namakwa District Municipality including the Richtersveld CPA Administrator and DENC Springbok.

- Key Authorities Meeting on 14 December 2020 at 10:00 via Zoom

A virtual Key Authorities Meeting took place on 14 December 2020 via Zoom from 10:00 – 12:30 with DENC, SANPARKS, DEFF: Protected Areas, DEFF: TCFA, National DWS, SAHRA as well as Dr. Morris from the McGregor Museum in Kimberley.

DWS: Orange-Proto (Upington Regional Office) could not attend this specific meeting due to other prior obligations and will be engaged again during the EIA Phase and WULA Process.

- Stakeholders Meeting on 14 December 2020 at 14:00 via Zoom

A virtual Stakeholders Meeting also took place on 14 December 2020 via Zoom from 14:00 – 16:00 and was open for attendance to all I&APs registered on the project database which included organisations, stakeholders situated cross-border in Namibia. The meeting was ultimately attended by DENC, Northern Cape Wetland Forum, Birdlife Africa, NamWater Namibia Water Corporation, Lower Orange River Diamonds (Pty) Ltd, Alexkor Limited, Biota Africa (Hamburg Germany) and Earthlife Africa Namibia.

The above virtual meetings provided the stakeholders the opportunity to obtain information regarding the project, obtain details on the availability of the DSR for comment and provided them the opportunity to raise comments, issues and concerns regarding the project for inclusion in the final Scoping Reports. The proceedings of the meetings were recorded.

Please refer to **Appendix 5.8** for the Minutes of the Meetings including Participants Lists.

g. Issues and Response Report

Regulation 44 of the NEMA EIA Regulations of 2014 requires that the applicant must record comments of interested and affected parties in reports and plans, and such written comments, including responses to such comments are to be attached to reports and plans that are submitted to the decision making authority.

All comments raised during the public review and comment period on the Scoping Reports for the applications and during the public engagements have been captured in the below 'Summary of Issues Raised by I&AP". The intention was to consolidate all issues and responses in a stand-alone Issues and Response Report (IRR) however time constraints did not allow such and thus the copies of comments received have been annexed to the finalised Scoping Report under **Appendix 5.9**.

h. Submission of Final Scoping Report to DMR

I&APs will be notified of the submission of the Final Scoping Reports to the DMRE and will be given access to the finalised Scoping Reports on the Naledzi website. The EAP will further notify I&APs of the DMR's decision to either reject/accept the reports.

iii. Summary of issues raised by I&APs

The PPP announcing the project and availability of the Scoping Phase commenced on 13 November 2020 and lapsed on 14 December 2020. The comments detailed in the below table have been recorded at virtual public meetings, written comments, issues raised by community members over WhatsApp Group Chats and any telephonic comments submitted during the review period.

LIST OF INTERESTED AND AFFECTED PARTIES (List of names of persons consulted in this column and Mark with X where those who must be consulted were in fact consulted)		DATE COMMENTS RECEIVED	ISSUES RAISED	EAP'S RESPONSE TO ISSUES
AFFECTED PARTIES				
Landowners				
Minister of Land and Rural Development (DRDLR) (land held in trust by state) Northern Cape Dept. of Agriculture, Rural Development and Land Reform Deputy Director **Contact: Itumeleng Mashune**	**x**	17 Nov 2020 Email	Please register me as an I&AP.	DRDLR is a pre-identified key stakeholder and is automatically on the I&AP Database (refer to Appendix 5.1 I&AP Database attached to the Scoping Report).
Informal Land Rights Holders				
Richtersveld Community Property Association (CPA) Contact: Annemarie de Wet CPA represents the Richtersveld claimant community - Sanddrift, Kuboes, Eksteenfontein, Lekkersing.	**x**	Telephonically Oct 2020.	The Richtersveld CPA represents the Richtersveld communities of Sanddrif, Kuboes, Lekkersing and Eksteenfontein. The CPA is under administration and Naledzi will need to consult directly with the CPA Administrator, Honey & Associates Incorporated, Mr Donovan Matjiet. All notifications and meetings must be arranged in consultation with the CPA Administrator and copied to the CPA.	Honey Inc. has been added as a key stakeholder to the I&APs Database (attached as Appendix 5.1). Mr. Matjiet has received all the Scoping Phase notifications and has attended the 8 Dec 2020 virtual Focus Group Meeting (see Appendix 5.8 for minutes). The planned January 2021 community public meetings will also be arranged in consultation with Mr Matjiet .
Honey & Associates Incorporated - Richtersveld Sida ! Hub CPA Administrator Attorney – Donovan Matjiet	**x**			
Person in control of land				
South African National Parks (SANPARKs) Senior Manager: Parks Planning and Development Willem Louw	**x**	14 Dec 2020 Authorities Meeting	The closing date for consultations is 14 December 2020. This is the first consultation. There has been no consultation with the Richtersveld community. Naledzi has pulled out of those public meetings. Our issue is that the applications fall within the	Naledzi has not pulled out of the meetings. The meetings have been postponed due to the Covid-19 risk in the Richtersveld and will be rescheduled for January 2021. This has been communicated through site notices and through a community members Whatsapp Group 'Naledzi Publieke Deelname'. Some of the community members provided their initial comments via this platform and ask

			Richtersveld National Park and World Heritage Site. This is admitted in the Draft Scoping Reports and that mining is prohibited in a national park and World Heritage site. Most of the likely impacts listed in the Draft Scoping Reports are rated as having a very high significance. The applications are fatally flawed. I don't understand why this EIA Process is carrying on. The public consultation ends on 14 December 2020. The communities staying in the application areas are the landowners. Naledzi never consulted them and the consultation period ends 14 December 2020. These are the major stumbling blocks of this project.	questions of clarity. We have been able to record initial comments via this platform which will assist us with the imminent January 2021 community engagements. Therefore virtual meetings are not the only form of consultation that has been undertaken. Consultation has many forms in term of the NEMA EIA Regulations and includes advertising in the local newspapers, placing site notices on-site, email notifications, direct phone calls, public meetings including virtual meetings. A combination of these consultations has been taking place since 13 November 2020 and the commenting period on the Draft Scoping Reports already commenced on 13 November 2020. The EIA Process also makes provision for a second round of public engagements. The DMRE has accepted the applications. Hence the EIA Process has proceeded. We have highlighted the legal implication of PRAA 2 in the Scoping Report and advise that the application not proceed based on the legal protection status of the application area. The applicant is aware of the legal implications, however is convinced that the economic advantages of prospecting in the area should be considered. The community will be consulted during January 2021. The EIA Process PPP is an ongoing process and there is still ample opportunity to engage the community in January 2021.
			Have the specialists visited the project area yet? Please note that anybody who wishes to enter the national park requires a permit in terms of Section 45 of NEMPAA. One cannot just enter the park.	No. Naledzi is still seeking access consent. It is anticipated that Specialists will only conduct their field investigations from February 2021. Noted. Naledzi will apply for an access permit for the EAP and appointed specialists from SANPARKS prior to undertaking any field investigations.

			Have Samara engaged the landowners with regard to the Social Development Plan yet?	Local landowner engagement is planned for January 2021. The social issues identified in the Richtersveld area remains the priority of the local and national government. Samara is proposing through its Social Development Plan to come in as a partner. Government has a social role to undertake to uplift the lives of the local communities and that is the emphasis of Samara's strategy. Samara will not pre-empt the people but align is strategies based on the outcomes of community engagements.
			Does Samara know who the landowners are? The land is held in trust by the Minister of Land and Rural Development and is currently in the process of being handed over to the rightful owners namely the communities of Sanddrift, Kuboes, Lekkersing and Eksteenfontein. They are the informal landowners and need to be engaged. They are called the free prior informal land right holders. NEC needs to change its whole consultation approach. The PPP is not just a matter of consulting the community; Samara needs their consent to prospect on the land. Documents need to be brought to the communities in Afrikaans and Nama. That is the legal process that needs to be followed. Please refer to the process specified under IPILRA, the Interim Protection of Informal Land Rights Act (Act 31 of 1996). There is a current legal mineral and land claim on the LOR or old TransHex mining lease area.	This has been recorded and updated in the Scoping Report see Section 2 (c) “PROPERTY OWNER” and on the I&AP Database attached as Appendix 5.1. Naledzi will consult the communities after 15 January 2021. In line with the latest Covid-19 regulations issued on 29 December 2020 no gatherings are permitted until 15 January 2021 or as reviewed by government. The public meeting presentation will be provided in Afrikaans and Naledzi will be preparing a Project Memorandum in Afrikaans and will send/deliver this to the community members of Sanddrift, Kuboes, Lekkersing and Eksteenfontein. The land claim has been recorded in the Scoping Report under Section 2 (c).

			Clause 9B in NEMPAA states that no mining is permitted in a world heritage site. It was the EAP's responsibility to advise the applicant of all the red flags in the application areas. Naledzi has highlighted the irreplaceable value of the biodiversity of the application areas in the national park in the riverbed. Your responsibility does not stop there. You needed to advise the client that they cannot apply for a prospecting right in a national park. These applications are not permissible and are no-go areas. You should have advised the client to stop the whole process. This application should never have been entertained by anybody. My recommendation is that you stop this whole process.	NEC and NDI have advised Samara of the legal implications of the application areas during a project-kick off meeting, in the Scoping Reports and in writing. The applicant is convinced that the economic advantages of prospecting in the area should be considered. The legal implication of PRAA 2 is also highlighted in several sections of the Scoping Report in which we advise the DMRE based on legislation. The decision remains with the DMRE as to whether the application should proceed to the EIA Phase.
			Naledzi must rectify in their Scoping Report the part where it is said that mining is already taking place in the area by Lower Orange River Diamonds (Pty) Ltd, TransHex and Oena Mine. We need to emphasise that NEMPAA already makes provision for mines operating in the area before the enactment of the NEMPAA. Also, you need to rectify where it is said that the Minister of Minerals will need to decide upon an application in a protected area. It must read the Minster of Environment.	Naledzi does specify this in the PRAA 2 Scoping Report under Section 2 (e) 'Policy and Legislative Context', the legal context given for both sections 48 of MPRDA and NEMPAA wherein it is explicitly stated that " Only existing lawful mining concessions operating before 2004 may proceed in a protected area subject to strict environmental management. Any new prospecting or mining-related activities are prohibited in protected areas." The Scoping Reports state that in terms of section 48 of NEMPAA that "no person may conduct prospecting or mining activities in special nature reserves or protected areas without the prior consent of the Ministers of Mineral Resources and Environmental Affairs" and does not refer to the Minister of Mineral Resources.
South African National Parks (SANPARKs)			Notified through RNP Park Manager – Brent	

Arid Regional Manager – Lucius Moolman			Whittington.	
South African National Parks (SANPARKs) Ais Ais Richtersveld National Park Manager – Brent Whittington	**x**	17 Nov 2020 Via email	Please ensure to include the following stakeholders in your engagements: • African Star minerals, Oena Mine, Theodor Boshof, theodor.boshoff@gmail.com • Lower Orange River Diamonds, Chris Kimber, cdk@lor.co.za • Trevali, Christo Horn, chorn@trevali.com • Ministry of Environment and Tourism Namibia, Paul Gowaseb, pgowaseb@yahoo.com • Ministry of Environment and Tourism Namibia, Wayne Handley metroshpinah@iway.na • Namibian Wildlife Resorts, Robert Hailume RHailume@nwr.com.na • Rosh Pinah Town • Richtersveld communities (Sandrift , Kuboes, Lekkersing and Eksteenfontein) • Department of Environment, Forestry and Fisheries (DEA/DEFF/DFFE) • Department of Water and Sanitation	These stakeholders have been included on the project I&AP Database (see Appendix 5.1 of the Scoping Report) and majority have been notified of the project and was informed of the availability of the Scoping Reports for public review and comment. Further public engagements will be undertaken during the EIA Phase. The aim is to conduct public engagement meetings with the Richtersveld communities during January 2021.

			• South African Police Services • Department of Immigration • Department of Nature Conservation Northern Cape • Bouvelon farms • Alexanderbay town • Oranjemund town • Port Nolloth town	
		3 Dec 2020 Official written comments	The Richtersveld National Park (RNP) was declared as a National Park in 1991 in terms of the National Parks Act No. 57 of 1976, (Government Gazette 13457, dated 16 Aug. 1991). The RNP is managed in accordance of a Management Plan approved by Minister Edna Molewa in terms of Sections 39 and 41 of NEM:PAA (Act no.57. of 2003). (i) ANParks legal mandate is to protect, control and manage National Parks and other defined protected areas and their biological diversity, (S17, NEMPAA, Act .57 of 2003). (ii) Mining is prohibited in National Parks and its buffer zones due to its significant negative effects on the environment including the soil, water resources, geological stability, biodiversity	The prohibitation of prospecting and mining within protected areas has been highlighted in several sections of the Scoping Reports. SANPARKS comments on the legal implications have been included under Section 2e 'Policy and Legislative context. It has also been highlighted in Section 2e under item E3, that in terms Section 22 (b)(ii) of the NEMA EIA Regulations of 2014 the competent authority is required to refuse an application if the activity is in conflict with other legislation.

			and air quality and therefore SANParks remain opposed to mining in National Parks and its buffer Zones. The RNP management Plan describe mining as a "threat" and the old Trans Hex Group (THG) mining areas are zoned as "mining rehabilitation areas". Due to the nature of the activities within the SANParks mandate, and the reason for the RNP's proclamation, the current mining activities within the Park needs to be monitored closely in order to prevent any irreparable damage to cultural, conservation or tourism related matters, (in terms of guidelines, regulations and in liaison with the Minister of Environment, Forestry and Fisheries, (DEFF), Ms Barbara Creecy). SANParks do not support this application and reserves the right to revise initial comments based on additional information that may be received.	
		15 Dec 2020 Official written comment	NEMPAA: • The entire Section 50 of NEMPAA dealing with commercial and community activities in national parks, nature reserves and world heritage sites will be relevant and applicable for this proposal. • In terms of Section 50 (5) of the act and its regulations, no development /construction may be permitted in a	**NEMPAA:** The requirement in terms of Section 50 and 50(5) of NEMPAA has been included under Section 2e, subsection E7 of the Scoping Report. If the application process proceeds, Samara will seek written approval from SANPARKS and the RGBK in terms of Section 50 (5) for inclusion in the Draft EIR & EMPR reports and for submission to the DMRE as part of the final EIR & EMPr reports as no environmental authorisation may be issued for activities in protected area without the prior written consent/approval from the management authority.

			national park, nature reserve or world heritage site without the prior written approval of the management authority. • The RNP management authority is SANPARKS with its head office in Groenkloof, Pretoria. Bufferzone: • The activity falls within the approved expansion footprint and buffer area of the RNP as per the RNP Management Plan (2018-2028). A Biodiversity Policy and Strategy for South Arica: A strategy of Buffer Zones for National Parks was gazetted in 2020 (GN 35020, 8 Feb 2012). The purpose of a national park buffer zone is to protect the purpose and values of the national park as defined in the management plan. • he proposed applications also occur in a critical biodiversity area (CBA's) as per the Northern Cape Biodiversity Conservation Plan of 2016. CBA's are terrestrial and aquatic features in the landscape are critical for conserving biodiversity and maintaining ecosystem functioning. The management objectives, as per the Northern Cape Biodiversity Plan, are to maintain these CBA areas in a natural or near natural state. Developing in	**Bufferzone:**

			these areas are to be avoided as far as possible. The Orange River is threatened and that is highlilghted in the DENC biodiversity plan. Rare and endangered species are also being threatened and for some of the plant species that might be our last population of that specific plant species, since the habitat of these plant species will be destroyed by the activity proposed. See the report from DENC with Potjiespram application – which is relevant to this application. "The conservation of these terraces is critical to the protection and conservation of numerous endemic plant species occurring on these terraces in South Africa". **Please also see provided report of Pieter van Wyk et al. (Naledzi note: included under Appendix 6)** The RNP is a contractual Park with the Richtersveld community. Included in the agreement with the Richtersveld community is that traditional, nomadic live-stock farming is to continue and the cultural heritage of the Richtersveld community preserved and conserved. The lack of consultation with the community and not addressing the cultural heritage are of a great concern.	
Richtersveld Joint Management Committee Nikodemus Swartbooi – Kuboes Representative Renseke Claase – Sanddrift Representative Abraham/Farie Cloete - Lekkersing Representative	**x**			Notified through emailed communications and SANPARKS RNP has also informed the RJMC of the application. Consultation with the management committee will be undertaking in January 2021.

Henley Strauss – Eksteenfontein Representative Willem Joseph – Livestock Farmers Representative				
Lawful occupiers of land **(Existing Mining Rights and Lease Areas)**				
African Star Minerals Pty Ltd (Oena Diamond Mine) General Manager - Theodor Boshoff	**X**			
Lower Orange River Diamonds (Pty) Ltd - Mining Right Contact: Chris Kimber (CEO)	**x**	27 Nov 2020 Emailed comments	1. LOR were never advised of this application prior to lodgement, but rather were made aware thereof through social media and a whispering campaign through our operations at the Lower Orange. The Applicant later advised that they had tried to make contact by way of SMS, which was confirmed by me as to having been received on 24 March 2020, just prior to lockdown. In that SMS I was asked to provide my email address as they wished to address a mail to me, which I provided within an hour. Needless to say, no mail arrived! (I have had our servers scanned, and there is simply no mail). This is the only attempt at engagement, and I confirm no further engagement, initiated by the Applicant, or anybody else for that matter, has been received. The circulation of the Application, and ancillary documentation, was ultimately forwarded to me, by NEC, at the request of Brent Whittington, of Sanparks. This is however, ultimately all trite. 2. The Application has been "accepted" on an area which falls within LOR Mining Right	1. Kindly note it is unusual for any mining company to engage/notify/ advise any interested or affected party of its intention to apply for a prospecting right/permit prior to lodgement. The mining company would then put its own application in jeopardy. An applicant will only notify interested and affected parties (I&Aps) of the application once accepted and instructed by the DMRE to notify I&APs through the EIA Process. It follows therefore that your expectation and demand that Samara should have informed you prior to such an application does not have a basis, even in law. NEC has sent out an emailed notification of the prospecting right applications and availability of the Draft Scoping Reports to LOR on 14 November 2020. The list of recipients from LOR included johan@lor.co.za, Jamie@lor.co.za and marina@lor.co.za. On 17 November 2020 we received your email address from Mr Brent Whittington from Sanparks, as you stated, and forwarded the notification to you. Samara Mining (Pty) Ltd has also confirmed that they engaged LOR on 18 November 2020 in Stellenbosch to discuss the applications. An agreement has also now been reached between Samara and LOR in this

			and Mining Lease area. The application therefore stands to be withdrawn, or in the alternative rejected. As a matter of interest, the Samara application is for areas located between the south bank of the Orange River and the 100-year flood-line. The 100-year flood-line, was, and continues to be, demarcated by LOR, as well as the previous rights holder. There is no official record thereof. I digress. Our right, as indicated on the Regulation 2(2) Sketch Plan, clearly identifies the boundaries of the Right. It appears that the Applicant has confused the boundaries of the Mine Works Programme with the boundaries of the Right. This area, between the south bank of the Orange River and the 100-year flood- line (as determined internally from time to time) has been excluded, by agreement, between interested and affected parties, both governmental and non-governmental. This leads me to the obvious question which we both failed to understand, how did the application manage to be uploaded on the SAMRAD system? As I advised, we are totally confused; however, that confusion is waning! Our preliminary investigations indicate that the Application was only uploaded subsequent to acceptance. Accordingly, it is evident that answers need to be provided. I certainly am not casting aspersions; however, our (and other interested and affected parties) interest has been piqued. We are, and will	regard. 2. The DMRE has accepted both Samara's application on 15 September 2020, and LOR's claims can only be verified with the DMRE. We have lodged a spatial query to the DMRE Kimberley Office to verify the LOR claims with the department. The DMRE Kimberley Office will need to advise us, provide the relevant information and state the way forward. Naledzi can unfortunately not provide a response to LORs claim until advised by the DMRE. With regard to the withdrawal of the application; Samara has confirmed in a letter addressed to LOR dated 26 November 2020 that they will not withdraw their applications, however are willing to consider any proposals that LOR may have at this stage. 3. e challenge the claims of plagiarism. The Draft Scoping Reports prepared for the prospecting rights a generic DMR template populated per heading by the EAP. The data about geology and bulk sampling method have been supplied to NEC by NDI Geological Consultants in the Prospecting Works Progamme for the applications. As explained to LOR, NEC has not been able to access the prospecting focus areas, and therefore the Scoping Reports are based on a desktop analysis. Data pertaining to the receiving environment and social surroundings, as stated under section iv (1)(a) of the respective Scoping Reports, have been sourced through preliminary specialist inputs, desktop analysis and use of GIS tools including reference to previously completed EIA Reports for current diamond

			continue to be, engaging with the various interested and affected parties. 3. I would like to mentioned and confirm, that we discussed the issues around your documents, which contained proprietary information, of both this company and various independent consultants, to this Company. I acknowledge your explanation, but we do need to engage further with the respective role-players. As mentioned, there are allegations of plagiarism and misrepresentation, which need to be addressed and put to bed. 4. As a consequence of the above, and given that the areas that NEC wish to visit fall within LOR Mining Right and Lease area, and in my capacity as CEO, and inters of section section 2(a)(1) of the MHSA, NEC are not authorised, nor given permission, to enter the Area. Entry into the Area constitutes, amongst other offences, a criminal offence. Please be advised that, if you, or anybody else who is unauthorised to be on the property, enter the Area you will be arrested, and removed to the nearest Police station, and charged accordingly. Please be further advised that the towns of Sendelingsdrift (Reuning) and Baken are included in this jurisdiction.	mining operations where available, you should know that some of these documents are already in the public domain and accessible. Information used from previously completed EIA / Scoping Reports have been cited in the PRAA 1 and PRAA 2 Scoping Reports. LOR has now also denied NEC access to the bulk of the prospecting focus areas for site visits and field investigations which limit our ability to gather site-specific data. 4. he denied access is acknowledged. We have received the formal letter from Mr Peter van Rooyen, LOR Legal Manager. We cancelled our scheduled site inspections and have informed the DMRE of the access challenges to the application areas. DMRE will need to advise and provide a way forward. **<u>Please note it has been documented in this Scoping Report that on 18 December 2020, Samara engaged LOR, in this regard and has agreed to enter into an exclusive collaboration agreement with LOR to explore the economic feaslbility of mining, between the 1: 100 year flood line and the south bank of the the Orange River, within the area of the current LOR License. The confirmation letter of this agreement is included under Appendix 3 (3.5) of the Scoping Report.</u>**
Lower Orange River Diamonds (Pty) Ltd Manager Legal Peter van Rooyen	**x**	15 Dec 2020 Official written comment	**<u>Objection to PRAA 1 Prospecting and Bulk Samping Application:</u>** The application area is part of the Mining Right	Samara has engaged LOR, CEO, Chris Kimber in this regard and has agreed to enter into an exclusive collaboration agreement with LOR to explore the

			Area of the existing LOR Diamonds Mining Right, Cession of the earlier Trans Hex Group Mining Right with reference NCS 30/5/1/3/3/1 (531) MR. LOR reserves the right to submit an lodge further additional and comprehensive grounds of objection in the event that this objection as to overlapping is not upheld and the above application indeed proceeds.	economic feasibility of mining, between the 1: 100 year flood line and the south bank of the Orange River, within the area of the current LOR License. The confirmation letter of this agreement is included under Appendix 3 (3.5) of the Scoping Report.
Owners, persons and occupiers of land adjacent to the site/downstream				
Alexkor SOC Limited – Mining Right 554 Contact: Environmental Manager Leilani Swartbooi (MR area - 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.	**x**	**14 Dec 2020 Virtual Meeting**	Please note that mining activities are taking place within the flood line of the Orange River at Witvoorkop, Kortdoorn and 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? Was the Richtersveld CPA administrator engaged?	Thank you for the confirmation. The CPA will be engaged in this regard in January 2021. The Richtersveld CPA Administrator is registered as a key stakeholder on the project I&AP Database. (See Appendix 5.1) and has been engaged as part of the Scoping Phase PPP. The Administrator has also attended the 8 December 2020 virtual meeting (see Appendix 5.8).
NamWater Namibia Water Corporation (Windhoek, Namibia) Senior Environmentalist – Water Quality & Environmental Services: Nicolaas Du Plessis	**x**			
NamWater Namibia Water Corporation (Keetmanshoop, Namibia) Manager – Business Unit South: Andries Kok	**x**			
NamWater Namibia Water Corporation Jolanda Kamburona	**x**	**15 Dec 2020 Emailed comment**	NamWater has the following comments: • The Orange River Estuary and Mouth (declared Ramsar site) does not lie very far	A Freshwater Impact Assessment and Terrestrial Biodiversity Study will be conducted as part of the EIA Phase to investigate the potential impacts of prospecting on the Orange River and potential to impact on the

			from the project site and hence the concern. Acknowledgement has been shown in the report, but caution should be taken not to affect the estuary and River Mouth. • The project locations are downstream of the NamWater Rosh Pinah abstraction point and will therefore not affect the quality of the abstracted water from Rosh Pinah.	estuary. The specialist will recommend management measures to avoid impact on the estuary which may include restrictions on the activity or implementation of alternative methods of prospecting to reduce the risk to the environment. NamWater Rosh Pinah abstraction point is located within and downstream of prospecting right application area 2 and its proposed prospecting focus areas. (PRAA 2).
Rosh Pinah Township (Pty) Ltd (Rosh Pinah, Namibia) Township Manager – Alexander Maasdorp	**x**			
Trevali Mining Corporation Rosh Pinah Mine General Manager – Christo Horn	**x**			
Richtersveld Sida!Hub CPA	**x**			
NamDeb Diamond Corporation (Pty) Ltd Sendelingsdrift, Daberas Mine Mine Operations Manager – Orange River Mines - Charlton Kurz				
Namdeb Diamond Corporation Pty Ltd Orange River Mines - Chief Operations ManagerJacob Jurgen	**x**			
Oranjemund Town Council (Oranjemund, Namibia) CEO – Shalie Akwaanyenga LED Manager – Charles Kakuru PRO – G. Scholtz	**x**			
Richtersveld Growers	**x**		Emailed notifications have been sent to	

Manager - Mike Rice			Richtersveld Growers	
Op My Stoep Namibia – Orangemund	**x**			
Sheperd Lodge	**x**			
Lower Orange River Stakeholders Forum Members	**x**			
Brandkaros Resort			To be consulted during January 2021.	
Municipal Councillor				
Ward 1 – Willem Links(PR 12663)	**x**			
Ward 2 – Anna Bock (PR 12664)	**x**			
Municipality				
Richtersveld Local Municipality Municipal Manager – Sydney Adams	**x**			
Richtersveld Local Municipality Infrastructure Manager - Ivan Cloete	**x**	8 Dec 2020 Virtual meeting	Since the community public meetings have been postponed until January 2021, can the community still complete the comment sheets or does the opportunity to comment stop on 14 December 2020?	The communities were able to submit their comments via email during the Scoping Phase. The communities however still have ample opportunity the submit comments throughout the EIA Process. A Whatsapp Group 'Naledzi Publieke Deelname' was also initiated to gather initial comments from the communities to guide our public engagements for January 2021. The initial comments have been included in the Scoping Report.
Namaqua District Municipality Project Manager - Shaun Abrahams	**x**	8 Dec 2020 Virtual Meeting	Three (3) months ago I read through a Scoping Report completed for Lower Orange River Diamonds (Pty) Ltd (LOR), which also identified the same areas for mining as the Samara prospecting focus areas at PRAA 1 and PRAA 2. Would that be a problem for the DMRE? Because according to the LOR Scoping Report they already have a mining license for those areas. Does Samara have any plans to extend the prospecting rights to commercial mining right?	According to LOR they currently hold the mining rights for alluvial diamonds on the area which the application area covers. Samara has engaged LOR in this regard and has agreed to enter into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining, between the 1: 100 year flood line and the south bank of the Orange River, within the area of the current LOR License. With regard to commercial mining; Samara will first test the mining method at a prospecting scale after which the project may unfold in a small pilot mine to allow improvement on the mining method, diamond recovery process and to reduce any potential environmental risks.

				This is addressed under Section 2(d) (ii) of the Scoping Report. According to Samara the method does not only refer to mining but also to the social-economic development that needs to be implemented as part of the project. The Social Development Plan addresses skills development and aims to ensure that the environment remains conducive for the current eco-tourism activities been undertaken in the Richtersveld area. The SDP will also ensure that the project contributes to the agricultural activities currently available in the area. It is thus emphasised that the project proposal is informed by a multi-disciplinary team to ensure that the method is tried and tested from an environmental and social point of view and to determine what the projects socio-economic abilities will be before it can proceed to commercial mining. The main risk of these types of projects is contributing to the unemployment rate in the area. The main aim of the project model is to incorporate job creation, skills development. Samara's key focus is not only to obtain the prospecting right but to ensure that the project model can achieve the local economic development priorities for the area.
Namaqua District Municipality Economic Development and Tourism Manager - Jannie Loubser	**x**			
Organisations				
Peace Parks Foundation (Ais-Ais Transfrontier Park) Spokesperson - Lisa-Marie Greeff-Villet	**x**			
Namibia Chamber of Environment	**x**	16 Nov 2020	Please register me as an I&AP. I have listed my	Namibia Chamber of Environment has been registered on

(Windhoek, Namibia) CEO – Dr. Chris Brown		Comment Sheet	broad concerns – have not yet had a chance to review the draft Scoping Report. I have the following concerns: ▪ ater use/abstraction ▪ hanges in river flow – diverting the flow ▪ mpact on aquatic fauna and flora ▪ isual impact - sense of place ▪ mpact on the Transboundary Ais Ais Richtersveld Landscape ▪ mpact on tourism ▪ oaching and illegal collection of natural resources ▪ Illegal crossing of the river (border) by staff; ▪ Impact on rural lives and livelihoods	the I&AP Database (See Appendix 5.1 of the Scoping Report). These potential impacts have been included in the Scoping Report as aspects for further investigation in the EIA Phase. See Section 2 (d)iv)(1)(a) subsection 1.5.1.2 (surface water use), 1.6 (Freshwater Ecosystems) 1.7 (Terrestrial Biodiversity), 1.8 (visual aspects), 1.12 (Cultural, Heritage and Palaeontological Importance and 1.13 (Socio-Economic Environment). Specialist Scoping Reports (Appendix 6) have been conducted to screen the potential impacts. In-depth specialist investigations as set out under Section (i) Plan of Study for EIA Process, subsection ii and iii, will be undertaken during the EIA Phase to confirm the significance of the potential impacts and to formulate site specific mitigation and monitoring measures. **Water use/abstraction:** It is understood that the net loss to the Orange River will be zero. Water abstracted from the river will be abstracted, clarified and released back into the river downstream of the workings. **Changes in river flow:** 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. The water diversion and impedance to limit ingress of water to the excavations would result in reduced river flow volumes. Sedimentation and erosion control will be vital at the proposed prospecting focus area. **Impact on aquatic fauna and flora:** The prospecting

				pockets are located within the endangered Lower Gariep Alluvial vegetation. The prospecting pockets pose a threat to this vegetation type. The ecosystem is extremely ecologically important and sensitive, and the proposed prospecting and bulk sampling activities pose a very significant risk to the ecology and biodiversity of the area. All aspects of the proposed prospecting and bulk sampling activities will be considered in extensive detail and all aspects will be 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 – sense of place:** The prospecting and bulk sampling activities could have a negative impact on the landscape character, sense of place and visual quality of the area. There are significantly high visual impacts associated with the project which will be assessed in detail in the EIA Phase. A Visual Impact Assessment will be conducted to determine the potential impact of the activities on the sense of place, landscape quality and character of the receiving environment. **Impact on Ais Ais Richtersveld Landscape:** The prospecting and bulk sampling activities have the potential to impact on the cultural heritage, conservation and or tourism. **Impact on tourism:** The RNP has a significantly high eco-tourism aspect including but not limited to indigenous culture, rich biodiversity, river rafting, Fish River Canyon hike, sport fishing along the Orange River, birdwatching, and desert living. The proposed prospecting and bulk sampling activities will have the potential to have a

				significant impact on the ecotourism of the area. Limited portions of the RNP will observe the activities, however, this area includes camping sites and the project may have a potentially very significant negative visual impact on the camping sites and sense of place for tourist. This impact will be investigated further in the EIA Phase by conducting a one-one engagement with the RNP management to determine potential impact on tourism, should the application proceed. Poaching and illegal collection of natural resources, including illegal crossing of the border by the staff will be prohibited in terms of the Environmental Management Programme (EMPr) to be prepared for the application areas. The prospecting works will be strictly monitored.
Earthlife Namibia (Windhoek, Namibia) Chair – Bertchen Kohrs	**x**	14 Dec 2020 Comment Sheet	What will happen to all the ambitious plans on the social sectors as was outlined by Dr Dywili and which will raise high expectations amongst the communities if the diamonds will be found?	Samara will roll out the Social Development Plan once the Prospecting Rights are granted by the DMRE to Samara. Once diamonds are discovered and it is found that the area can be economically mined, Samara will apply for the Mining Permit after which the Social Development Plan can be reviewed based on 'past lessons learned'.
Africa-Biota / University of Hamburg, Institute of Plant Sciences and Microbiology (Hamburg, Germany) Director – Prof Norbert Jurgens	**x**	14 Dec 2020 Stakeholder Meeting	a) Will a specialist on avifauna be included? It also makes sense to include a specialist on migratory fish.	An Avifaunal Assessment will be conducted by an Avifaunal Specialist as part of the Biodiversity Impact Assessment. See Section 6 for the Plan of Study for the Biodiversity Impact Assessment and Appendix 6 for the Method of Assessment. A Freshwater Ecological Assessment has been commissioned and 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 protect this fisheries resource.
Africa-Biota / University of Hamburg, Institute	**x**	14 Dec 2020	a)	a)

of Plant Sciences and Microbiology (Hamburg, Germany) Director – Prof Norbert Jurgens		Comment Sheet	The greater PRAA encompasses almost the complete area of a major habitat type along the most important perennial water resource in this arid region. Even if at present no immediate activity is planned within the whole large PRAA the EIA should logically mirror this coverage of the almost complete habitat system along the river from near De Hoop to near Grootderm. The large scale of the PRAA requires an integrated assessment of the Namibian and South African side. b) The aquatic ecosystems & biocoenoses of the Orange River are already damaged by the decreasing water level, chemical pollultion and fishing. This impact is likely to increase with projected climate change and upstream land use change. Therefore, special care should be given to migratory fish and other aquatic life. c) The ancient (almost tertiary?) gravel terraces along the river carry endemic flora and fauna which has not been published. As the main author of all the vegetation types cited in the Scoping Report I am aware that these small units were not covered by the larger landscape units used in the 2012 and 2018 Vegmap nor in the riverine vegetation. This insufficient covered 'blindspot' between the large landscape units in the hinterland and the gallery forest requires an	Please note that this application is for a Prospecting Right with Bulk Sampling, not a full scale mining permit or right. Activities to be conducted on the Orange River will be small scale basically a 'test' scale and will be implemented in a phased manner. The entire system will not be prospected at once. A maximum of ten (10) trenches will be excavated (100m x 25 x4m) per application area over a three year period. The request to cover the almost complete system along De Hoop to near Grootderm is extreme. The specialist studies currently aim to assess the focus areas and downstream habitats that might be affected by the prospecting activities. Indepth studies covering the complete system will be conducted once the application for full scale mining is lodged. b) A full Freshwater Ecological Assessment will be commissioned as part of the EIA Phase and 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 protect this fisheries resource. See Appendix 6 for the Freshwater Ecological Assessment Scoping Report which includes a Plan of Study for the EIA Phase. c) The presence of the tertiary gravel terraces along the Orange River has now been included under Section 1.7.1. (Vegetation). The site vegetation types and species descriptions and likely impacts included in the Scoping Reports and the Specialist Scoping Reports are based on desktop investigations. These descriptions and likely impacts will be confirmed and verified during in-depth specialist field investigations

			intergrated study on both banks as the gravel terraces have already been heavily degraded by mining on the Namibian side as well.	that will form part of the EIA Phase. The comments raised by stakeholders will be brought to the attention of the specialists for consideration in their site investigations and reporting.
Birdlife South Africa Dr Melissa Lewis Policy and Advocacy Programme Manager	**x**	15 Dec 2020 Written comment	We recognise the need for economic development, including responsible mining. We do not, however, support developments that may have a significant negative impact on the country's bird species, the habitats they rely on, and natural water sources. **<u>Prospecting right application area 2 (PRAA 2)</u>** BirdLife South Africa is emphatically opposed to the application to prospect in PRAA 2 insofar as this area falls within a national park and world heritage site. The draft scoping report correctly highlights that prospecting in these types of protected areas is prohibited by law. Importantly, the NEMPAA of 2003 allows no exemption to this prohibition. Moreover, regulation 22(b)(i) of the Environmental Impact Assessment Regulations (2014) specifies that a competent authority must, within 43 days of receipt of a scoping report, refuse environmental authorisation if "the proposed activity is in conflict with a prohibition contained in legislation". If granted, any authorisation to prospect within PRAA 2 would, in all likelihood, be overturned if taken on appeal or judicial review. We therefore strongly urge the Department of Mineral Resources and Energy (DMRE) not to allow this application to proceed beyond the scoping phase.	**PRAA 2** This is correct. Based on the requirements of the EIA Regulations of 2014, Section 22(b)(ii) the report finds the application is not permitted to proceed to the EIA Phase since the application is in conflict with the prohibitation contained under Section 48 of NEMPAA and MPRDA.. 1. The DEA Environmental Screening Report has been generated for the application area and is attached under Appendix 6 of the Scoping Report and has now been addressed in the final Scoping Report under Section 2 (e) Policy and Legislative Context, items E34. The identified environmental themes and applicable assessment protocols have been included under item E36 to E40. This has also now been included under Section 2 h (iv)(1) (a) of the finalised Scoping Reports. 2. The Final Scoping Reports under Section 2 h (iv)(1)(a), subsection 1.6.1 does recognise that the prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thus the RAMSAR wetland system and that such impact, if regarded as significant at all, will be unacceptable. The impact from the prospecting activities will be assessed in detail in the EIA Phase. It will only be possible to determine the significance of potential impacts on the Orange River Mouth once the

			Comments applicable to both draft scoping reports BirdLife South Africa has several additional concerns and recommendations regarding the draft scoping reports. These comments should not be interpreted as suggesting that we in any way support the application proceeding in respect of PRAA 2. As highlighted above, this application should not be permitted to proceed to a full environmental impact assessment (EIA). Nevertheless, until such a decision has been made by DMRE, the following should be taken into account for both reports: **1.** The draft scoping reports make little mention of the reports generated by the national web-based environmental screening tool. Nor do their sections on Policy and Legislative Context mention which theme-specific protocols will govern specialists' assessments and reports during the EIA phase. **Please could the final reports elaborate on which environmental themes the screening tool has identified as relevant for these applications and which protocols will consequently be applicable.** **2.** The Orange River Mouth is a Wetland of International Importance that currently sits on the Ramsar Convention's Montreaux	Aquatic Ecological Impact Assessment and Biodiversity Impact Assessment inclusive of the avifaunal assessment have been completed. The draft EIR would therefore stipulate whether the activities have the potential to degrade the site. 3. The criteria for designation of the Orange River Mouth and importance for waterbirds for breeding and migration and its status as an Important Bird Area (IBA) has now been included under Section 2h(iv) 1(a) subsection 1.6.1. and 1.7.3. The AEWA agreement has now been stated under Section 2(e) under Policy and Legislative Context item E 20 and Section 2h(iv) 1(a) subsection 1.7.3. The AEWA Secretariat has now been added to the I&AP database included under Appendix 5 to the Scoping Report. The AEWA will be consulted during January 2021. The relevance of the CMS has been included under Section 2e, item E19 of the Scoping Report and Section 2h(iv) 1(a) subsection 1.7.3. 4. rotocol is applicable project area of influence is applicable. 5. n Avifaunal Specialist will be commissioned to conduct the Avifauna Assessment as part of the Biodiversity Impact Assessment. According to

			Record. If the EIA concludes that prospecting has the potential to further degrade this site, or to impede the restoration of its ecological character, it is strongly arguable that this should be considered a fatal flaw. Notably, the South African government's most recent report to the Conference of the Parties to the Ramsar Convention identified the removal of the Orange River Mouth from the Montreaux Record as being a priority for our country. Authorisation should not be granted for activities that would frustrate the attainment of this objective and contravene Article 3(1) of the Convention. **3.** In assessing potential impacts on the Orange River Mouth within the context of South Africa's obligations under the Ramsar Convention, consideration needs to be given to the criteria that justified this estuary's designation as a Ramsar Site. South Africa's justification for the site's designation relied heavily on its importance for numerous species of waterbirds. The site is regarded as the second most important estuary in South Africa in terms of its conservation importance, and is used primarily for breeding and as a stop-over on migration. Unfortunately, migrant numbers are already lower than they were in the past, and the further degradation of an important	the Specialist Scoping Report method station, the avifaunal assessment will cover the generic effects of the proposed mining and migratory routes and breeding sites of potential Red Data List species, as well as ecological and migratory connectivity. The Terrestrial Animal Species Protocol is applicable. The application area corresponds to a very high 6. he prospecting activities will be implemented at a small scale wherein sampling will be conducted in a phased manner. Bulk sampling will be conducted at one prospecting pocket at a time and will be currentlly rehabilitated before moving to the next pocket. By keeping the activities small the risk to the environment can be strictly managed and monitored. This will also assist the site team to iron out all the challenges before moving to the next focus area. The appointed specialist team will assist Samara to formulate the required mitigation, rehabilitation and monitoring measures based on the Samara's specific prospecting method. Specialists will investigate and recommend rehabilitation measures that have proven to be successful. Samara I further engaging with a multidisciplinary team to assist with the formulation of the prospecting method with concurrent rehabilitation, with the lowest possible environmental risk. The EIA Report will consider the hierarchy of rehabilitation measures that can/should be applied. In certain instances where the EAP or specialists are uncertain of the success rate of the rehabilitation measures, restrictions would need to be placed on the

			stop-over point would likely place additional stress on these species. Indeed, there is already a lack of large wetland systems on this coast, with the next closest options being Walvis Bay in the north and Olifants River in the south. The Orange River Mouth also supports several species of birds which are listed on the Namibian, South Africa or international red data books (such as the Damara Tern). This aspect has received insufficient emphasis in the draft scoping reports. Moreover, the reports have not mentioned that the Orange River Mouth is an Important Bird and Biodiversity Area (IBA) in danger, or that many of the species it supports are covered by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). As a Contracting Party to AEWA, South Africa is internationally obliged to maintain these species at, or restore them to, a favourable conservation status. However, the Agreement currently receives no mention in the reports and our understanding after liaising directly with the AEWA Secretariat is that they have not received notification of this application. Please can this be rectified? Note further that some of the species of conservation concern expected to occur within the project's area of influence (e.g. the Lappet-faced Vulture) are listed under the Convention on the Conservation of	activity or source. Still, these are recommendations the specialists will need to make based on the refined prospecting method and findings of field investigations. 7. The assessment of rehabilitation measures and likelihood of success have been included in the Plan of Study for EIA as an aspect to be conducted as part of the EIA Phase. See Section i and iii (Plan of Study for EIA) in the later sections of the Scoping Report. 8. The specialist field investigations will confirm the presence of CBA1 during the EIA Phase. It is deemed likely that these areas could be considered no-go areas from a biodiversity perspective due to the high impact and potential loss of irreplaceable habitat. 9. This has now been addressed in the Scoping Report under Section (ii), subsection ii, Plan of Study for EIA. 10. The refined prospecting method and requested information will be included in the EIA Report. The refined method and designs will be used to base the specialists investigations on which will ultimately inform the findings of the EIA and EMPr reports. 11. The application for relaxation of the conditions imposed by GN 704 will be incorporated into the WULA. The Water Use Technical Report in support of the WULA will be made available for 60 days public review and comment. The formal

			Migratory Species of Wild Animals (CMS). This Convention is therefore also relevant. **4.** iven the importance of the Orange River Mouth from a species-conservation perspective, it is essential that the estuary be considered not only in the Freshwater Ecological Impact Assessment, but also in the full Biodiversity Impact Assessment, with impacts on avifauna being assessed by an avifaunal specialist. Indeed, best practice dictates that species impact assessments investigate all project areas of influence, not only the prospecting focus areas. If the Terrestrial Animal Species Protocol is applicable, then consideration of project areas of influence is a legal requirement. 5. Te note that, although the draft scoping reports raise several concerns regarding habitat loss, little is said regarding other potential impacts on species, such as disturbance. It is important that the EIA investigate all potential direct and indirect impacts of the proposed prospecting and its associated infrastructure on species of conservation concern and that the mitigation hierarchy be carefully applied.	WULA process will start in the EIA Phase once the position of prospecting sites and infrastructure have been determined.

			6. The scoping reports assert that many of this project's negative impacts can be addressed through rehabilitation. We question the confidence with which the reports promote such a measure – especially in light of these areas' high ecological sensitivity and importance. 7. If rehabilitation is to be proposed as a mitigation measure, it is essential that the EIA includes a rigorous assessment of the rehabilitation methods available and their likelihood of successfully rehabilitating impacted areas to a pre-disturbance state. Any predictions regarding the effectiveness of rehabilitation/restoration need to be supported by evidence. If this is not possible, it cannot simply be assumed that rehabilitation will be effective. 8. irdLife South Africa objects to any prospecting being authorised within Critical Biodiversity Areas (CBAs) that are classified as irreplaceable. Prospecting with the intention to mine is clearly incompatible with conserving these areas and, given that they are irreplaceable, their loss cannot be remediated through biodiversity offsets. Should the presence of CBA1 areas be confirmed during the EIA, we urge that	

			this be considered a fatal flaw. 9. Given the impacts that mining activities are already having on the Orange River, it is essential that the EIA carefully assesses cumulative impacts. The draft scoping reports are currently silent on how cumulative impacts will be assessed. Please could this be elaborated upon in the final reports? 10. We understand that the applicants are still in the process of refining their prospecting methods and design. From the stakeholder engagement that has occurred thus far, our understanding is that these details will be finalized in time to inform the full EIA, the drafting of the Environmental Management Programme, and the compilation of the water use licence application. We request that the draft EIA report include a comprehensive description of the proposed methods (including, for instance, specifics regarding the amount of water that will be abstracted and details of the water diversions) to enable interested and affected parties (I&APs) to properly review the report's impact assessment and proposed mitigation measures. 11. Finally, we are concerned by the proposal	

			that prospecting activities occur within the 1:50 and 1:100 year flood line of the Orange River. Our understanding from the stakeholder meeting on 14 December 2020 is that the application for an exemption from the requirements in regulation 4 of the Regulations on Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources (1999) will be submitted with the water use licence application and that I&APs will be afforded an opportunity to comment thereon. We look forward to reviewing the draft application and supporting documentation in due course.	
Birdlife South Africa Dr Melissa Lewis Policy and Advocacy Programme Manager		15 Dec 2020 Emailed Comments	With reference to the virtual meeting of 14 December 2020, we followed with great interest the applicant's presentation on its social development plan. We are pleased that such a plan is envisaged, and would like to raise the following points and suggestions for the applicant's consideration: 1. It was noted that small enterprise development will occur, with artisanal miners and small scale farmers being provided land, equipment and support to enable their development. It will be important to also consider the environmental impacts of these activities and allow stakeholders to comment on these ahead of the plan's finalisation and implementation (of course, to the extent that the developments envisaged involve activities included in Listing Notices 1-3,	Samara is looking at a broader public engagement process which will be communicated to the communities during the January 2021 meetings. The broader public engagement will allow Samara to engage other relevant stakeholders on the development in the area with regards to the Social Development Plan. The SDP engagement process is 90% planned. Samara will host a Summit where all stakeholders will be invited, departments and community organisations to determine if the project model is workable or not. The SDP engagement process will be transparent and will allow stakeholders to provide their inputs. The SDP engagement is however separate to the EIA Process and will be facilitated by Samara separate to the EIA Process public engagement process. The need for skills development was discussed as part of the Social Development Plan overview presented by

			environmental authorisation will be a legal requirement.). 2. In terms of the social development and increased education and awareness activities discussed, we noted that there was no mention of any environmental education, skills development or awareness. We feel this is a key element that should be included.	Samara. It was stated that skills development remains a critical part of job creation and poverty eradication and that Samara will form a partnership with all SETA's particularly the MQA and Agri-Seto to ensure proper skills development in the Richtersveld. Samara's current focus areas are the upgrade of the training centre in Alexander Bay and establishing a local trade test centre. Samara also aims to host a skill expo to do the following: • Develop an integrated skills development program • Identify shortage of skills • Develop a coordination tool for all skills development programs in the mining sector. The suggestion of increased environmental education will be considered as part of the SDP. The Richtersveld would have existing environmental education programmes that might just need to be enhanced.
Namibia Chamber of Commerce and Industry	**x**			
Northern Cape Wetland Forum Thabo Ramollo - DENC: Kimberley	**x**	14 Dec 2020 Virtual Stakeholders Meeting	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.
Orange-Senqu River Commission (ORASECOM)			To be consulted during January 2021	
UNESCO			To be consulted during January 2021	
RAMSAR			To be consulted during January 2021	
Organs of State (Roads Department, Eskom, Telkom, DWS)				
Lower Orange River - Department of Water and Sanitation: Orange –Proto Water Management Authority (Upington) Alexia Hlengani	**x**	20 Nov 2020 Official written comment	1. It is stated that the proposed operation will not be more than 100 metres from the open watercourse or estuary. It must be noted that, in terms of GN 704 Regulation 4, Restriction on locality, subsection (b) it is stated that: "No person in control of a mine or activity may (c) except in relation to a matter contemplated in regulation 101, carry on any underground or opencast mining, prospecting or any other operation or activity under or within the 1: 50 year flood line or within a horizontal distance of 100 metres from any watercourse or estuary, whichever is greatest', therefore the applicant is required to specify the exact distance of the proposed operation from the water resource to ensure compliance withi the stated regulation. 2. herefore, any other water use activity as outlined in section 21 of the NWA associated with the proposed project are not permissible as indicated on paragraph 1 above shall have to be	**Item 1 and 2**: Please refer to Section 2e of the Scoping Report,, under Policy and Legislative Requirements, subsection E5 wherein it is stated that the project triggers several Section 21 water uses that require authorisation and a WULA will be submitted to the DWS: Orange-Proto. These water uses include Section 21a, c, f, g and i including an application for exemption/relaxation of the condition imposed by GN 704 will be submitted as part of the overall WULA o the DWS: Upington Regional Office, since excavation and bulk sampling activities and infrastructure will be located within the 1: 50 and 1: 100-year flood line of the Orange River. According to Samara's prospecting method the prospecting focus areas are located within the riverbed and active channel. The mobile processing plant will be located on the Orange River embankment, above the active channel, not less than 50m from the river bed. See Section 2(d) (ii) of the Scoping Report for a description of the prospecting method. **Item 3:** Samara will comply with the relevant sections of the NWA regarding water use. A WULA will be submitted to the DWS: Orange River Proto and all the relevant legislative requirements relevant to the WULA will be listed for compliance.

			authorised by the DWS prior to such water use activity taking place. 3. All relevant sections and regulations of the NWA regarding water use must be adhered to. 4. No pollution of surface water or ground water resources may occur due to any activity on the property. 5. Any oil or diesel (including any petroleum products) spillage on site, must be properly managed to prevent any contamination of the water resource. An emergency response protocol must be developed to ensure that such spillages are immediately attended to and that the contaminated site properly rehabilitated and that protocol as indicated in Section 19 of the NWA is observed. 6. The applicant shall note that all domestic waste generated on site and any waste associated with the operation be disposed of at licensed landfill site. A signed copy of service agreement from the municipality shall be submitted to this Department to demonstrate that indeed provision will be made to render such services. 7. It is stated that the temporary diversion or re-alignment of the river will be constructed to gain access to alluvial	**Item 4 and 5:** Noted **Item 6:** Samara will engage the Richtersveld Local Municipality to obtain a service agreement for waste removal. The agreement will be included in the Draft EIR & EMPr reports. **Item 7:** The recommendation will be included as a mitigation measure in the EIR and EMPR.as part of the mitigation measures for the prospecting and bulk sampling activities.

			material for excavation. Further indicated that a channel will be excavated from current river flow on the dry side of the river bed. The applicant must ensure that sandbag barriers are used for temporary diversion and it is to be removed when the prospecting is finished. 8. It is indicated that chemical toilets will be established for the employees. The Department supports the use of chemical toilets considering the lifetime of the project.The chemical toilets shall be used and managed according to applicable legislation. 9. The Draft Scoping Report states that water for the process will be abstracted from the Orange River. The vacuum and filter system will remove dirt, filter the water to drinkable standard and either release it back into the river or supply communities with water by pumping it into municipal reservoirs is still to be confirmed. Please note that drinkable water standards get revised from time to time and must comply with potable standards (SANS 241:2011) depending on final use. 10. The abstraction and filtration of sediment laden water from excavations to be used in the plant with release of filtered water back into the river channel downstream of workings may change the water quality/	Item 8 to 10 : Noted. Item 11: Soil erosion management will be included in the EIR & EMPr. Item 12: The Closure and Rehabilitation Plan will be prepared during the EIA Phase and will form part of the EIR and EMPR documents. Item 13: Samara intends to stockpile material close to the river bed and embankment..

			any water discharged into the river must comply to SANS 241 drinking standards and enhance the quality therein. 11. Soil erosion on site must be prevented at all times during prospecting. Extra precautions must be taken in areas where soils are deemed as highly erodible. If soil erosion cannot be prevented, it must be minimised. 12. The applicant must furnish the department with the rehabilitation plan for the affected areas. 13. Stockpiling of any material should be within the 100m from the watercourse owing to high sedimentation. 14. Wetland: the applicant must ensure not to prospect within the wetland. The DWS guideline entitled "a practical field procedure for identification and delineation of wetland and riparian areas" (DWAF, 2005). There must be a 500m buffer from the edge of the temporary wet zone of the wetland edge of any structural development. A functional assessment of the wetland must be conducted should the development not be in agreement within the 500m buffer. 15. The applicant shall note that according to section 19 (1) of the NWA, it is stated that "an owner of land, a person in control of	Item 14: Please note prospecting and bulk sampling activities will require the temporary altering the course of the watercourse, bulk sampling excavation in the flood line (both bed and banks), rehabilitation of the bed and banks after excavations.; and the temporary diversion of the watercourse during bulk sampling. Natural flow may also be impeded depending on the methodology employed. Item 15: Noted this has been stated under Section 2 e 'Policy and Legislative Context', item E5 as requirements in terms of the NWA.

			land or a person who occupies or uses the land on which (a) activity or process is or was performed or undertaken; or (b) any other situation exists, which (a) any activity or process is or was performed or undertaken; or (b) any other situation exists, which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring". Any pollution incident (s) originating from this mining operation shall be reported to the Regional Head of DWS within 24 hours.	
National Department of Water and Sanitation Specialist Scientist - Directorate: Water abstraction and In-stream use Dr. Wietche Roets	**x**	18 Nov 2020 Emailed comment	Please note that the regional office of DWS is the entry point for all information. Further note that these activities may require a water use authorisation. The location of the proposal may prejudice this application.	A WULA will be submitted to the DWS: Orange Proto once all details on the project have been finalised. Naledzi have been in communication with the DWS Upington Office (Alexia Hlengani) from onset and DWS Upington has submitted official comments on the Scoping Report.
		14 Dec 2020 Authorities Meeting	If the prospecting rights are approved, at which scale will be prospecting activities be implemented?	The prospecting activities will be small scale and will be implemented in a phased manner to minimise the risk to the environment. Bulk sampling will focus on one prospecting pocket at a time paired with concurrent rehabilitation. If the method proves to be successful, the works programme will continue to the next pocket. Samara will first iron out all the potential risks on a small scale operation before moving to the next focus area. The aim is to implement a new mining method with a low environmental risk which can provide socio-economic development in the Richtersveld area.
			Will the EIA Process and WULA be done parallel? It is also important that the regional DWS be engaged as soon as possible.	The formal WULA for the water use authorisation will only start once the prospecting sites are determined. The PPP for the EIA and WULA has started already and is presently talking about the WULA to key role-players.

				The regional office has been engaged and has submitted their interim comments on the Scoping Reports.
			A fluvial geomorphological assessment should also be conducted to ensure the river mouth dynamics are not affected by the upstream mining.	A Freshwater Study will be conducted by SASS Environmental Services CC and will include a Geomorphic Assessment to describe the affected sections of the Orange River in terms of geomorphic reaches, physical habitat types and sediment regime. The description will include maps and statistics of physical habitat types and dominant sediment types along the above-mentioned reaches. Detailed geomorphic descriptions of the river channel (plan and cross-sectional view) will be done at the hydraulic sites (possibly the dewatered reach and below each hydro station). These data will allow for the assessment of the proposed infrastructure and required flow and sediment regimes to maintain the critical physical habitat and its maintenance processes along the areas targeted for mining.
			The Scoping issues have many red flags and the acknowledgement of the severity of impacts on the flow, water quality, geomorphology, habitat and biota put these applications in a fatal flaw category for DWS. It is further cemented by the fact that it is located in a protected area. Objectives of mining operations and objectives of conservation areas are not compatible. In terms of the DWS's perspective of pollution prevention and protection, we will not entertain a Section 21 c & i water use application inside the river, inside a protected area. We cannot stop people from applying for a water use license, but these fatal flaws will prejudice the	The potential impacts and severity of impacts included in the Scoping Reports are desktop-based and still subject to specialist field investigations, a refined prospecting method and confirmed prospecting locations. The legal implications of PRAA 2 are highlighted in the Scoping Report. The report finds that PRAA 2 prospecting right application is in conflict with the prohibition on prospecting and mining in protected areas as contained in Section 48 of NEMPAA. The applicant is however convinced, in spite of the legal implication, that prospecting will have several socio economic advantages to the Richtersveld community and cross border communities.

			application. The applications are in no go areas and the applications should not proceed any further than the Scoping Phase.	
National Department of Water and Sanitation Sub-Directorate Instream Water use Chief Landscape Architect - Pieter Ackerman	**x**	17 Nov 2020 Emailed comment	Thank you for the opportunity to comment as part of the EIA process and IWULA process. Diamond mining and coal mining are inter alia not supported within National Park so the one application within the Richtersveld National Park is not supported from our section.	
Department of International Relations and Cooperation (DIRCO)			To be consulted in January 2021	
Northern Cape Heritage Resources Agency Regional Manager – Andrew Timothy				Draft Scoping Report was couriered to the NCHRA. Naledzi has attempted to contact Mr Andrew Timothy. Further attempts for consultation will be conducting during January 2021.
South African Heritage Resources Agency Natasha Higgit	**x**	11 December 2020 Official Comment	SAHRA notes that a field based HIA will be conducted as part of the EIA phase. The pending HIA must comply with section 38(3) of the NHRA. The assessment of archaeological resources must be completed by a qualified archaeologist and must comply with the SAHRA 2007 Minimum Standards: Archaeological and Palaeontological Components of Impact Assessment Reports. Please ensure that the specialists names are provided in the report (no name has been provided on the Heritage Desktop report). Additionally, please ensure that the HIA is application specific i.e. please do not combine two prospecting rights applications in one report. Any other heritage resources as defined in	This request has been included as part of the Protocols to be followed for specialist studies. Please refer to Section 2e Policy and Legislative requirements (subsection E39) of the Scoping Report.

			section 3 of the NHRA that may be impacted, such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed. Further comments will be issued upon receipt of the above requested report and the draft EIA and appendices.	
		14 Dec 2020 Authorities Meeting	SAHRA only has the mandate to comment in terms of the South African Heritage Resources Act. SAHRA cannot comment on the Outstanding Universal Value (OUV) of properties.	The Department of Sport Arts and Culture Northern Cape and its Heritage Unit Northern Cape Heritage Resources Authority will be consulted to comment on the universal values recognised in the area's listing as World Heritage. The authorities will be consulted in this regard in January 2021 and during the EIA Phase. The EIA Reports including the Heritage - and Palaeontological Impact Assessment Reports will be submitted to SAC Northern Cape and NCHRA for comment.
McCregor Museum (Kimberley) Prof David Morris	**x**	15 Dec 2020 Comment Sheet	▪ The dates from the Heritage Scoping Report are wrongly quoted: "Excavations at Spoegrivier confirmed that the lower layers, with dates of 3520750 BP (Pta-6754) and 3580760 BP (Pta-6987), predated sheep and/or pottery (Webley, 2001)." ▪ The McGregor Museum as provincial museum for the Northern Cape should have been consulted for records/insights concerning the area. ▪ The Department of Sport Arts and Culture Northern Cape and its Heritage Unit and/or	▪ The error is noted and be corrected in the Heritage Impact and Palaeontological Impact Assessment Reports to be prepared during the EIA Phase. ▪ Please note that Heritage and Palaeontolgoical Scoping Reports are desktop based and full investigations will still follow in the EIA Phase that will require indepth research and field investigations. The archaeologist and palaeontologist will engage with the McGregor Museum in this regard during January to February 2021. ▪ The Department of Sports, Arts and Culture Northern Cape has been added to the project I&AP

			Northern Cape Heritage Resources Authority must be consulted as authorities mandated to assist in management of the universal values recognised in the area's listing as World Heritage. The Department was lead agent in the World Heritage listing. ▪ The McGregor Museum was contacted in connection with the public consultation period on 9 December 2020. This was very late in the process, hence delay in responding by 14/15 December 2020. ▪ I enquired at the Northern Cape Heritage Resources Authority and they apparently had heard nothing about this proposed project up until 14 December 2020 (when I provided minimal information on it – and they were not in a position to make reasonable comment). This is a major oversight by the applicant and their various consultants, especially the Heritage consultant. In light of this, receiving a written response from their office, by whatever date, must be regarded as a sine qua non. ▪ The McGregor Museum Archaeology Department has been involved in observing rock art occurrences and other archaeological traces along the west bank of the Orange River in this area and notes that previous mining has adversely impacted rock art sites and other materials there, and that the existence of graves adds	Database as a key stakeholder (see Appendix 5.1) and will be engaged during January 2021. ▪ The comments from McGregor Museum has been received and incorporated into the final Scoping Reports. There is still an opportunity to participate and comment on the applications during the second round of public engagements to be conducted during the EIA Phase. More in-depth information will also be available during this phase. ▪ Naledzi couriered hard copies of the Draft Scoping Reports to Andrew Timothy of the Northern Cape Heritage Resources Agency also tried to contact Mr Timothy on several occasions on his mobile phone, however there was no answer or was "not available". Dr Morris you also confirmed that the cellphone number we were using was correct and in use. We will contact and engage the Heritage Resources Agency in January 2021. ▪ The existing impacts in the study and prospecting focus area will be documented in the Heritage Impact Assessment Study post field investigations to be conducted in February 2021. The information currently contained in the Scoping Reports, specialist and EAP, are desktop based. This has however been added under Section 2 (d) (iv) 1(a) subsection 1.12. ▪ orrect, detailed site investigations will be undertaken along both PRAA's during January to February 2021 for both a Heritage – and Palaeontological Impact Assessment Study. ▪

			to the exceptional sensitivity of the west bank of the Orange River in this area. These previous impacts should be documented as part of any impact assessment. ▪ Please note that the period Jan-Feb 2021 is proposed for the carrying out of a heritage impact assessment along the proposed areas of impact: this assumes detailed on-the-ground evaluation of sites along the two stretches of river bank. ▪ Critical to understanding the heritage significance of the sites including the graves and other heritage traces along the bank of the river would be in-depth consultation with the community members who may have historical connections with the sites and who do have on-going management responsibility as the owners of the land. ▪ Evidence of this degree of consultation at the level of both scoping and on-site survey should be provided. It is not clear that any such consultation happened in the scoping phase.	onsultations with the community members in this regard have not taken place during the Scoping Phase. The specialist scoping reports are desktop based and did not include consultation. These consultations will be undertaken as part of the specialist field investigations as part of the full Heritage Impact Assessment Study. The requirement has been added and acknowledged as a requirement for the EIA Phase in the Scoping Report under Section 2 (d) (iv) (1) (a) subsection 1.12. ▪ vidence of such consultation will be included in the full Heritage Impact Assessment Study which will form part of the EIA Report.
Northern Cape Department of Immigration Office Manager Springbok – P. Davids				
Department of Immigration: Viooldrif (Sendelingsdrif, Alex Bay closed) Office Manager – Virginia van Wyk	**x**			
Department of Environment, Forestry and Fisheries (Directorate: Forestry Regulation)				
Northern Cape Department of Public Works	**x**			

Head of Department - Ruwayda Baulackay				
Communities				
Lekkersing - Willem Cloete **Eksteenfontein** – Demitri Farmer **Sanddrift** – Gert Cloete **Sanddrift** – Willamina Bantam		14 Dec 2020 Written Comments Comment Sheets	We did not receive the Scoping Report with all its attachments, Visual Scoping Report, Groundwater report, mining plan, nor the application with all its attachments. The complete application with the names and addresses of the applicants must be sent to us. According to law, we are entitled to these documents. Refer to case no. 9628/2015 between Duduzile Baleni & Others v Regional Manager: Eastern Cape Department of Mineral Resources & Others. All the information must be provided in Afrikaans. We demand this information in order to make an informed decision. We cannot make a decision on the application without the information. The information must be provided by COB, 14 December 2020. Myself and the following community members reject the application by Samara based on the following reasons: • We did not receive any prior information and cannot grant permission; • The law requires that the landowners must receive prior information before permission can be granted, not consultation: • There was no consultation with the Richtersveld community. We are the	The Scoping Reports were made available from 13 November to 14 December 2020 electronically on the Naledzi website and hard copies were placed at the public libraries of Sanddrift, Kuboes, Lekkersing and Eksteenfontein. An advertisement was published in the Gemsbok Newspaper and Plattlelander Newspaper in this regard on 13 November 2020. Site notice posters were placed in areas of Alexander Bay, Port Nolloth, Lekkersing, Sanddrift, Kuboes, Eksteenfontein and as far as Springbok. With regards to the demand for information by COB, 14 December 2020. We received your set of comments on 15 December 2020 via email. According to the NEMA EIA Regulations 2014, we may not consult during the period of 15 December to 5 January 2021. Therefore could not respond as 'demanded'. The information will be collated and provided to community members in January 2021 in the forms of an Afrikaans Project Memorandum. As stated the information was placed in the project area. The EIA does not seek permission from landowners through its public engagements, it is merely informative and gives interested and affected parties the opportunity to obtain project information, participate, and obtain clarity on the aspects of the project and to submit inputs on the potential impacts of the proposed activity and make their overall sentiment on the project known. Samara will independently facilitate the formal engagement process which seeks landowner consent and will also discuss the overview of the Social Development Plan which forms part

			landowners. • We did not receive any documentation and were not informed. The consultant merely sent us messages and posted notices. • We heard Samara wants to mine in the river; • How are they going to access the river? • What about the endangered plant species? • Where will they create access roads? • The river is earmarked for irrigation, not mining. • The law states that no new mines are allowed in the national park or world heritage site. • Our ancestors graves are everywhere along the river. • The entire application area is holy ground for the Nama landowners of the Richtersveld. • We have a mineral and land claim against the TransHex Mineral Lease Area in the Land Claims Court. • The consultant did not take any of the above into account.	of the project model being developed by Samara. Consultations with the Richtersveld Communities will follow in January 2021. The public meetings scheduled for December 2020 and 12 and 13 January 2021 were and have been postponed due to the Covid-19 risk in the Richtersveld area and based on the latest Covid-19 regulations issued by government which prohibits gatherings until 15 January 2021. Correct, Samara intends to conduct bulk sampling below the floodline of the Orange River. The prospecting focus areas are accessible in most parts from existing unsurfaced mine gravel roads within the existing LOR and Oena Mining Right and Mineral Lease Areas. Samara will go into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining between the flood line and the south bank of the Orange River., within the area of the current LOR License. Hence Samara will use mine access roads as far as possible. Part of Samara's prospecting method includes clearing of vegetation from prospecting focus areas. Several floral species protected under Section 2 of the Northern Cape Conservation Act, 2009 have the potential to be located within the focus areas. The prospecting and bulk sampling activities have the potential to result in loss and fragmentation of already range specific species. A full Terrestrial Biodiversity Impact Assessment field investigation will be undertaken as part of the EIA Phase to assess the potential impact on endangered floral species and confirm the presence of endangered species within the focus areas. Samara intends to conduct prospecting at a small scale with concurrent rehabilitation. The provisional planning is therefore for full rehabilitation

			The Nama of the Richtersveld are the legal owners of the Richtersveld and before any mining application can be approved, we must give prior consent. The comments have been undersigned by the community members of Lekkersing.	of the bulk-sampling excavations using the same material that was excavated. If feasible, a rescue effort will need to be put in place to rescue and relocated endangered species to other gravel terraces under permit for later use during rehabilitation of the disturbed areas. With regards to "The river is earmarked for irrigation not mining"; according to Samara's prospecting method and Hydrological and Hydrogeological Specialist Scoping Report it is understood that the net 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 the workings. The protection status of PRAA 2 has been highlighted in the Scoping Report under Section 2e 'Policy and Legal Context'. The applicant has been advised accordingly. Samara however insists that the applications proceed based on the positive socio-economic benefits the project will have for the Richtersveld Communities. The presence of Nama graves along the Orange River and the cultural value of the application area has been highlighted in the Scoping Report and the Heritage and Palaeontological Scoping Reports attached to this parent Scoping report. A full Heritage – and Palaeontological Impact Assessment field investigation (on-the-ground survey) will be conducted during the EIA Phase to identify the sites of cultural importance that need to be protected./ avoided in the areas of prospecting. The survey will be conducted during January to February 2021 and the Archaeologist will be required to consult the community members who have historical connections with the potential sites.

				The mineral and land claim against TransHex has been recorded in the finalised Scoping Reports (see Section 2 c – Locality) and in the Summary of Issues Table and will be brought to the attention of the DMRE through the finalised Scoping Reports. Samara will through the EIA Process public engagements planned for January 2021 discuss the separate engagement processes that will be undertaken to seek landowner consent from the Nama people of the Richtersveld community.
Abe Koopman	**x**	10 December 2020 WhatsApp Comment	When does Naledzi Environmental Consultants (Pty) Ltd intend to meet with the communities?	We will meet with the communities in January 2021. Arrangements will be communicated with the communities. For now, in line with the latest Covid-19 regulations of 29 December 2020, the public meetings for 12 and 13 January 2021 have been cancelled until further notice. The latest Covid-19 regulations prohibit gatherings until 15 January 2021. We will arrange the meetings in consultation with the CPA, CPA Administrator and the local municipality thereafter communicate the public meeting arrangements to the municipal satellite offices and share the Afrikaans and English notices on the 'Naledzi Publieke Deelname". Whatsapp Group.
Kuboes - Willem	**x**	10 December 2020 WhatApp Comment	What is the attitude of the existing mines towards the applications? We are glad we can talk about this, the community members are being used to oppose the application.	According to LOR they currently hold the mining rights for alluvial diamonds on the area which the application area (PRAA 2) covers. A spatial query has been lodged with the DMRE: Springbok and Kimberley on 3 and 7 December 2020 respectively to verify the claim. The verification result from the DMRE is still pending. Samara has engaged LOR in this regard and has agreed

				to enter into an exclusive collaboration agreement with LOR to explore the economic feasilbity of mining, between the 1: 100 year flood line and the south bank of the the Orange River, within the area of the current LOR License.
Zuna Links		9 December 2020 WhatsApp Comment	Is there a certain piece of land that Samara Mining has applied for? Where is the land parcel situated? Who is Samara Mining (Pty) Ltd? Who is their board of directors? Is Samara, currently mining in the area? Is Samara not just another name-changing mining group already mining in the 'Baken' area?	Yes. Samara has applied for two alluvial diamond prospecting rights with bulk sampling on the following prospecting right application areas (PRAA): ▪ PRAA 1: DMR Ref. NC30/5/1/1/2/12664 PR – left bank of the Orange River boundary to Portion of Remainder of the Farm Richtersveld No. 11. The application area extent is 987398 Hectares. ▪ PRAA 2: DMR Ref. NC30/5/1/1/2/12663 PR – left bank of the Orange River boundary to Portion of the Remainder of Farm No. 18. The application area extent is 690 Hectares. ▪ Application area PRAA 2 is situated below the flood line of the Orange River within the Richtersveld National Park and on the parks northern perimeter, downstream from De Hoop Campsite to Sendelingsdrift. Application area PRAA 1 is situated downstream from PRAA 2, below the flood line and on the Orange River from Sendelingsdrift to Baken. Prospecting and bulk sampling activities will be conducted below the flood line of the Orange River. Please refer to Appendix 3 of this Scoping Report for the application area locality maps. Samara Mining is a company which was founded in

				February 2018 upon its ability to provide a high-quality service to its clients constantly striving to innovate; be flexible; establish strong working relationship and have respect for the environment and the safety of its employees. Samara's board of directors include DR SMA Dywili (Director, CEO and Main Shareholder) and AWA Du Preez (Director). Samara is not currently mining in the Baken area. Samara was mining in the Barkley West District of the Northern Cape.
Zuna Links - Kuboes		10 Dec 2020 WhatsApp Comment	How can small businesses in the Richtersveld benefit during the whole process?	Samara Mining is planning to create entrepreneurs within the Local communities, to boost small business growth.
Kuboes – Malcolm Balie		10 Dec 2020 WhatsApp Comment	Please provide us with background on Samara Mining Pty Ltd. We want to know their success, how long they exist and if they have had good relations in the past with communities? Where did they mine before / where are they still mining?	Samara Mining (Pty) Ltd, Applicant: Samara Mining was founded in February 2018 upon its ability to provide a high-quality service to its clients constantly striving to innovate; be flexible; establish a strong working relationship and have respect for the environment and the safety of its employees. Samara Mining was mining in the Barkly West District Northern Cape and have a good relationship with the Local Municipality and community.
			There are three categories of labour of which all three are available in the Richtersveld. One (1) category is most common in the Richtersveld and a plan should be made to improve the skills of the local labour to the next category.	Samara has a plan to upskill the local community so that they are employable to fill positions required by Samara Mining. That includes all categories of employment.

Pieter De Wet - Sanddrift		10 December 2020 WhatsApp Comment	Is the one application area in the Richtersveld National Park and the other application downstream?	Yes. Application area 2 is located within the Richtersveld National Park on the Orange River and application area 1 is downstream on the Orange River from Sendelingsdrift to Baken. Please refer to Appendix 3 of the Scoping Report for the prospecting right areas locality maps. (NEC also furnished the maps on the WhatsApp Group)
			Important role players in the area include the agricultural project downstream from the applications and the livestock farmers using the application areas for grazing. Specifically in the summer months, the livestock graze on the grass and riparian vegetation along the Orange River banks and islands.	Thank you for highlighting these role players to Naledzi. Regarding the agricultural project downstream from the applications; The Richtersveld Growers are included on the project I&AP Database (Appendix 5.1) and the EIA Process notifications have been sent to them. The livestock farmers will continue to have access for their Livestock to the Orange River. As the mining method will not affect the normal and day to day flow of the Orange river, neither will it impact on any Agricultural or farming activities taking place around the Orange River. During the EIA Phase Impact Assessment Naledzi will consider the impact of the prospecting activities on the Orange River vegetation. The prospecting activities should not affect the livelihood or daily activities of livestock farmers/grazing area.
Kuboes – Nico Swartbooi	**x**	10 December 2020 WhatsApp Comment	How are these prospecting activities going to affect our environment, namely the trees and grass along the river banks?	As per Samara Mining (Pty) Ltd's prospecting technique, riparian vegetation (trees, grass) within the proposed prospecting pockets, particularly the trench sites, will need to be dozed off to obtain access to the alluvial gravels for bulk sampling. This will result in the damage and loss of riparian vegetation along the Orange River banks in the areas of the trench sites. The Orange River ecosystem is extremely ecologically important and sensitive and the prospecting and bulk sampling activities pose a significant risk to the ecology (plants and animals) of the area. The prospecting and

				bulk sampling will thus be considered in extensive detail and all aspects thereof will need to be exceptionally well planned and executed. Samara is thus still refining the prospecting technique and proposed locations of the trench sites to minimise the potential impact on the Orange River. Specialists still need to conduct detailed on-site investigations to confirm the potential impact on the riparian vegetation and Orange River based on Samara's final prospecting technique and trench locations. The detailed specialist site investigations will be undertaken in the EIA Phase of the process during February to March 2021. A Biodiversity Impact Assessment and Aquatic Ecological Impact Assessment will be undertaken to confirm the potential impact on the Orange River and its associated riparian vegetation. It must however be noted that the prospecting and bulk sampling activities will be a short term activity (3 years) and planning is for full rehabilitation of the bulk-sampling excavations using the same material that was excavated. The rehabilitation will be according to the environmental guidelines and is to be properly filled and compacted to 'fully' restore the beds and banks of the watercourse. Good monitoring and management, good housekeeping on-site during all phases of the project, and diligent attention to details during rehabilitation could result in a successfully restored site.
Kuboes - Willem Cloete	**x**	10 December 2020 WhatsApp Comment	What opportunities will there be for the youth of the communities?	Samara has a plan to upskill the local community so that they are employable to fill positions required by Samara Mining.

Kuboes – Chalwyn Thomas		10 Dec 2020 WhatsApp Comment	Who will do the labour at the mine? Will people from outside Richtersveld be employed or will Samara employ people from the nearby communities?	Samara Mining has a plan to up skill the local communities so that they can fill the labour positions at the mine.
			The directors of Samara Mining (Pty) Ltd must join Naledzi at the public meetings. It is compulsory.	Samara Mining (Pty) Ltd will be represented at the public meetings.
			If Samara Mining (Pty) Ltd is not satisfied with the results of the prospecting and bulk sampling activities and is not interested in the specific area anymore, what will happen then? Will Samara rehabilitate the affected areas or just leave? Because people have come in the past and destroyed our area and made a mess of the environment and left it like that.	If the prospecting and bulk sampling results are not favourable, Samara will not apply for a mining permit/right to open a full scale mine. A mining proposal must make financial sense. Samara will rehabilitate the affected areas. A Closure and Rehabilitation Plan will be prepared as part of the EIA Process and will be included as part of the Environmental Impact Report and Environmental Management Programme for the applications. Samara will be required to rehabilitate the affected areas in accordance to the Rehabilitation Plan. The document is legally binding. Section 41 of the Mineral and Petroleum Resources Development Act (28 of 2002) prescribes financial provision for the remediation of environmental damage. The Rehabilitation Plan will thus include a financial provision for rehabilitation and management of negative impacts. Samara is required to make financial provision for the rehabilitation or management of negative environmental impacts. If Samara/any holder of a prospecting right fails to rehabilitate or manage any negative impact on the environment, or is unable to undertake such rehabilitation or management, the minister may, upon written notice to the holder, use all or part of the financial provision to

				rehabilitate or manage the negative environmental impact in question. The holder must annually assess the environmental liability and increase the financial provision to the satisfaction of the minister.
Willem Links - Kuboes		10 Dec 2020 WhatsApp Comment	Please bear in mind that we must also take into consideration the farmers who farm along the Orange River. Also bear in mind that the local farmers bring their livestock to the Orange River to drink. How will they have access to the water if Samara is mining on the Orange River?	Thank you for highlighting the agricultural land use along the Orange River. According to our records the farmers downstream from the application areas, include the Richtersveld Growers, a partnership between the Richtersveld community and private investors. The agricultural venture is directly downstream from the prospecting right application area (PRAA) 1 and is considered a potentially affected downstream water user. Richtersveld Growers has been pre-identified as an interested and affected party and is currently on our project I&AP Database, receiving all the EIA Process communication. The farmers will continue to have access for their Livestock to the Orange River. As the mining method will not affect the normal and day to day flow of the Orange river, neither will it impact on any Agricultural or farming activities taking place around the Orange River.
Boeta Aroe		10 December 2020 WhatsApp Comment	Can you please elaborate on the proposed prospecting methods?	The prospecting method was provided in Pdf format on the WhatsApp Group to Mr Boeta Aroe. In summary the prospecting method is provided under Section 2 (d) (ii) of the Scoping Report under '***Description of Activity'***.
Boeta Aroe		10 December 2020 WhatsApp Comment	Will the Whatsapp Group platform be used as proof of public engagement process?	No. The 'Naledzi Publieke Deelname' Whatsapp Group platform was merely created to share public engagement notifications and for the communities to raise initial comments. This has assisted Naledzi to gauge the issues that need to be addressed in proposed January 2021 public engagements.
			My concern is if the country goes into a hard lockdown and no public gatherings are allowed,	The Whatsapp communications will not be used as sole proof of public engagements. If public engagements are

			will Naledzi postpone the public engagements or use the Whatsapp communications as proof of the public engagement process.	prohibited in the next few months due the Covid-19 risk in the area, we will be required to follow the directions issued by the Minister of Forestry, Fisheries and Environment in term of the Disaster Management Act (Act 57 of 2002). The directions usually include: • xtension of timeframes by the number of days of the duration of the lockdown period declared for the covid-19 pandemic until the termination of the lockdown period; or • Use of alternative engagement measures such as emails, websites, direct phone calls, virtual meetings (Zoom / Microsoft Teams), newspaper notices, engagement with community representatives, and distribution of notices at places accessible to potential I&APs. The other alternative is to host 1 day open days in each community and present the project information to small groups of community members at a time. However for now, public gatherings are prohibited until 15 January 2021.
Department of Land Affairs				
Commissioner on Restitution on Land Rights – Department of Rural Development and Land Reform	**x**	28 Oct 2020 Official Results	No land claims appear on our database in respect of the properties. This includes the database of claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014.	The Richtersveld Community has confirmed that they do have a mineral and land claim against the TransHex Mineral Lease Area (LOR) in the Land Claims Court. This has been recorded in the finalised Scoping Report under Section 2 c – Locality.
Traditional Leaders (Communal Property Association)				
-				
Department of Environmental Affairs				
National Department of Environment, Forestry	**x**	14 Dec 2020	Our comments are specific to the Protected	The legal implication on PRAA 2 in terms of NEMPAA has

and Fisheries: Protected Areas Planning Contact: Thivhulawi Nethononda		Official written comments	Areas Act and its regulations. Section 48 of NEMPAA states that despite other legislation, no person may conduct commercial prospecting, mining exploration production or related activities in a special nature reserve, national park or nature reserve. With regard to PRAA 2, the draft Scoping Report is not correct to indicate that the prospecting will be on the boundary of the national park while the prospecting will be inside the national park. The Richtersveld National Park was declared on 16 August 1991, a copy of the government gazette was circulated to the EAP. Samara Mining (Pty) Ltd is not allowed to conduct mining activities in the PRAA 2 which is situated inside the national park.	been highlighted under Section 2 e, Policy and Legal Context and in several sections throughout the Scoping Report. We thank the department for furnishing the RNP proclamation. This has been corrected in the finalised Scoping Report. Please refer to Section 2 c (Locality), 2e (Policy and Legislative Context) including Figures 1 and 2 and Appendix 3 which includes shows the location of the application area within the protected area. Naledzi advises in the finalised Scoping Report that according to the NEMA EIA Regulations of 2014 that the application is not permitted to proceed to the EIA Phase if it is in conflict with other legislation. The applicant is convinced that there is room for coexistence of the overlapping applications, hence this submission.
National Department of Environment, Forestry and Fisheries: Transforntier Conservation Areas National Biodiversity Officer control: TCA – Willeen Olivier	**x**	14 Dec 2020 Authorities Meeting	As with the WULA, the same applies to the riverine forest. Samara will need to apply for a permit to DEFF: Forestry Management for any impact on the riverine forest and potential removal thereof along the Orange River.	According to the Biodiversity Scoping Report, several protected tree species, Boscia albitrunca, Vachellia erioloba and Euclea pseudogenes, according to the National Forest Act, 1998 (Act No. 84 of 1998) (NFA) are likely to be located throughout the prospecting focus area and pockets. Samara will apply for a Section 7 (1) (trees in natural forests) and Section 15 (1) (removal of protected trees) NFA permit to DEFF: Forestry Management once the location of prospecting focus areas and associated infrastructure are confirmed.
			Have the Richtersveld communities been consulted? They are the landowners of these application areas. PRAA 2 is located within a protected area. The	The Richtersveld communities are recorded in the finalised Scoping Reports as the informal land rights holders. The Richtersveld community has been informed of the project and will be engaged during January 2021. Samara will engage the Richtersveld communities

			law is clear that mining is prohibited in protected areas. I don't understand why the EIA Process is still carrying on. The application is illegal. The impacts specified in the Draft Scoping Reports are all significantly high. This is a fatal flaw for the applications	separately to seek landowners consent to feed into the EIA Process. The protection status of the PRAA 2 has been highlighted in the relevant Scoping Report and it is advised therein that Section 22b (ii) requires that an application not proceed to the EIA Phase if it is in conflict with other legislation. To this end the EAP has advised Samara. Samara insists that the application proceed based on the positive socio-economic benefits the project will have for the Richtersveld Community. Many young people in the Richtersveld area, many under the age of 20, are without jobs and critically affected by proverty 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. 90% of Samara's labour force will be sourced from the local communities of Koeboes, Sandrift, Lekkersing, Eksteenfontein, and Sendilingsdrift. This will ensure local communities benefit maximally from job opportunities emanating from this prospecting right. The likely impacts specified in the Scoping Reports are desktop based and still subject to in-depth specialist field investigations to be undertaken as part of the EIA Phase. The impact significance ratings have thus been rated on a cautious approach until the prospecting method is refined and locations of prospecting and infrastructure have been determined and can be verified through specialist investigations onsite.

			The application areas belong to the local communities. The consultation process with informal land rights holders is not prescribed by NEMA. It has been set out in two court cases namely Maledo and Others and Baleni and others. These court cases were won by the communities in Rustenburg and Xolobeni (Eastern Cape). Samara needs approval from each community member to prospect in the area. The 12 and 13 January 2021 community meetings are not enough to meet the legal requirements and to get approval from the communities. Samara does not indicate anywhere how these communities are going to be paid rent for the use of their land for mining.	The consultation with community members have been responded to in the above sections. Samara will engage the Richtersveld communities through a separate engagement process to seek landowner consent of which the outcomes will ultimately feed into the EIA Process for submission to DMRE. The EIA Process public engagements to be scheduled for January 2021 will inform the community of the requirement for landowner consent and how Samara intends to approach the community in this regard.
			The international border is a highly contentious issue; you need to involve the Department of International Relations and Cooperation (DIRCO) in this consultation process. You might just create an international incident if you go an inch beyond the international border. The borderline is not clear.	Thank you for highlighting this requirement. DIRCO has been added to the I&AP Database (see Appendix 5.1) and will be consulted during January 2021 to verify the international border between South Africa and Namibia.
			Naledzi needs to engage with ORASECOM. It is a body created by the United Nations to deal with all the trans-border issues around water usage from the Orange River. They need to be involved in this process.	ORASECOM is currently on the I&AP Databaase for the project (see Appendix 5.1). The EIA Process notifications and scheduled virtual meeting notices have been sent to the ORASECOM Secretariat. No response has been received and Naledzi will engage ORASECOM in January 2021.
			PRAA 2 is illegal and will not succeed. The northern part of PRAA 1 needs to be cut out of the PRAA 1 application area because it too falls within the Richtersveld National Park and it is illegal.	The legal implication on both application areas have been highlighted and recorded in the relevant Scoping Reports for the attention of the DMRE. Legislation requires the exclusion of these areas. Samara insists that the applications proceed as applied based on the positive socio-economic benefits held therein for the Richtersveld Communities.

			The Ais Ais Trans-Frontier Conservation Area (TFCA) was set up based on an international treaty signed by Thabo Mbeki and certain implications need to be considered. The TFCA and its international partners need to be consulted through the structures that the treaty has set up. You can read the treaty. Certain processes need to be followed and Naledzi has not followed one of the processes in terms of decent consultation. There is still a lot of work to be done.	The members of the TFCA consulted during January 2021 and the relevant engagement requirements will be followed.
			This is a NEMA application and the DMRE has access to the DEA Screening tool. How this application (PRAA 2) got accepted without the DMRE using this tool, I have no idea. This application should never have been accepted.	The relevant DEA Screening Reports are attached as Appendix 6 to the final Scoping Reports. The legal implications relevant ot the application are highlighted the final Scoping Reports submitted to the DMRE for approval. DMRE will then need to reach a decision on the applications based on the information contained in the respective reports.
Northern Cape Department of Environment and Nature Conservation: Springbok Namakwa Environmental Officer – Aviwe Nyakaza	**x**	12 Dec 2020 Official written comments	The following is to be made part of the full Biodiversity Impact Assessment during the EIA Phase: • Proper faunal and floral species list must be compiled as all indigenous species are protected under the Northern Cape Nature Conservation Act 9 of 2009. Flora and fauna classification must also include status according to applicable legislation. • No indigenous faunal species may be removed from the site without the necessary permits from DENC. This includes the removal of bird nests, especially raptor sites, and no animals	The DENC requirements will be included in the full Biodiversity Impact Assessment and the outcomes will be made available with the draft EIR and EMPR reports for the respective applications. The requirement to obtain permits for the DENC and DEFF to remove faunal species and indigenous vegetation included protected trees have been recorded and addressed under Section 2 e 'Policy and Legislative Context' under item E16 of the Final Scoping Report. **General:** ▪ Stringent erosion control measures will be recommended in the EIR and EMPR reports for the applications. ▪

			(including snakes) may be hunted (poached), trapped, injured or removed in any way without the necessary permits. • ermits must be obtained from DENC for any indigenous vegetation which is protected under the NCNCA, or the DEFF for protected tree species under the NFA. General: • Stringent erosion control practices must be developed and implemented and all areas susceptible to erosion must be protected. • The mine and all its operations must be informed by the environmental sensitivity mapping in conjuction with conservation and planning tools. • A map must be provided which superimposes the mining activities and its associated structures and infrastructure in relation to the identified environmental sensitivities and indicate any areas that should be avoided and proposed buffer zones in relation to mitigation measures. The map must also be able to determine mitigation with regards to conservation areas that overlap with the mine. •	A site plan showing the prospecting focus areas and confirmed processing infrastructure, superimposed on the environmental sensitivity of the application areas will be included in the Draft EIR & EMPR reports for the application areas. The required no-go areas and bufferzones will include on the composite map. The mitigation proposed by the EAP for mining overlapping with conservation areas would ultimately require the exclusion of the protected areas from the overall application process. Samara however insists that the applications continue without any exclusion. ▪ The diesel volume to be stored onsite will be confirmed in the draft EIR and EMPR reports, since these details are not presently available.

			The triggered listed activities specified in Table 2 of the Scoping Report (for both PRAA 1 and PRAA 2. Reference is made to Activity 14 (GNR 327) – diesel storage facility capacity has not been confirmed. A clear confirmation of combined capacity of the storage facility needs to be made.	
Northern Cape Department of Environment and Nature Conservation: Springbok Scientific Services - Namakwa Environmental Officer Peter Cloete	**x**	**14 Dec 2020 Authorities Meeting**	What is the area zoned for in terms of SPLUMA?	The Richtersveld Local Municipality currently does not have a valid Spatial Development Framework. PRAA 2 falls within the RNP which has an approved management and zoning plan. The prospecting focus area is earmarked as 'primitive' and 'low intensity leisure'. Primative areas are conservation-oriented to protect the sensitive environmental from development impacts. Low-intensity leisure is tourism-oriented to provide infrastructure for day and overnight visitors in a natural environment. It is anticipated that PRAA 2 will be earmarked as 'Protected area' and PRAA 1 as a 'bufferzone / expansion area'. The prospecting right areas, acoording to the Northern Cape Province Spatial Development Framework (NCSDF, 2012), are located within the Gariep Centre (GC) of plant endemism which encompasses the Richtersveld and extends northwards into Nambia's Spergebied and supports 355 endemic plant species. The prospecting activities do not fall within a specific development corridor se out for the Northern Cape Province.
			The area is located within a CBA 1, which is the highest level of protection. The Lower Gariep Alluvial vegetation which is critically	CBA1 must be conserved since these areas are irreplaceable, remediation through biodiversity offsets may not be feasible. It is therefore critical that vegetation

			endangered. The Orange River is classified as an NFEPA. Considering all these aspects and after all the mitigation measures have been exhausted, a biodiversity offset must be considered in the planning phase.	dozed off site and plant species are rescued and kept in a nursery to be reinstated on the disturbed areas.
			What type of agricultural activities is Samara planning to include in the SDP?	Samara does not want to pre-empt the community and will obtain a directive through the upcoming public engagements in January 2021. They intend to solicit inputs from the community first to determine their interest and align them with the emerging agricultural development plan.
			Did you consult the DEA Screening tool before you applied? Because in the screening tool it would have highlighted all the sensitive areas.	The application was lodged prior to Naledzi's appointment. The DEA Environmental Screening Report is submitted to the DMRE with the finalised Scoping Reports. Please note that the DMRE also has access to the DEA Screening Tool for verification of application areas in relation to protected areas, legal implications and sensitivity.
Other Competent Authorities				
Namibia: Ministry of Agriculture, Water and Rural Development	**x**			Notification emails and invitations to the virtual meetings were sent to the other competent authorities. These authorities have not participated as yet. Naledzi will engage these authorities during January 2021 either telephonically, again via email or through a virtual meeting.
Namibia: Ministry of Environment & Tourism	**x**			
Namibia: Ministry of Mines and Energy	**x**			
National Heritage Council of Namibia	**x**			
Other Affected Parties				
Om Dis Town Transformation Agency (Oranjemund, Namibia) Sustainability Manager – Ronel van der Merwe	**x**	17 Nov 2020 Email	Please register me as an I&AP.	
SAPS Alexander Bay Col. D. Links	**x**			
SAPS Port Nolloth Col. Moyo	**x**			

SAPS Vioolsdrift Col. Van der Westhuizen	**x**			

iv. Environmental Attributes associated with the sites

1) Baseline Environment

a) Type of environment affected by the proposed activity

(Current geographical, physical, biophysical, socio-economic, and cultural character)

Section 21 (3) and Appendix 2 of the NEMA EIA Regulations of 2014 (GNR 326) requires a description of the environment that may be affected by the activity and the manner in which the activity may affect the environment should be considered. The receiving environment consists of different components such as the biophysical, social, economic, heritage and cultural aspects.

A DEA Screening Report has been generated to determine the environmental sensitive themes relevant to the application area (attached under **Appendix 6**). Based on the national web-based environmental screening tool, the application area has a legal implication and highlights very high themes for biodiversity, archaeology and cultural heritage and aquatic ecology; and a medium sensitivity for plant species and Palaeontological features; and then low sensitivity in terms of agriculture and animal species. The report requires the following specialist studies to form of the EIA Process based on the site sensitivity:

- Visual Impact Assessment
- Archaeological and Heritage Impact Assessment
- Palaeontological Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment
- Hydrological Impact Assessment
- Plant and Animal Species Assessments
- Socio-Economic Impact Assessment

Specialist investigations have been commissioned for all of the above-required assessments excluding a Socio-Economic Impact Assessment since the application is at prospecting stage and this study can be commissioned once Samara applies for a mining permit and /or mining right. Specialists have produced Scoping Reports and the requirements for their full impact assessments have been included as part of the Plan of Study for EIA.

The desktop specialist scoping reports have been included under **Appendix 6,** inclusive of Specialist Declarations.

Therefore the data pertaining to the receiving environment and its social surroundings have been sourced through preliminary specialist inputs, desktop analysis and use of tools such as Geographic Information Systems, DEA Screening Tool including reference to previously completed EIA Reports for current mining operation where available.

Kindly note that the attached DEA Screening Report is relevant to PRAA 2 and the Specialist Scoping Reports address both Samara application areas, namely PRAA 1 and PRAA 2. The application areas are end-to-end, and the affected environment of both includes the Orange River, which is basically similar throughout.

1.1 Climate

The PRAA 2 is located in the Arid West Coast Climatic Region and Winter Rainfall Season (May to September) of South Africa. The regional climatic regime is classified as Arid, Desert, Hot arid, according to the Köppen-Geiger Classification System (Conradie, 2012). (Source: https://en.climate-data.org/africa/south-africa/northern-cape-470/). Climate data specific to the prospecting focus area has been retrieved from the SANPARKS owned Sendelingsdrif weather station (co-ordinates: -28.12982; 16.89239. **Figure 8**). The data recorded is for the period 2013 – 2020 (8 year period) and was recorded on a daily basis.

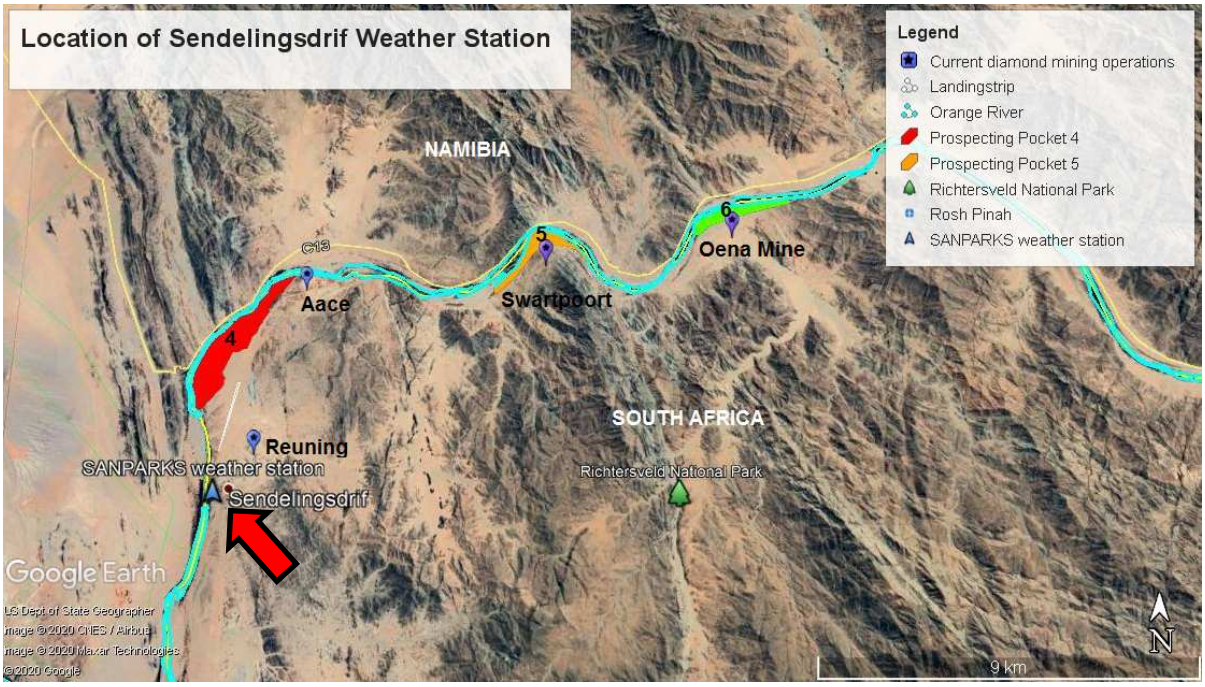


Figure 8: Map illustrating the location of Sendelingsdrif weather station (arrow) in relation to the prospecting pockets 4, 5 and 6.

The Sendelingsdrif station data has also been compared with data provided in attached specialist investigations, Oena Diamond Mine draft EIA Report (*Site Plan Consulting, 2018*) and the Richtersveld National Park (RNP) Management Plan.

The climate of the lower Orange River is mainly characterised by very low rainfall (<50mm/year), occasional penetration of coastal fog this far inland, frost-free winters, strong southwesterly winds; and very high temperatures and uncomfortable summers. (*Site Plan Consulting, 2018*)

Mean Annual Precipitation (MAP)

The prospecting focus area exhibits a very low average MAP of 19.84mm from 2013 to 2020. The months with the highest average rainfall are March (5.9mm), April (2.7mm) and August (3.22mm). The highest rainfall event recorded during the period was in March 2016 (23.88mm). See Table 3 for the average monthly rainfall over the period 2013 – 2020, including annual averages.

Data retrieved for year 2014 is unusually high for the Richtersveld and is considered incorrect and has been excluded from the average MAP calculations.

Table 3: MAP data for period 2013 -2020 (SANPARKS Sendelingsdrif weather station)

Climate Data analysis of the SANPARKS Sendelingsdrif Weather Station for Period 2013 - 2020													Annual Average Rainfall (mm)
Period	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	
2013	0	0	15.1	3.6	0	4.9	0	15.7	6.8	0	0.1	0.3	**46.5**
2014	3.7	0	19.79*	432.9*	55.97*	40.59*	39.73*	46.73*	51.1*	70.32*	71.9 *	71.16 *	-
2015	0.4	0.4	0.3	0.1	0	3.7	1.5	0.25	0	0.4	2.4	2.3	**11.75**
2016	0	0	23.88	1.9	2.1	1.7	0.3	0.7	1.6	0.1	0.4	0	**32.68**
2017	7.9	0	0.8	2.7	0	3.7	0.5	0.8	0.3	1.7	1.9	0	**20.3**
2018	0	0.4	1	0.3	0.9	1.4	0	3.4	0.2	0.2	0	3	**10.8**
2019	0	0.9	0	0	0.3	2.7	1.2	0	0.4	0.3	0	0	**5.8**
2020	0.7	0	0.2	10.5	0.2	3.1	4.5	1.7	0.2	1.4	F*	F*	**11.1**
Ave	**1.6**	**0.2**	**5.9**	**2.7**	**0.5**	**3**	**1.14**	**3.22**	**1.35**	**0.58**	**0.8**	**0.93**	**19.84**

**F refers to future months – data still to be recorded*

** Data inaccurate*

Comparative data shows a MAP of 35mm (*AGES, Geo-and Hydrological Report, 2020*) and 40.5mm/year (*Oena Mine 2018 draft EIA Report, Site Plan Consulting*). The 40.5mm MAP was recorded for Vioolsdrift for the period 1993 – 2000. Similar annual averages were recorded at Sendelingsdrif in the year 2013 and 2016.

Even though precipitation is generally of low intensity, the relatively cohesionless sandy topsoil at the site is prone to scouring by concentrated runoff, especially in areas exhibiting steep topography (Figure 8).

Temperature

The minimum and maximum temperatures recorded daily at Sendelingsdrift and the mean minimum and maximum temperatures for the past nine years (2008 - 2016) were 14 °C and 29 °C respectively. Temperatures easily rise above 50 °C in the summer months and plunge to freezing point on winter nights. The mean maximum temperature rapidly declines from April to June, followed by a gradual increase to a maximum in February. (*RNP draft-plan*).

Wind

The Richtersveld is characterised by relatively high wind speeds, overall ranging from an average of 7km.hr-1 in January to 4km.hr-1 in June (Hendricks et al., 2004). (*RNP draft plan*)

The Sendelingsdrif data reveals the prevailing wind direction as south, south-westerly with infrequent easterly winds. An average wind speed of 8.1m/per second (2019) and 7.9m/per second (2020) was recorded at the station.

Comparative data for Vioolsdrift shows dominance of >30% in the S, SSW and SW sectors in summer with southerly wind speeds also generally >5m/s and an easterly wind domination in the winter months of March – September (*Oena Mine 2018 draft EIA Report, Site Plan Consulting*).

The sandy topsoil throughout the prospecting focus area is highly susceptible to wind erosion. (*AGES, 2020) and topsoil in the study area is scarce. Loss of topsoil due to erosion can deter successful rehabilitation of disturbed areas.*

Evaporation

The mean annual evaporation recorded at Sendelingsdrif ranges between 1650mm – 1700mm for the period 2013 – 2019, with the highest annual evaporation rate recorded in 2013 (2010.05mm). (*Sendelingsdrif Weather Station, Daily Monitoring Data*)

Comparative data shows an APAN of >2600mm (*AGES, Geo-and Hydrological Report, 2020*) and 3576mm/year (*Oena Mine 2018 draft EIA Report, Site Plan Consulting*). The 3576mm APAN was recorded for Okiep and Keetmanshoop statistics over four years.

Extreme weather incidents

- The RNP management plan stated that temperatures easily rise to 50°C in summer;
- The warmer easterly winds (usually in August) dry out the veld and destroy annual plants, crucial fodder for livestock;
- The Richtersveld experiences relatively high wind speeds and cause sand storms on a regular basis.

Future Climate based on climate change

Dramatic temperature changes have been observed in the Richtersveld with significant increases in temperatures of 1.1 to 1.2 °C in just 20 years at the Henkries weather station (*RNP draft-plan).* This has resulted in a sharp increase in the number of very hot days in summer. Changes in rainfall are less obvious; rainfall events appear to decrease slightly over time. Smaller rainfall events will evaporate quickly, and the area will become even drier. It is expected that the Richtersveld area would become more desert-like with much less of the Succulent Karoo characteristics that are currently present.

The above precipitation, temperature, and evaporation, including extreme weather conditions, point to much drier conditions which could pose a risk to successful rehabilitation and re-establishment of riparian vegetation removed from the River embankment and channel. Vegetation (endemic to the area) removed from the focus area will need to be kept in a nursery to be restored as part of the rehabilitation efforts. Small operations in a phased manner with quick concurrent rehabilitation efforts will need to be undertaken.

1.2 Topography

The prospecting focus area is located on the Orange River's flood plain, in the broad and very gently sloping Orange River valley. The river cuts through numerous prominent rocky ridges separated by smaller narrow valleys and lowlands (**Figure 10**).

Bulk samples will be abstracted by excavating trenches at deep alluvial gravel pockets situated below the 1: 100-year flood line of the river. Small re-alignment of the river will be constructed to gain access to the alluvial material for excavation. The bulk sampling activities will be short term and will be rehabilitated.

The 1: 100-year flood line is generally located near or at the meso terrace gravel deposits interface. The Orange River channel has an existing river channel and a side channel that carries overflow water during peak flow (**Figure 9**). Given the damming of the Orange, Vaal & Malibamatso Rivers upstream, the normal flood flow of the Orange River has been altered to such an extent that normal flood flows do not occur (only occasional flooding when the Fish River system floods). (*Oena Mine draft EIR, Site Planning, 2018*).

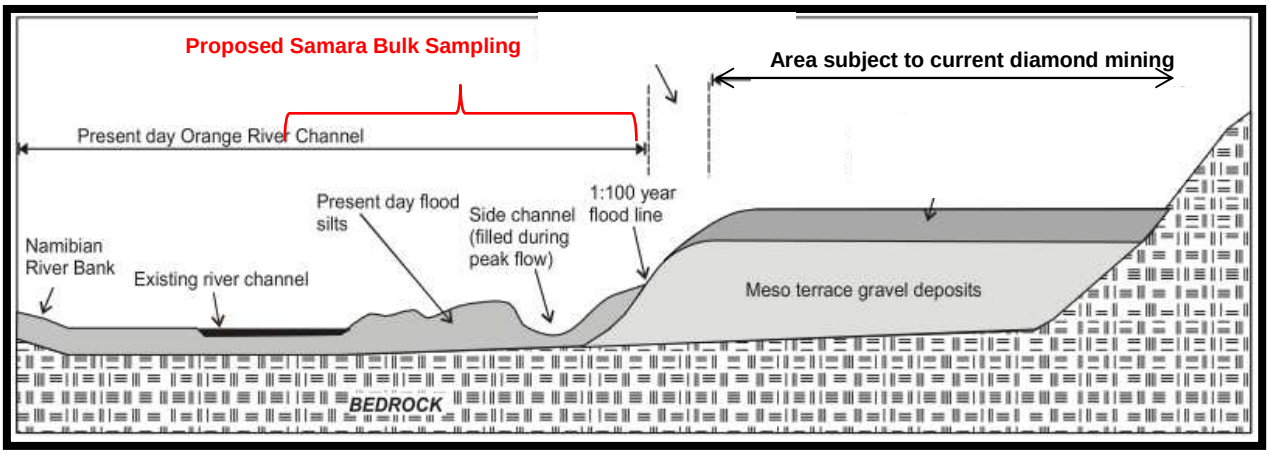


Figure 9: Illustration of the Orange River valley floor topography and location of the proposed prospecting and bulk sampling pockets *(image courtesy of Oena Mine / Site Planning, 2018*)

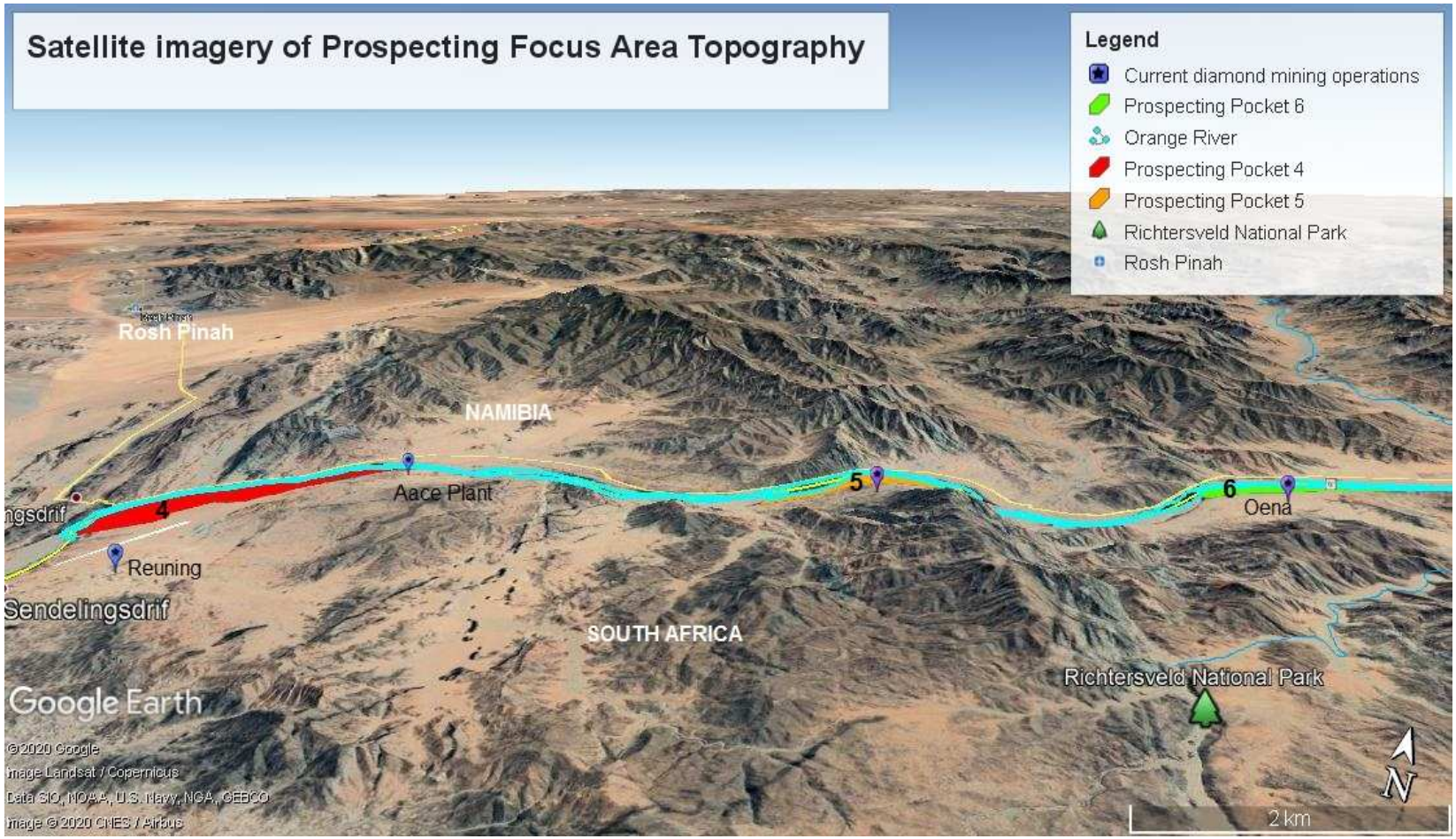


Figure 10: Satellite imagery illustrating the topography of the prospecting focus area (pockets 4, 5 and 6 = PRAA2) and regional area

1.3 Geology

1.3.1 Regional Geology

The lower Orange River basement geology is dominated by rocks of the Richtersveld supergroup. These rocks formed during the middle to late Proterozoic age (2 Ma to 5 Ma). Over time a rocky mountain landscape has formed, forcing the Orange River to pierce through the mountains changing directions (meandering), losing energy and depositing minerals. Alluvial diamonds in the study area are a result of transportation of eroded diamonds from kimberlitic sources.

Existing diamond mining operations are taking place in the regional area and in the RNP in line with section 48 of NEMPAA. The existing mining operations include Lower Orange River Diamonds and African Minerals (Oena Mine).

1.3.2 Local Geology

Bedrock consists mostly of grey gneissic granite and mafic lava (a product of the granitisation) of the middle to late Proterozoic age (1300-590 million years). The bedrock was deeply eroded by the Orange River some 65-140 million years ago to create the highly irregular bedrock surface conducive to the establishment of the trapsites as discussed below. The diamond bearing alluvial gravels of the Lower Orange River (LOR) were deposited in two suites. (R.J. Jacobs et al, 1999):

- The older (19-17million years ago- Miocene age) higher-lying proto-Orange terrace deposits form the Arriesdrift Gravel Formation.
- The lower and younger meso gravel terraces have not been aged but are assumed to have been deposited not much earlier than 3-5million years ago - these gravels are for the most part the targets of the future mining at Oena. These lower terraces have lower quality diamonds but the diamonds are generally larger.

Because of the impact on the mining method, the highest concentration of diamonds is located in the lowest basal levels of the gravels (interface of the gravel and bedrock). This requires that all gravels be removed to ensure all diamonds are recovered. The upper more mobile layers of the gravels may also contain diamonds but in much lower concentrations.

At Oena Mine, the on-site geology consists of the following deposits, as shown in the cross-section in Figure 11. The older (richer) proto-terraces were deposited at higher altitudes than the meso gravels (Donald, 2018).

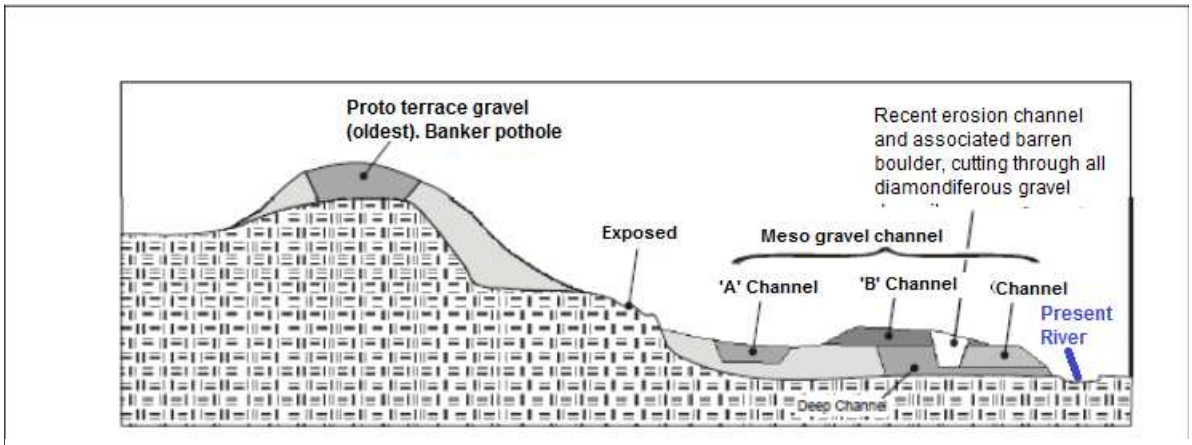


Figure 11: Geological cross section of the proposed prospecting area (map abstracted from Samara PWP and courtesy of Oena Diamond Mine)

1.4 Soils

The prospecting focus area (pockets 4, 5 and 6) corresponds to three soil forms namely;

- **Dundee**
  - Location: Bulk sampling will take place in the flood-plain of the Orange River of which the dominant soil form is Dundee.
  - Dundee soil form usually shows stratified alluvial deposits built as a result of flooding events.
  - Description: Dundee soil consists of an Orthic A horizon over a Stratified Alluvial Horizon.
  - Soil texture: A – Sandy, G – Sandy loam
  - Depth (mm): A – 0 -300 , B - >300
- **Diamond bearing alluvial gravels (gravel channel and deep alluvial pockets)**
  - Location: Occur in deep alluvial pockets within the Orange River flood plain below the alluvial terrace gravels currently mined by Oena.
  - The gravels are formed by deposition of the river loads;
  - Description: Gravels contain a coarse pebble/ gravel fraction of 70 – 90% and clay content of 6-15%.
  - Soil texture: A – Sandy
  - Depth: Alluvial gravel pockets within the river may vary between 0-2m in depth
- **Mispah**
  - Location: Prospecting Pockets 5 and 6 border the low hills (Western Gariep Hills Desert) along the Orange River which is dominated by Mispah soils.
  - Description: The Mispah soil consists of an Orthic A Horizon over hard rock. The soils are very shallow (less than 400mm) in depth and are non-arable.
  - Soil texture: A – Sandy loam;
  - Depth (mm): A - 0 - 300

The sandy topsoil is prone to scouring by concentrated runoff, especially in areas exhibiting steep topography. The sandy topsoil throughout the area is highly susceptible to wind erosion.

Pockets 4, 5 are located within the LOR Mining Right Area and pocket 6 next to (or within) the Oena Mine lease area. Topsoil within the mining lease areas are scarce. The Orange River has scoured away most of the topsoil in the broad valley to leave either the exposed meso-gravel deflation terraces or the deposited silts of recent flood periods. (*Site Planning, 2018 Oena Draft EIR Report*).

The creation and utilisation of temporary tracks to the prospecting pocks, especially when activities move from one prospecting pocket to the next may lead to soil compaction and altered runoff patterns. Vegetation clearing for bulk sampling and prospecting activities will result in the exposure of soils, leading to increased runoff and erosion, resulting in erosion of the river embankment.

The decommissioning and rehabilitation of the trenched areas within the Orange River may potentially lead to soil contamination from hydrocarbons.

Removal of topsoil to stockpile will be essential before any site infrastructure areas are disturbed to ensure that topsoil is conserved for rehabilitation works. Importantly, bulk sampling activities would need to be implemented in a phased manner (keep affected areas small) followed by concurrent rehabilitation.

1.5 Surface and Groundwater

The DEA national web-based screening tool shows that the application area corresponds to an area with a very high aquatic ecology theme and requires a Hydrological Impact Assessment to form part of the EIA Study. Accordingly, the description that follows below has been abstracted from the AGES Pty Ltd Hydrological and Hydrogeological Scoping Report (**Appendix 6**) completed for the application area. The data provided below is a summary of the information contained in the AGES Scoping Report. Please refer to the Hydrological and Hydrogeological Scoping Report for detailed figures, maps and information.

1.5.1 Surface Water Features

The PRAA 2 and prospecting pockets 4, 5 and 6 are located on the left bank of the lower Orange River, 60km upstream from the Orange River Estuary (declared Ramsar site). The Orange River is South Africa's largest river flowing westwards from Lesotho to Alexander Bay where it flows into the Atlantic Ocean, west of the study site. (**Figure 12**).

The river enters the study site in the east at an elevation of approximately 36 mamsl, dropping to 18 mamsl over a direct distance of approximately 46km. As a result, the river is characterised by low surface flow velocities, and deposition of sediments as a result of a very gentle slope (<0.5°). The active channel of the Orange River is 30 – 40m wide; however, the riverbed is approximately 300 – 400m wide.

The palaeo-channels in the study area have been cut off from the present Orange River Valley. Changes in the direction of the river over the years has resulted in the remnants in the study area due to river meandering. The deposition of heavy minerals happened where the river lost energy due to change in direction that was caused by obstructions, junctions of cross-channel, rising bedrock etc. Deposits of alluvial diamonds are limited to remnant paleo-channels systems that formed later.

The prospecting focus area falls with the quaternary catchments D82 J (Pocket 5, 6, portion of 4) and D82K (remaining portion of pocket 4).

Diamond mining operations (Oena, LoR Diamonds) honour the 1:100 year flood line of the Orange River with activities below the flood line limited to pumps. The current diamond mining operations along the Orange River are responsible for ensuring the river bank stability.

Samara proposes to undertake the bulk sampling and processing activities below the 1: 100-year flood line of the Orange River. Ten (10) trenches will be excavated from the Orange River active channel, bed, banks and various terraces along the river from prospecting pockets 4, 5 and 6 (**Figure 12, 13**). There will be no processing in the riverbed only on the river active channel embankment or 50m from it. Only machinery and associated pumps will be located within the riverbed. During concurrent rehabilitation, tailings and overburden from the processing plant will be backfilled into excavations also within the regulated zone of the Orange River. No slimes dam will be constructed as part of the prospecting and bulk sampling infrastructure.

GN704 places a restriction on the placement of mine infrastructure and pollution control above the 1: 50 and 1: 100-year flood zones or within a horizontal distance of 100m of any watercourse or estuary, borehole or well. With excavation, bulk-sampling and processing activities within the 1: 100-year flood line, an application for the relaxation of the conditions imposed by GN 704 will be required to the DWS: Orange-Proto as part of a Water Use License Application for the project.

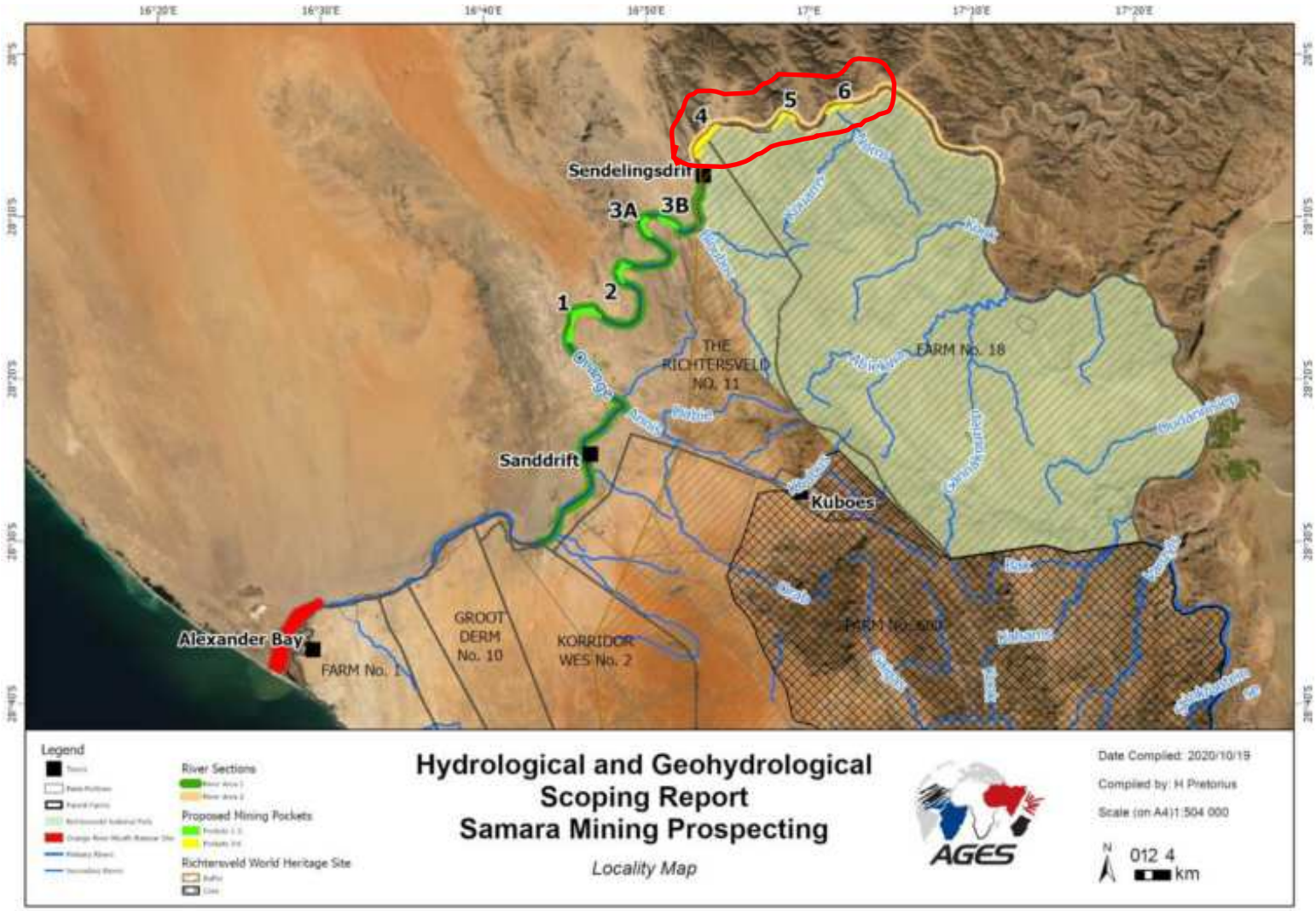


Figure 12: Location of Prospecting Pockets 4, 5 and 6 (PRAA 2) along the lower Orange River.

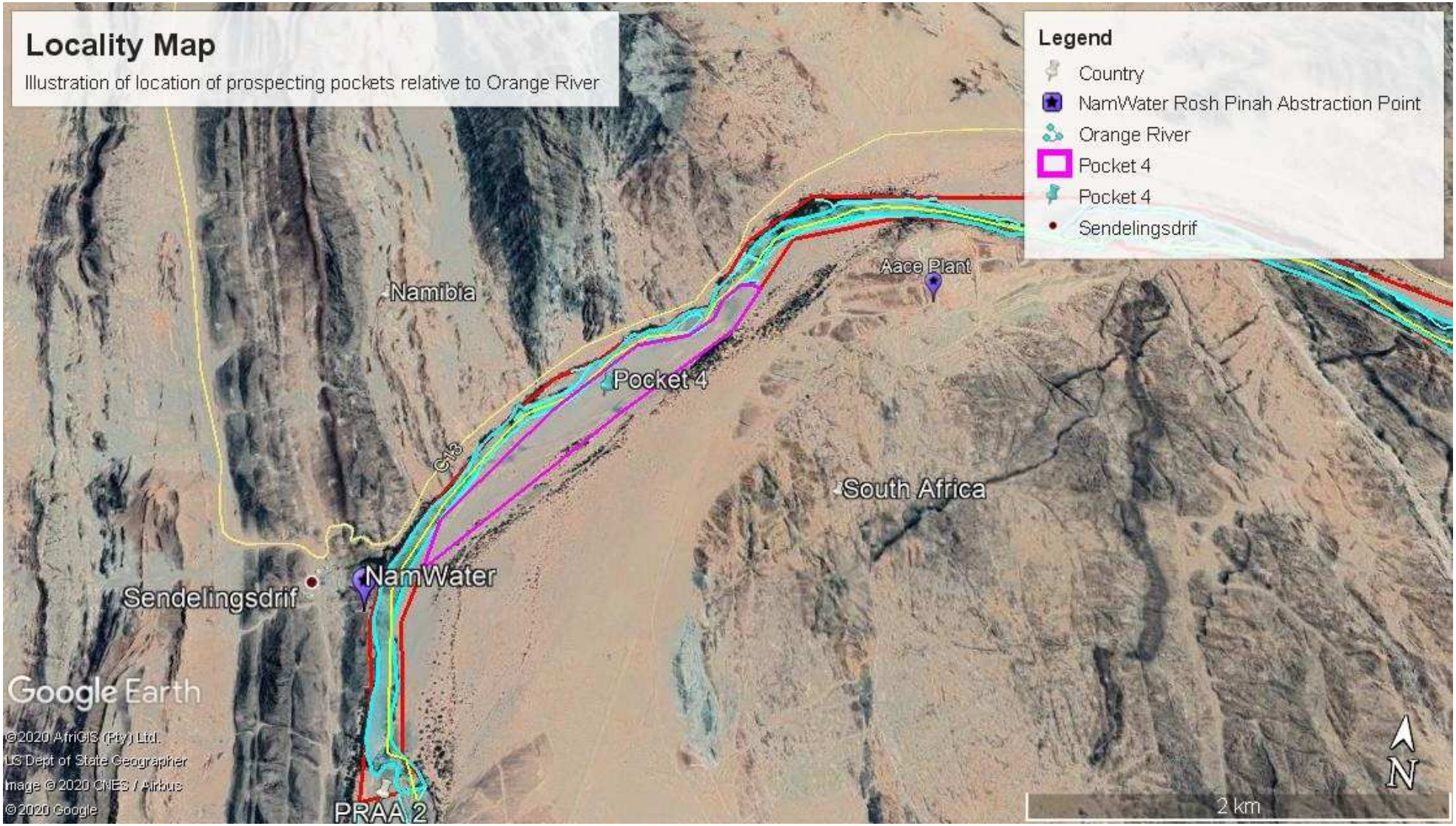


Figure 13: Locality Map illustrating the position of proposed prospecting pockets relative to the Orange River. This particular map illustrates the position of proposed prospecting pocket 4 just north of Sendelingsdrif within PRAA 2.

1.5.1.1 Mean Annual Precipitation

The area receives a MAP of 35mm (March, April, extending through winter season) with a APAN in excess of 2600mm. Rainfall is expected to follow an eight (8) year cycle, ranging from 0 – 78mm/year.

Even though precipitation is generally of low intensity; the relatively cohesionless sandy topsoil is prone to scouring by concentrated runoff especially in areas exhibiting steep topography and poses an increased risk of erosion and sedimentation load into the river. The sandy topsoil throughout the area is highly susceptible to wind erosion. Conservation of topsoil will be essential, and topsoil stockpiles will need to be protected from erosion to ensure availability for rehabilitation efforts.

1.5.1.2 Surface water use

There are several gauging weirs within the Orange River being a shared resource between Namibia and South Africa. South Africa has an international obligation to allow a certain amount of water to pass for Namibian users. It is therefore essential that measurements of the water are vital to know that SA is fulfilling those obligations.

In the Lower Orange WMA, irrigation is the dominant water use and comprises 94% of the total water requirement compared to 3%, 2% and 1% thereof, respectively, for urban, rural and mining purposes. Nearly all irrigation developments are dependent on water from the river. More than 35 000 ha of land are cultivated between Boegoeberg and Onseepkans, with grapes (60%) and cotton (ca. 20%) constituting the main crops. Other crops include lucerne (8.2%), wheat (7.9%) and maize (3.5%). Most of the irrigation water is applied to high-value orchard type crops of which yield and quality may be negatively affected by water deficits or excessive salinity. The irrigation water is therefore needed with a relatively high assurance of supply and should be of acceptable quality. The upper Orange River serves as a domestic water source and is experiencing increasing demand.

Mining is the dominant economic activity within the Richtersveld Local Municipality. Many of the disadvantaged communities are employed within the mining industry and rely on income from the industry. The scaling down of mines and the subsequent decline in the contribution of the mining sector is threatening the employment opportunities for these communities. The dominant water uses downstream from the prospecting focus area includes urban, rural, mining (Sanddrift, LOR, AlexKor) and irrigation (Richtersveld Growers). The current water rights for Farm no. 11 and Farm No. 18 belongs to the Richtersveld CPA. Significantly, the NamWater Rosh Pinah water abstraction point is downstream from the prospecting focus areas for PRAA 2, at Sendelingsdrift (**Figure 13**).

Water for the prospecting and bulk sampling operation will be abstracted from the Orange River. The 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 pumping it into municipal reservoirs (to be confirmed). If the water is leased back into the river, it is understood that the net loss to the Orange River will be zero.

The water diversion and impedance to limit ingress of water to the excavations would result in reduced river flow volumes. The prospecting and bulks sampling activities will result in sedimentation into the Orange River, which will impact the functioning of the Orange River gauging weirs and affect their accuracy. Sedimentation and erosion control will be vital at the proposed prospecting focus area. DWS is proposing that the applicant use sandbag barriers for temporary diversions and remove it when prospecting is concluded.

A Water Use License Application will be submitted to the DWS: Orange-Proto for the abstraction from and subsequent release of clarified water into the Orange River (refer to section 1.5.1.6)

1.5.1.3 Normal Flow Rate

The normal flow rate of the Orange River is recorded as 53m^3/second at time of the Hattingh report of (2001) 1: 100-year flood line determination. Subsequent to such determination, further dams have been built on the Orange River and the fish river, reverse pumping on the Vaal River has been reduced and extensive irrigation pumping downstream of Prieska is now occurring with very noticeable low flow this past year at the Rosh Pina cause-way. (*Site Planning, 2020, LoR-D draft Scoping*).

Small temporary diversions of the river will be constructed around the excavations. 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 the new channel and include a cast bunt wall in river to direct flow through the new channel. The process would include the diversion, abstraction and filtration of sediment-laden river water from the excavations, and the release of clarified water back to the river channel downstream of the workings as per section 1.5.1.2.

The water diversion and impedance to limit ingress of water to the excavations would result in reduced river flow volumes. The diversion and impedance of the river is a Section 21 water use under the NWA and requires authorisation from DWS (see Section 1.5.1.6). 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.

1.5.1.4 Surface Water Quality

It is recorded that the Orange River carries a 60,4x10 ° ton silt load annually into the sea. The Orange River Estuary (declared Ramsar site) is located only 60km downstream from the prospecting site. The estuary cannot tolerate unnecessary siltation or chemical contamination of the river. (*Site Planning, 2020).*

Stockpiling of topsoil, excavations of alluvial material from the bed, banks, and various terraces along the Orange River, rehabilitation of bulk-sample excavations and processing the bulk sample all the potential to result in increased sediment load into the river during rainfall events (elevated TSS). The operation of the rotary processing plant may cause surface water pollution (including petrochemicals). According to the Samara Rotary Pan Plant design, all the conveyor belts will have underpans to collect any soil spills or grease and will drain into a tray beyond the plant. From plant has been designed to have zero spillage. A filter system has been put in place to replace the need for a slimes dam.

The abstraction and filtration of sediment-laden water from excavations to be used in the plant with release of filtered /clarified water back into the river channel downstream of the workings may change the water quality (decreased TSS).

GN704 (GG 20119) (June, 1999) restricts the use of pollutants near streams.

No Dense Media Separation (DMS) technology will be used as part of the proposed Rotary Pan Process Plant since it requires chemicals to separate heavy from light material in the processing plant and can pose a potential pollution risk to the Orange River.

Other sources of potential contamination at the proposed prospecting and bulk sampling activities include:

- Petro-chemicals – particularly from heavy machinery
- Increased sediment loads (TSS) due to the mining process and disturbance of the alluvium in and along the riverbanks
- Possible e-coli contamination from on-site sanitation

1.5.1.5 Acid Generating Capacity

The project area is not dominated by rocks containing sulphides, which have an influence on acid-generating capacity. The acid-generating capacity of the local geology is low.

1.5.1.6 Applicable Regulated water use in terms of the National Water Act

The project triggers the following Section 21 water uses and a WULA will be lodged with the Department of Water & Sanitation: Orange-Proto Catchment Management Agency:

- Section 21a – Abstracting water from the Orange River;
- Section 21c – The temporary diversion of the watercourse during bulk sampling. Natural flow may also be impeded depending on the methodology employed;
- Section 21f – The clarified water from the filtration process at the prospecting works will be released to the river resource;
- Section 21g – Topsoil/ overburden stockpile, Diamondiferous material stockpile from bulk sampling excavation, Diamond depleted stockpile (waste material) from process plant and temporary onsite disposal of waste, including Petro-carbons;
- Section 21 i:
    - Temporary altering the course of the watercourse
    - The bulk sampling excavation in the 1:100-year flood line (both bed and banks)
    - The rehabilitation of the bed and banks after excavation
    - The release of clarified water (with a lower TSS) into the watercourse downstream of the workings

With excavation, bulk-sampling and processing activities within the 1: 100-year flood line, an application for the relaxation of the conditions imposed by GN 704 restriction on the placement of mine infrastructure and pollution control above the 1: 50 and 1: 100-year flood zones or within a horizontal distance of 100m of any watercourse or estuary will be required to the DWS: Orange-Proto as part of a Water Use License Application for the project.

A WULA Procedure will be followed in terms of the WULA and Appeals Regulations of 2017 (GNR 267).

DWS: Orange – Proto and DWS National have been consulted in the Scoping Phase of the EIA Study and will be consulted during pre-application meeting before starting with the formal WULA, submission of the required 'Water Use Technical Reports' including a site visit and liaison during the assessment of the Licence Application

1.5.2 Groundwater

The prospecting focus area is characterised by a fractured and weathered aquifer. The water table is between 30 – 39mbgl. The underlying aquifer is regarded as intergranular and fractured aquifer, with typical borehole yields (0.0 – 0.1l/s). The aquifer has zero contribution to baseflow, with zero average groundwater resource potential (GRA, 2012). According to the Vegter Harvest Potential, the area is characterised by a resource potential of 500m^3/km^2/annum, with an annual groundwater recharge of 0-1mm.

The aquifers have low hydraulic conductivity ($1x10^1$ – $1x\ 10^{-5}$ and 1×10^1 – 1×10^{-1}), and the prospecting area has low groundwater vulnerability.

The baseline groundwater quality is not known at this stage and would be an important baseline for assessing contamination of the groundwater resource.

Due to the reliance on groundwater in most parts of the Richtersveld Local Municipality, wellhead areas and aquifer yield zones must be protected. On a municipal scale, a Groundwater Management plan is urgently needed (Harrison, *et a*l., 2019). The interim measures proposed are to place High Yield Aquifer Protection Zones of 250 – 500m around Kuboes and Port Nolloth aquifers; and to place 50m wellhead protection zones around boreholes, especially those supplying the Richtersveld towns (Harrison, *et al*., 2019).

The proposed prospecting and bulk sampling activities have the potential to impact on the groundwater quantity by lowering the static water level and localised dewatering.

1.5.2.1 Potential Groundwater contaminants

- Petro-chemicals – particularly from heavy machinery
- Increased sediment loads (TSS) due to the mining process and disturbance of the alluvium in and along the riverbanks
- Possible e-coli contamination from on-site sanitation

1.6 Freshwater Ecosystems

According to the national web-based screening tool the application area corresponds to an area with very high aquatic ecology theme and requires an Aquatic Ecological Impact Assessment to form part of the EIA Study.

Accordingly, Scientific Aquatic Services (SAS) has compiled a Freshwater Ecological Scoping Report (**Appendix 6**) in support of the prospecting right applications along the Orange River. The description that follows below has been abstracted from the Freshwater Scoping Report. For a complete description, maps and figures, please refer to the specialist report.

The desktop study identifies all potential watercourses that may be impacted by the proposed prospecting and bulk sampling activities, a 500m 'zone of investigation' around the focus area, in accordance with GN 509, 2016 as it relates to the NWA, was used as a guide to assess possible receiving watercourses. The 500m zone of investigation around the focus area – is referred to as the investigation area.

1.6.1 Orange River

The proposed prospecting and bulk sampling activities are located directly adjacent to and within the delineated boundary of the Orange River. The majority of the focus area (all prospecting pockets PRAA 1 and PRAA 2) falls within the Orange River Gorge, and the southern portion falls within the Western Coastal Belt Aquatic Ecoregion in the Lower Orange River Catchment. The prospecting pockets fall within quaternary drainage regions D82J and D82K (**Figure 14**).

According to National Freshwater Ecosystem Priority Area (NFEPA, 2011) database the majority of the focus area (including pockets 1 to 5) and a portion of pocket 6) is situated within a Sub WMA currently not considered important in terms of fish or watercourse ecological importance, while the north-eastern portion of PRAA 2 (including a portion of prospecting pocket 6) is located within a SubWMA that is considered an important fish corridor. The rivers are identified for threatened fish species which form part of the fish sanctuary network.

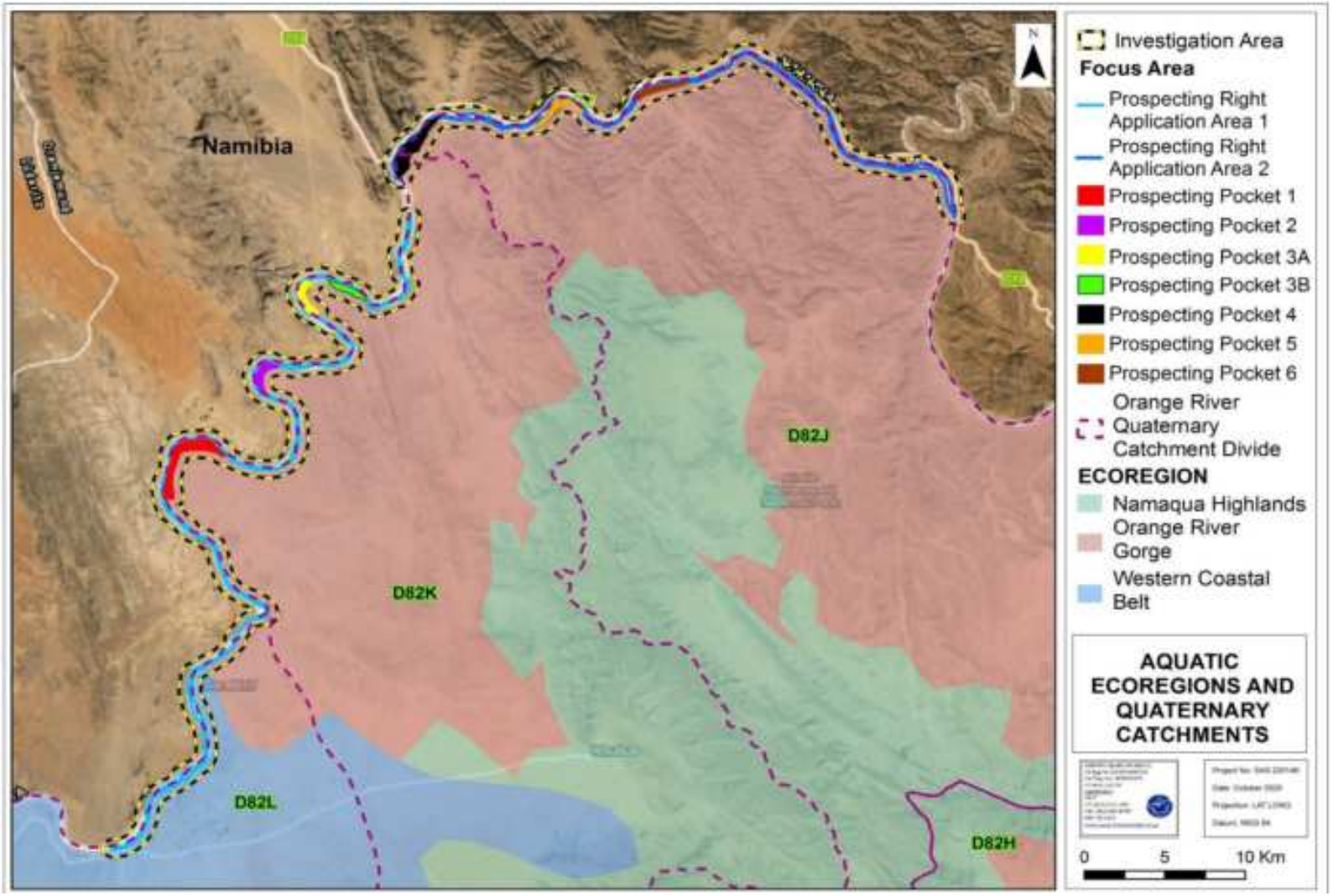


Figure 14: The Quaternary Catchments and aquatic ecoregions that pertain to the focus area (SAS, 2020)

According to the NFEPA database (2011) there is a natural floodplain wetland associated with the Orange River (associated with all prospecting pockets). The floodplain wetland is moderately modified (Class C) (NFEPA, 2011).

The prospecting pockets correspond to the following wetland vegetation types:

- Gariep Desert (Endangered) (Pocket 6-PRAA 2)
- Southern Namib Desert (Least Threatened) (Pocket 1 to 5 – PRAA 1 & 2)
- Richtersveld (Least Threatened) (Remaining southern portion of PRAA 2)

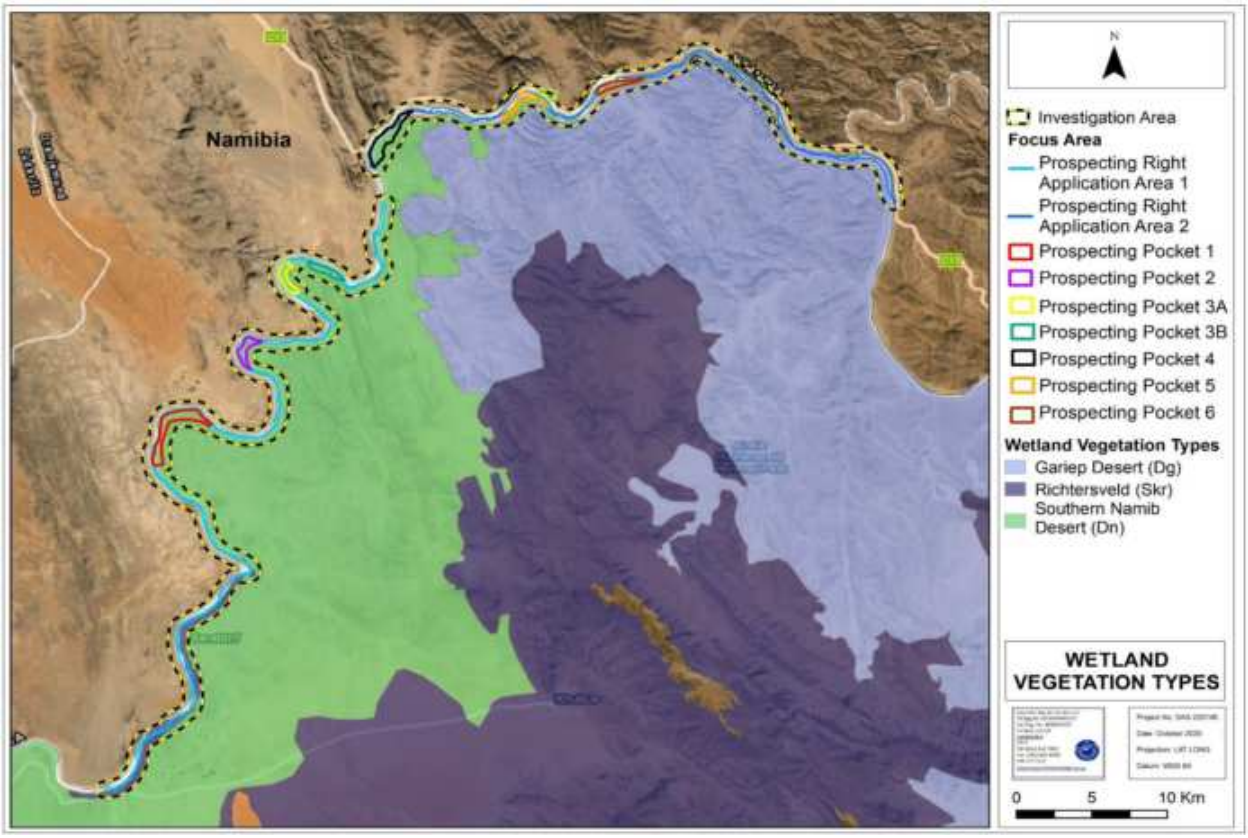


Figure 15: The Wetland Vegetation Types associated with the focus area according to Mbona et al. (2015) (SAS, 2020)

According to the NBA (2018): SAIIAE the portion of the Orange River where prospecting pockets 4, 5 and 6 are proposed is a channelled valley bottom wetland. The wetland is considered to be in a heavy critically modified ecological condition according to the NBA, 2018 dataset and is currently not protected (Ecosystem Protection Level (EPL)), and is therefore considered critically endangered (Ecosystem Threat Status (ETS)). The wetland is affected by roads, mining and a degraded river system (**Figure 16**).

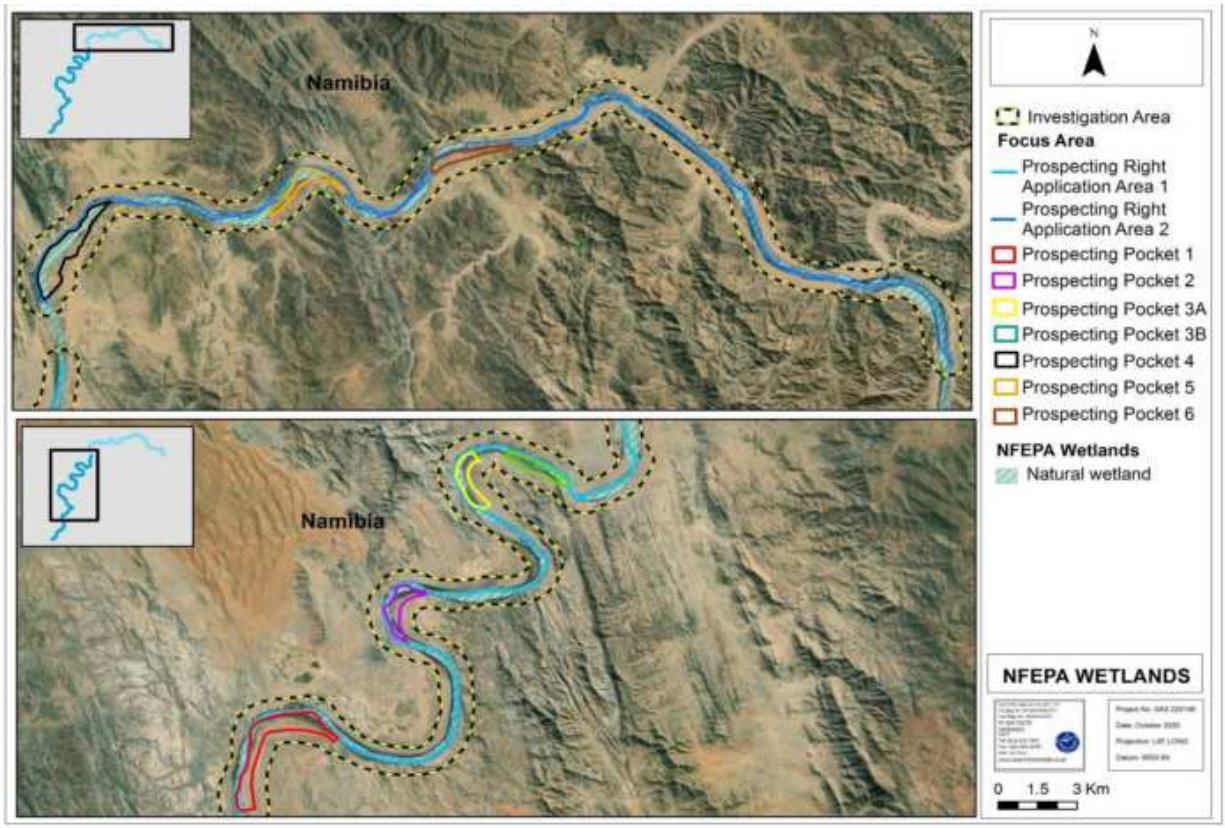


Figure 16: The natural floodplain wetland associated with the Orange River associated with the focus area according to NFEPA (2011). (SAS, 2020)

There are numerous tributaries (named and unnamed) associated with the Orange River (**Figure 17**). According to the NFEPA Database (2011), the Present Ecological State (PES) of the PRAA 2 portion of the Orange River is moderately modified (Class C). Various anthropogenic activities have occurred along the Orange River, i.e. historic sand and diamond mining on both sides of the river, establishment of small settlements such as Drifsand, and formalised road within 32m of the Orange River on the Namibia side. The settlements were likely established because of mining activities along the river. The settlements may have become reliant on ecosystems provided by the Orange River. The Orange River is not classified as a FEPA river.

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

In terms of the Northern Cape Critical Biodiversity Areas (2016) pockets 4 to 6 fall within the Richtersveld Cultural and Botanical Landscape and the Richtersveld National Park as declared under NEMPAA. The area has formal long-term protection for important biodiversity and landscape features (NC CBA, 2016 and Mining and Biodiversity Guidelines, 2013). The Richtersveld National Park has a significantly high eco-tourism aspect including but not limited to indigenous culture, rich biodiversity, river rafting, Fish River Canyon hike, sport fishing along the Orange River, birdwatching, and desert living. The proposed prospecting and bulk sampling activities will have the potential to have a significant impact on the ecotourism of the area.

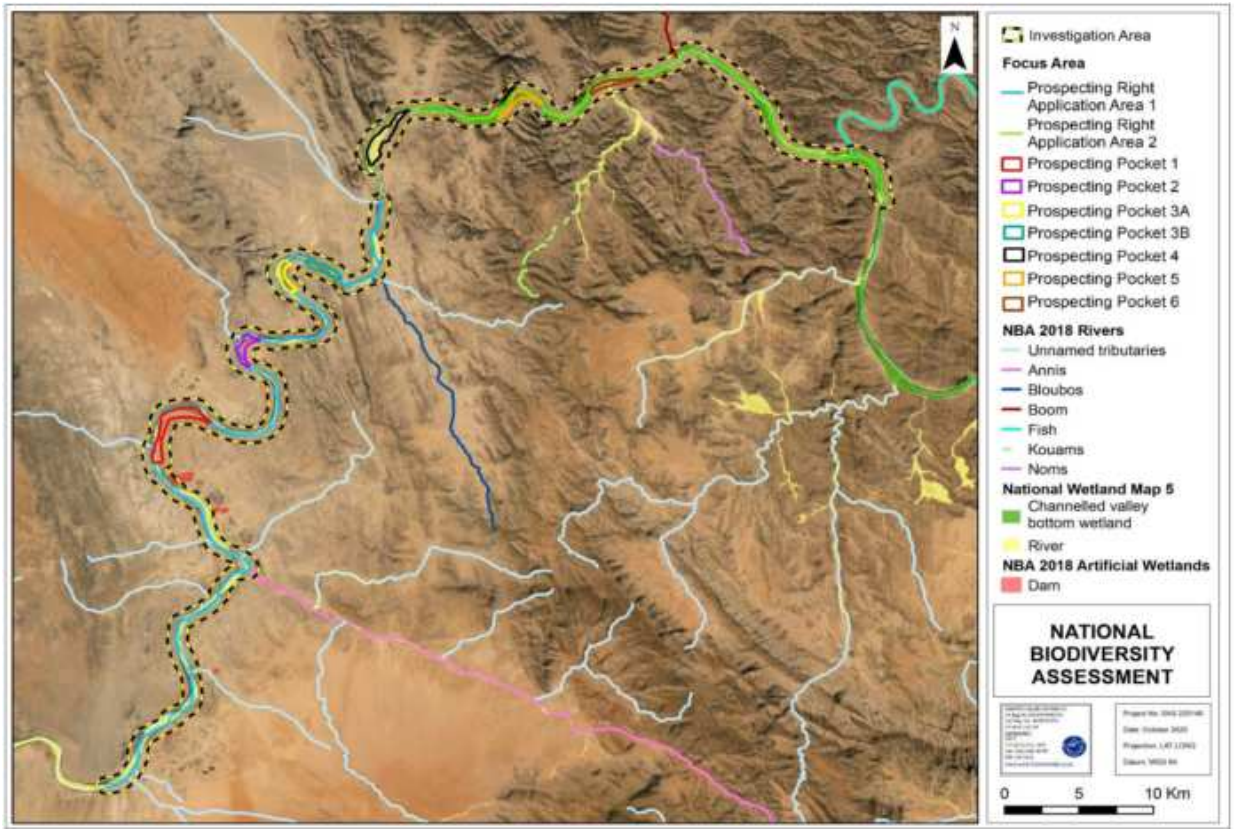


Figure 17: Watercourses including the Orange River and its tributaries associated with the focus area, according to the NBA (2018)

Present Ecological State (PES) / Ecological Importance and Sensitivity (EIS)

According to the DWS Resource Quality Information Services (RQIS) PES/EIS Database, the following sub-quaternary catchment reaches (SQRs) of the Orange River are applicable to the focus area:

- D82L – 03298, 03238 , 03166
- D82K – 03175, 03084, 02994, 0000
- D82J – 02886, 02869

Key information on fish species, macro-invertebrates and background conditions, associated with the above SQRs and pertaining to the PES, EIS for the Orange River are provided in Table 2 to 4 of the Freshwater Scoping Report.

Importantly, *Namaquacypris hospes*, a fish species, is known only from the section of the Orange River below Augrabies Falls, it prefers rocky and cobble habitat. The mobilisation of sediment from the proposed prospecting and bulk sampling activities has the potential to result in habitat smothering and has the potential to have a significant impact on this species as well as the *Labeos sp* (mudfishes) and *Labeobarbus sp*. (yellowfishes) from within the river that also have the same habitat preference.

Watercourse Delineation

The Orange River is identified as an alluvial river channel, which are self-formed features, meaning that they are shaped by the magnitude and frequency of the floods that they experience, and the ability of these floods to erode, deposit, and transport sediment. Alluvial channels are, therefore, formed in material that is able to move during moderate floods. This indicates that the bed and banks

of an alluvial river channel are characteristically made up of unconsolidated mobile sediments such as silt, sand or gravel or cobbles and small boulders. Alluvial river channels tend to erode their banks and deposit the eroded material on bars and on their floodplains (Ollis et al., 2013).

Various anthropogenic activities have occurred along the Orange River, such as; historic sand and diamond mining on both sides of the river, establishment of small settlements such as the Drifsand settlement, and a formalised road within 32m of the Orange River on the Namibian side. The settlements were likely established because of the mining activities along the river. The settlements may have become reliant on eco-services provided by the Orange River. Based on the above activities, it is evident that the Orange River has undergone varying degrees of disturbance. Numerous quarries from historic mining activities have also been identified along the Orange River. The delineations of the Orange River and its associated riparian habitat and floodplain will need to be refined during the field assessment in the EIA Phase of the project.

In terms of NEMA any activities falling within 32m of a delineated boundary will trigger a listed activity. Any activities proposed within the watercourse and the associated 100m GN 509 Zone of regulation (ZOR), including rehabilitation, must be authorised by DWS in terms of Section 21 (c) & (I) of the NWA. In addition, according to GN 704, the activity footprint must fall outside of the 1: 100-year flood line of the watercourse or 100m from the edge of the watercourse, whichever distance is the greatest. Should this not be feasible, the applicant is to undergo a Water use Licence application process to attempt to obtain approval from the DWS in terms of Section 21 c& i of the NWA. In addition, exemption from the requirements in terms of Regulation GN 704 will be required.

The 100m and 32m ZOR around the watercourses are indicated in **Figure 18**. The 1: 100-year flood line will need to be determined for this reach of the Orange River to verify the regulated zone of the watercourse.

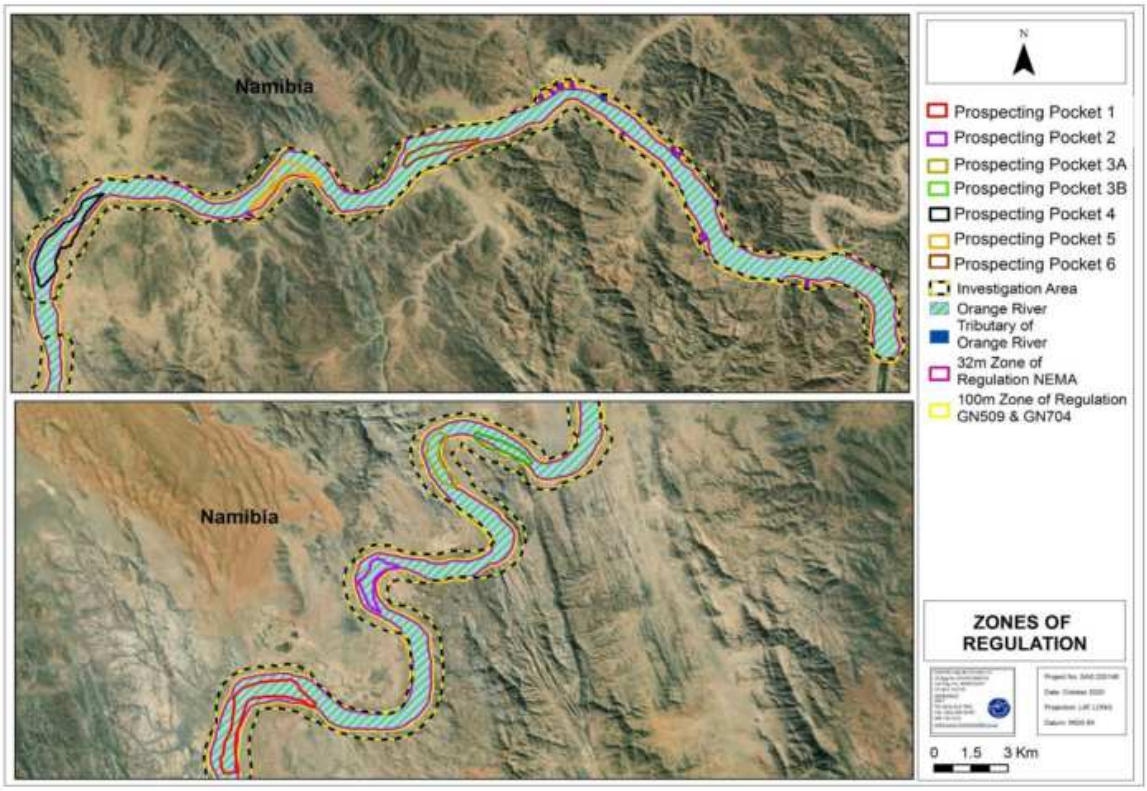


Figure 18: Conceptual watercourse delineation and associated Zone of Regulation (ZOR) associated with the prospecting pockets. (SAS, 2020)

Orange River RAMSAR Site

The prospecting and bulk sampling activities (PRAA 1 – pockets 1, 2, 3A, 3B and **PRAA 2 – pockets 4, 5 and 6**) are located approximately 30km north of the Orange River Mouth RAMSAR site. It is a transboundary area of extensive salt marshes, freshwater lagoons, marshes, sandbanks, and reed beds shared by South Africa and Namibia. Extensive abstraction of water from the Orange River for domestic, commercial and industrial purposes could severely restrict the amount of water reaching the site. See **Figure 19** below.

Following the collapse of the saltmarsh component of the estuary, the site was placed on the Montreux Record in 1995. The site has experienced rapid degradation as a result of adjacent diamond mining activities (Alexander Bay) and flow regulation of the Orange River as a result of dam construction and water consumption. The Orange River Mouth is regarded as the second most important estuary in South Africa in terms of conservation importance after Knysna. The mouth supports several fish and bird species listed in international red data books for Namibia and South Africa. SA's justification for the site's designation is based on its importance for numerous species of waterbirds and is primarily for breeding and as a stop-over on migration. Further diversion of flow in the headwaters of the Orange River is likely to further reduce water availability in the Orange River Mouth. Construction of the proposed Neckartal dam in the lower Fish River in Namibia will further compound this situation since the Fish River is currently the main source of floods at the Orange River Mouth. The prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thus the RAMSAR wetland system. Such impact, is regarded as significant at all, will be unacceptable.

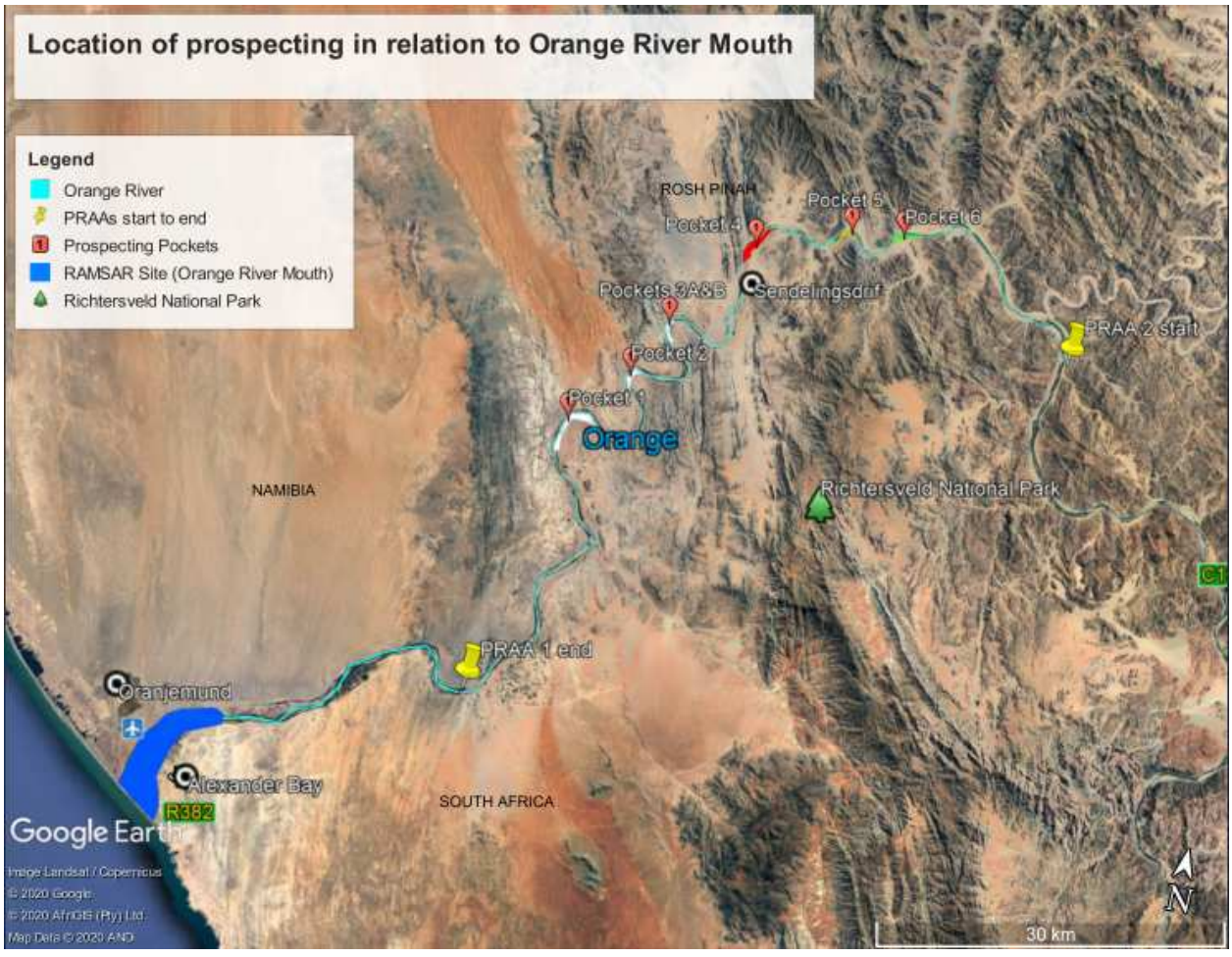


Figure 19: Location of proposed prospecting activities 30km upstream of the Orange River Mouth

Provided that the prospecting and bulk sampling activities do not take place within the active channel of the Orange River and undertaken in the low flow season with all rehabilitation completed before the rising of the river the risk can be significantly reduced. These mitigation measures, combined with other design management mechanisms and with well-managed construction and implementation practices, could potentially lead to significantly reduced impacts. Despite all of this, the risk the project poses still remains high.

The Orange River System is extremely ecologically important and sensitive. The proposed prospecting and bulk sampling activities poses a very significant risk to the system. It is thus deemed essential that all aspects of the proposed prospecting and 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.

1.7 Terrestrial Biodiversity

According to the national web-based DEA screening tool the application area has a very high biodiversity theme, medium plant species theme and low theme for animal species. The screening tool /report requires that a Terrestrial Biodiversity Impact Assessment including Plant Species- and Animal Species Impact Assessment be completed as part of the EIA Process.

SAS has therefore also compiled a Terrestrial Biodiversity Scoping Report inclusive of Plant and Animal Species screening (**Appendix 6**) in support of both Samara's prospecting right applications. A short summarised description has been abstracted from the report and included below. Please refer to the full report for all-inclusive details, maps and figures.

1.7.1 Vegetation

As stated in the above sections PRAA 2 and its associated prospecting pockets are located within a protected area namely the Richtersveld National Park and the Richtersveld Cultural and Botanical Landscape) (**Figure 20**). According to the NEMPAA (2003) and the Mining and Biodiversity Guidelines (2013) the area is legally protected, and mining herein is prohibited. This is echoed in the Northern Cape Critical Biodiversity Areas Plan, 2016, which states that the protected areas must stay in a largely natural ecological condition and as per the management objectives determined by the Protected Area Management Plan.

The prospecting focus area covers four vegetation types namely the Lower Gariep Alluvial Vegetation (Azonal Vegetation Biome), the Western Gariep Hills Desert (Desert Biome), the Richtersveld Sheet Wash Desert (Desert Biome), and the Noms mountain Desert (Desert Biome) (see **Figure 21**).

- Pocket 4 falls exclusively within the Lower Gariep Alluvial Vegetation type
- Pocket 5 falls within the Lower Gariep Alluvial Vegetation type bordering the Western Gariep Hills Desert vegetation type;
- Pocket 6 falls within three vegetation types, namely the Lower Gariep Alluvial Vegetation type (making up most of the pocket area), and small sections bordering each of the Richtersveld Sheet Wash Desert and Noms Mountain Desert.

It has also been brought to the EAP's attention by SANPARKS and Prof. Norbert Jürgens (Africa Biota) during the Scoping Phase public consultations, that the prospecting pockets/focus area correspond to

an ancient gravel terrace along the river that carry endemic flora and fauna. These smaller vegetation units are not covered in the larger landscape units used in the 2012 and 2018 VegMap nor in the riverine vegetation. These terraces will require an integrated study on both banks as the gravel terraces, during the specialist field investigations since these terraces have already been heavily degraded by mining on the Namibian side as well. SANPARKS has also supplied a report by Pieter van Wyk et al. 'Two new plant records for the Richtersveld National Park' (see **Appendix 6**) which provides a species list of Fauna and Flora on the last untouched Meso-Orange River Terrace at Pooitjiesram within the RNP.

Lower Gariep Alluvial Vegetation (pockets, 4, 5, 6)

This vegetation type is a nationally endangered ecosystem (National List of Threatened Ecosystems, 2011) and about 6% is statutorily conserved in the Richtersveld and Augrabies Falls National Parks. Some 50% transformed for agricultural purposes or alluvial diamond mining. Vegetation features include flat alluvial terraces and riverine islands supporting a complex of riparian thickets (dominated by *Ziziphus mucronata, Euclea pseudebenus* and *Tamarix usneoides*), reed beds with *Phragmites australis* as well as flooded grasslands and herb lands populating sandbanks and terraces within and along the river.

Noms Mountain Desert (pocket 6)

It is least threatened and is 100% statutorily conserved in the Richtersveld National Park. It has a high conservation value due to high concentration of endemic taxa of the East Gariep Centre of Endemism. Very little of the unit is transformed, but there is diamond mining at Oenas, close to the Orange River. Domestic grazing is permitted in the park in terms of its status as a contractual park. This unit contains one of the largest aggregations of *Pachypodium namaquanum*. Most of the unit is formed by rugged, generally low mountains with bare rock and very sparse vegetation. Habitats differ according to topography, rock type and climate. On the rocks, succulents like *Aloe dichotoma, Ceraria namaquensis*, *Pachypodium namaquanum, Tylecodon hallii, Commiphora capensis, Zygophyllum segmentatum, Schwantesia herrei,* but also the rare *Portulacaria armiana* occur. In the valley bottoms*, Dicoma capensis, Pharnaceum croceum, Dimorphotheca polyptera, Mesembryanthemum gariusanum, Sesuvium sesuvioides, Euphorbia phylloclada, Leucophrys mesocoma and Stipagrostis namaquensis* are frequent. Relatively more mesic vegetation occurs towards the upper end of the moisture gradient from the hyperarid Orange River Valley to higher altitudes and in some of the gorges.

Richtersveld Sheet Wash Desert (pocket 6)

It is least threatened and 100% statutorily conserved in the Richtersveld National Park. The vegetation type is also found across the border in Namibia, where it is partly protected within the Ais-Ais National Park. It has a high conservation value due to its concentration of endemics of the Eastern Gariep Centre of Endemism. Very little of the vegetation type is transformed. Grazing of private herds is permitted in the park (contractual park). It is characterised by rugged mountain ranges with bare rock and valleys some of which (e.g. lower Gannakouriep River) form deep canyons. At high altitudes vegetation cover is sparse; plant cover (including *Commiphora capensis, Aloe dichotoma, Tylecodon hallii, Schwantesia herrei, Euphorbia gariepina and E. virosa*) is more conspicuous in some gorges and on slopes covered with a mixture of boulders and rubble. On valley bottoms within this vegetation unit sparse grassland mainly with *Leucophrys mesocoma* and *Stipagrostis namaquensis* occur, but also *Stipagrostis obtusa and S. ciliata*, after good rains combined with rich populations of opportunistic life forms like *Mesembryanthemum gariusanum* (sometimes flowering in masses), *Dicoma capensis, Pharnaceum croceum, Dimorphotheca polyptera, Sesuvium sesuvioides and Euphorbia phylloclada.*

Western Gariep Hills Desert (pockets 5 and 6 border this vegetation type)

It is 11% is statutorily conserved in the Richtersveld National Park. About 1% transformed by several active and historical mines. The unit has a high conservation value due to its endemic, and other localised species and recommendations have been made to SANParks to incorporate most of it into the Richtersveld National Park. Elsewhere within the unit, Cornellskop has been declared a Natural Heritage Site. The unit also occurs at least to some extent in Namibia where most of it is protected within the Sperrgebiet National Park. Very heterogeneous broken landscape, mostly hilly but including some smaller and larger plains. Some of the plains are covered by quartz gravel, others by loamy sand or by gravel from different rocks, with strong contrasts between different mosaic elements. The main vegetation unit includes quartz fields, which are covered by dwarf cushions of the *Brownanthus pubescens* community and the *Hartmanthus pergamentaceus* community (Jürgens 2004), the latter being restricted to this unit. The undulating hills, especially on southwestern slopes, are covered by the Ruschianthemum gigas desert shrubland community (Jürgens 2004), while rocky outcrops sometimes support populations of the spectacular Aloe pillansii (e.g. Cornellskop).Please refer to a full description of the vegetation types included as Appendix E to the Biodiversity Scoping Report.

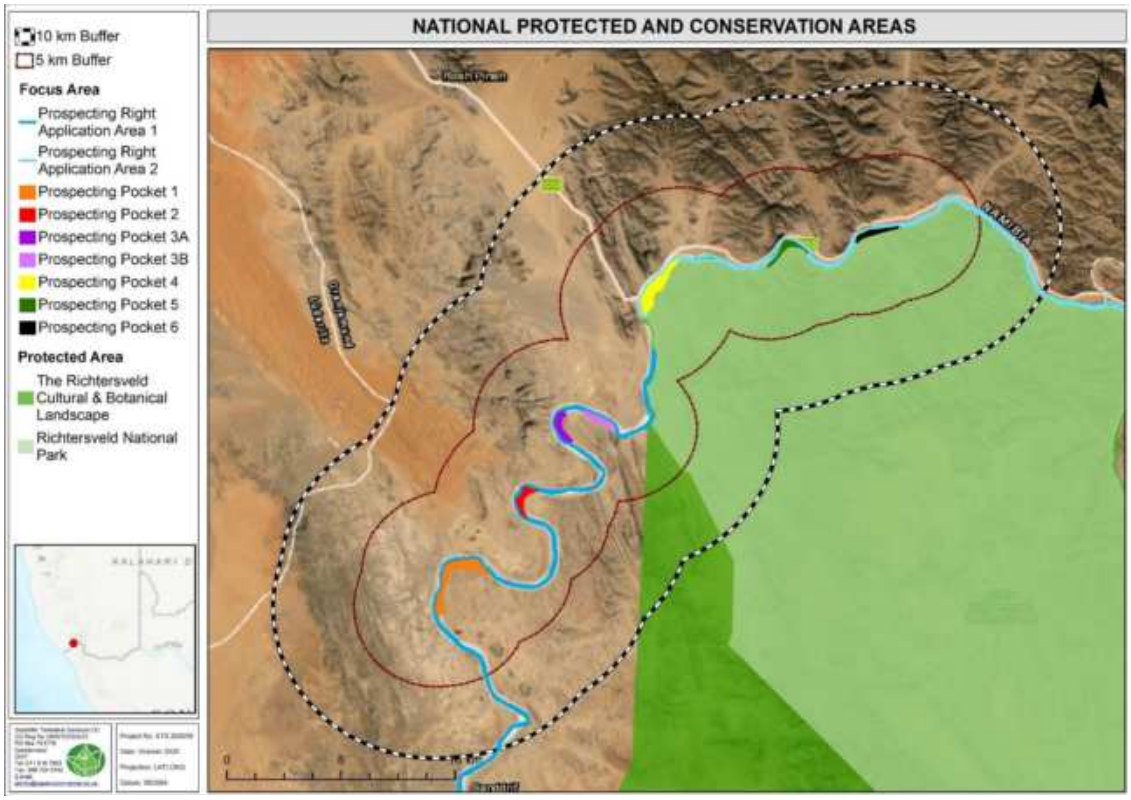


Figure 20: Protected areas within a 5km and 10km radius of the focus area (SAPAD, SACAD, 2019; NPAES, 2019) (SAS, 2020)

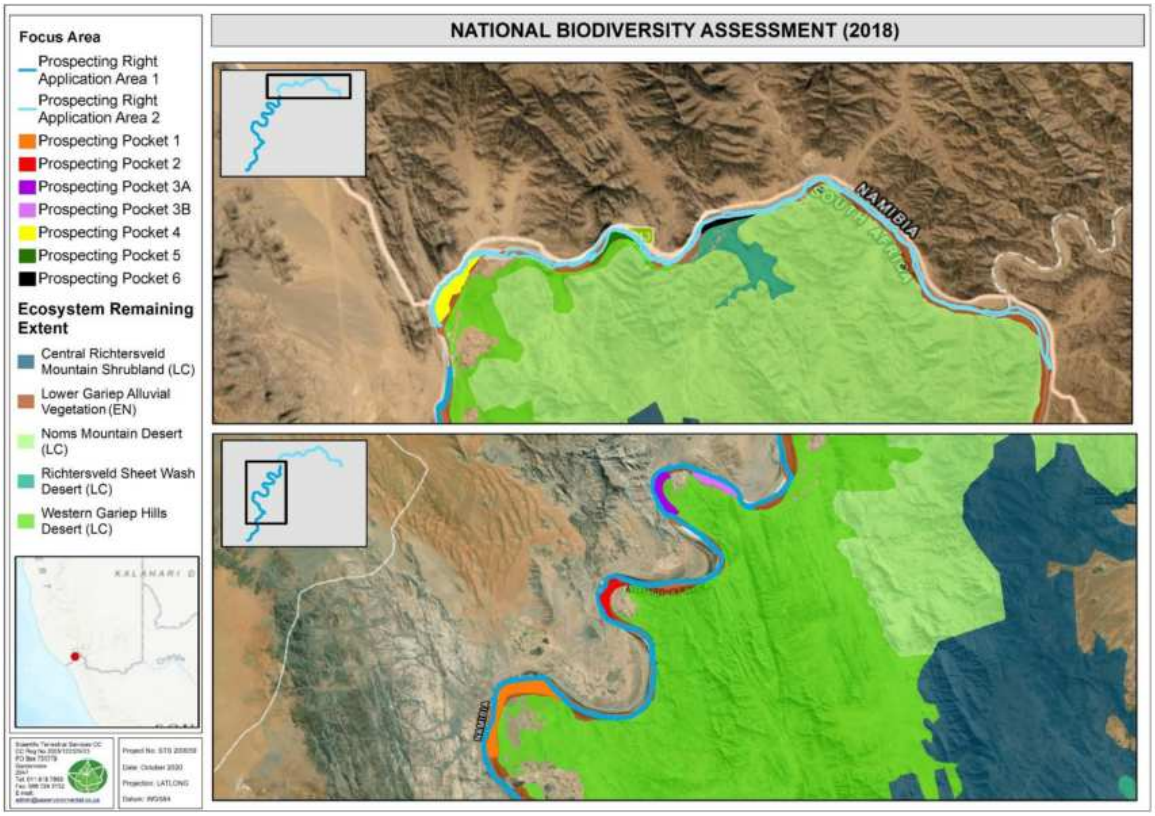


Figure 21: The remaining extent of vegetation types associated with the focus area, according to the National Biodiversity Assessment (2018) (SAS, 2020)

According to the Northern Cape Spatial Development Framework, 2019 the prospecting focus area is located in the Gariep Centre of plant endemism which covers the Richtersveld and extends northwards into the Namibia Spergebiet and supports roughly 355 endemic plant species, several of which are protected under Schedule 2 (Protected Species) of the Northern Cape Nature Conservation Act, 2009 (Act No. 9 of 2009). The prospecting focus area does not fall within a development corridor as set out in the SDF. Refer to Figure 8 in the Biodiversity Scoping Report.

The study site is not located in an Important Bird Area (IBA), or within 10km from an IBA. It is also not located in a Strategic Water Source Area for Surface Water.

It is however necessary to mentioned that the application areas are 30km upstream from the Orange River Mouth Estuary (RAMSAR site) which is an IBA due to the importance for numerous species of waterbirds. The site is primarily used for breeding and stop-over migration. Further degradation of the site from upstream mining will place further stress on these species. Many of the species it supports are covered in the Agreement on the Conservation of Afrcan-Eurasian Migratory Waterbirds (AEWA). South Africa is internationally abliged to maintain these species.

1.7.2 Floral Species

Several floral species (e.g. *Astridia herrei* (a critically endangered endemic) and Conophytym bilobum (a near threatened endemic) that are protected under Section 2 (Protected Species) of the Northern Cape Conservation Act, 2009 (Act No. 9 of 2009) have the potential to be located within the focus area and within all the prospecting pockets. A full list of species can be viewed in Table F1 (Appendix F of

the Biodiversity Scoping Report). It is important that a comprehensive field assessment be undertaken to determine the presence and the possibility of occurrence for all protected species.

Permits must be obtained from DENC for any indigenous vegetation which is protected under the NCNCA, or the DEFF for protected tree species under the NFA

The prospecting and bulk sampling activities may require the removal of indigenous trees forming part of the Orange River riverine forest. Several protected tree species, *Boscia albitrunca*, Vachellia erioloba and Euclea pseudebenus, according to the National Forest Act, 1998 (Act No. 84 of 1998) are likely to be located throughout the focus area and within the prospecting pockets. In terms of this act, protected tree species may not be cut, disturbed, damaged or destroyed and their products may not be possessed, collected, removed, transported, exported, donated, purchased or sold - except under licence granted by the DEFF, or a delegated authority. In addition DEFF: Forestry Management and Regulation will be consulted to determine the permit requirements for potential removal of riverine forest (riparian vegetation) at prospecting focus areas.

1.7.3 Faunal Species

Several faunal SCC such as *Cistugo seabrae* (Angolan Hairy Bat, NT) *Torgos tracheliotos* (Lappet-faced Vulture, VU), *Phoeniconaias* minor (Lesser Flamingo, NT), *Otocyon megalotis* (Bat-eared Fox), *Parahyaena brunnea* (Brown Hyaena, NT), *Aonyx capensis* (Cape Clawless Otter, NT), *Equus zebra hartmannae* (Hartmann's Mountain Zebra, VU), *Panthera pardus* (Leopard, VU) have been recorded within the Richtersveld National Park, whilst some of these species may also occur outside of the park along the Orange River. Many of these species are endemic to the region, thus their restricted distributions and movement may be threatened by fragmentation and habitat destruction resulting from prospecting and bulk sampling activities. It is important that a comprehensive field assessment (preferably within all seasons) be undertaken to determine the presence and the possibility of occurrence for all protected species. A full list of species can be viewed in Table G1 (Appendix G of the Biodiversity Scoping Report).

Some of the species of conservation concern expected to occur within the projects are of influence (e.g. Lappet-faced Vulture) are listed under the Convention of the Conservation of Migratory Species of Wild Animals (CMS) and is therefore relevant.

No indigenous faunal species may be removed from the site without the necessary permits from DENC. This includes the removal of bird nests, especially raptor sites, and no animals (including snakes) may be hunted (poached), trapped, injured or removed in any way without the necessary permits.

1.7.4 Legal Implications of prospecting/ mining in Protected Area and Potential impact

The prospecting pockets 4, 5 and 6 are located within a legally protected area in which mining is prohibited as specified by the NEMPAA. Prospecting pockets 4, 5 and 6 can be considered as no-go areas from a biodiversity perspective due to their location within a legally Protected Area and must therefore be avoided.

All three prospecting pockets are associated with the endangered Lower Gariep Alluvial vegetation type which is already to a large degree transformed, with a remaining 47% of natural vegetation left. Some 6% of this vegetation type is protected within two protected areas (Augrabies Falls National Park, Richtersveld National Park) within which prospecting pockets 4, 5 and 6 are located. The pockets pose a threat to this vegetation type. Loss of habitat within this endangered ecosystem will further impact on

the floral and faunal communities within the ecosystem. An estimated 11 endemic species are found within the lower Gariep Alluvial Vegetation, which having already restricted distributions will be at further risk of fragmentation especially as the prospecting pockets will pose potential barriers to the dispersal of such species throughout the vegetation type.

The ecosystem is extremely ecologically important and sensitive, and the proposed prospecting and bulk sampling activities pose a very significant risk to the ecology and biodiversity of the area. It is essential that all aspects of the proposed prospecting and 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.

1.8 Visual aspects

According to the national web-based screening tool, environmental themes identified for the application area a Landscape / Visual Impact Assessment is required as part of the EIA Study.

Prospecting pockets 4, 5 and 6 are located below the 1: 100-year flood line of the Orange River within the vicinity of Oena Diamond mine and Lower Orange River Diamonds operations within the Richtersveld National Park. Access to these diamond mining areas within the park is strictly prohibited (RNP draft Plan). Diamond mining is located on the Namibian side and South African side of the Orange River. The workings are visible to anyone travelling down the Orange River and to the occasional persons on the Namibian side of the Orange River.

Scientific Aquatic Services, has therefore prepared a VIA Scoping Report for the PRAA 1 and PRAA 2 to screen the potential visual impacts from the prospecting and sampling activities on sensitive receptors (see **Appendix 6**). According to the report the prospecting focus area is situated on flat alluvial terraces and on the Orange River bed, surrounded by mountainous terrain in the greater region. There are limited sensitive receptors situated within a 5km radius of the focus area, namely settlements including Klipheuwel, Sendelingsdrift, Auchas, Sanddrift and Skilpad.

There are limited roads on the South African side of the Orange River, yet several roads are present on the Namibian side of the river, namely Deboras Pass, Auchas Pass, Niklaas Pass and the formalised C13 Road running along the Orange River.

The Richtersveld National Park has significantly high eco-tourism aspect including, indigenous culture, rich biodiversity, river rafting, the Fish River Canyon hike, sport fishing along the Orange River., birdwatching and desert living. The Orange River is an established, world-renowned area for sport fishing and river rafting. The Orange River is considered a very highly sensitive receptor.

The area surrounding the prospecting focus areas is characterised by deep canyons, jagged mountains, vivid landscapes of unusual colours of rocks and soils, of extremely rare succulent plants and languid stretches and white water rapids of the Orange River. The quality of the landscape if considered very high and the sense of place provide a feeling of becoming one with nature.

The greater region surrounding the focus area comprises natural and undisturbed land; thus limited anthropogenic structures are present in this region. The area is intrinsically dark with limited to no sources of nigh time-lighting. The prospecting and bulk sampling activities could have a negative impact on the landscape character, sense of place and visual quality of the area.

According to the viewshed analysis (**Figure 22),** it is evident that the prospecting and bulk sampling activities will most likely be observed from sensitive receptors within 1km of the prospecting pockets. Limited portions of the Richtersveld National Park will observe the prospecting and bulk sampling activities. However, this area includes camping sites and the project may have a potentially very significant negative visual impact on the camping sites.

Additionally, the Richtersveld National Park was declared a UNESCO World Heritage Site in 2007 and is one of South Africa's most important conservation areas. There are several possible camping and picnic sites within the park. Despite the project being in a remote area, visitors and international tourists visit the Richtersveld National Park. The project is likely to have a high to very high visual impact on the overall landscape character of the area.

There are significantly high visual impacts associated with the project which will need to be assessed in detail in the EIA Phase. a VIA will be conducted to determine the potential impact of the prospecting and bulk sampling activities on the sense of place, landscape quality and character of the receiving environment.

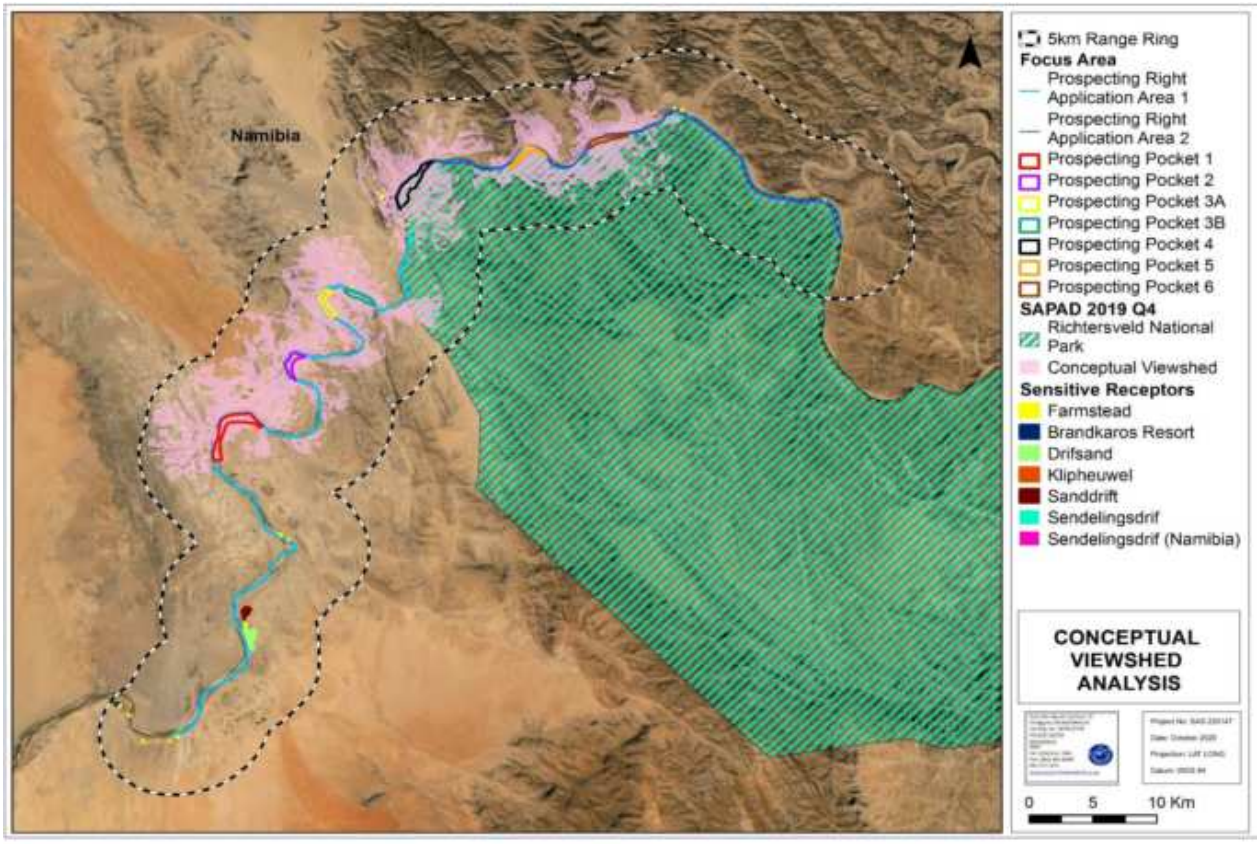


Figure 22: Viewshed analysis of prospecting focus area (SAS, VIA Scoping, 2020)

1.9 Air Quality

Ambient dust levels at PRAA 2 are expected to be low, apart from dust generated off the unvegetated landscape during high wind conditions. The only other main sources of dust in the area include:

- Low volumes of dust generated from other mining operations along the River;
- Vehicle entrained dust from unsurfaced roads in the area

Dust will be generated from the following activities to be undertaken during bulk sampling:

- Clearing of vegetation with a dozer
- Removal of topsoil,
- Excavation of trenches to collect bulk samples of diamondiferous gravels;
- Machinery/vehicles travelling on unsurfaced roads;
- Tipping of diamondiferous gravels into the Rotary Pan Plant (wet process and dust levels at the plant will be low);
- Backfilling of tailings and overburden into excavations;
- Removal of equipment and infrastructure during rehabilitation activities.

The prospecting pockets 4, 5 and 6 are located in a restricted diamond mining area in the RNP of Oena and LOR Mining Right Areas. The bulk sampling activities are expected to have a very low contribution to the current dust levels generated by the existing mines. The town of Sendelingsdrif might however experience a moderate increase in dust levels due to the cumulative impact of operations at both the existing Reuning mine and Samara bulk sampling and processing activities. However, the impact will be a short-term impact.

1.10 Noise

Ambient noise levels are very low due to the remoteness of the site. The only current noise source along the Orange River are current mining operations, namely Oena Mine, Aace plant, Swartpoort, Reuning and Namdeb Sendelingsdrif Mine. Noise sources at these mines include use and movement of dump trucks, excavators, equipment including operating processing plants.

The proposed prospecting, bulk-sampling and processing operations are expected to generate increased noise levels in the area of existing diamond mining operations. The noise sources expected to contribute include:

- Use of machinery and heavy vehicles
- Operation of pumps in the River
- Operation of the Rotary Pan Plant

Proposed prospecting pocket 4 is located 2km north of Sendelingsdrif which might experience an added increase in noise levels. The noise levels are however expected to be moderate to low to the remoteness of the pockets to sensitive receptors.

1.11 Traffic

The diamond prospecting and bulk sampling activities are expected to generate low traffic volumes since it will not produce a bulk ore product and a fly camp will be established at the prospecting pockets. The bulk sample will be reduced to small quantities of recovered alluvial diamonds and gravel material devoid of alluvial diamonds will be backfilled into trenches. Small volumes of traffic might be generated by:

- Bringing machinery and heavy vehicles to site during site establishment (once-off short-term impact per prospecting pocket)
- Prospecting related vehicles travelling on unsurfaced roads (low traffic)
- During rehabilitation, the equipment and heavy vehicles would need to be removed from site.

There are existing unsurfaced roads within the PRAA 2 that provide access to the prospecting pockets. Pocket 4 can be accessed via the Reuning and Aace plant gravel roads close to Sendelingsdrif. Pocket 5 can be accessed via the Swartpoort operation gravel road. Pocket 6 can be accessed via the Halfmens Pass to Oena Mine.

1.12 Site of Cultural, Heritage and Palaeontological Importance

According to the national web-based screening tool the application area has a very high archaeological and cultural heritage theme and medium sensitivity Palaeontological features. The screening tool requires that Heritage- and Palaeontological Impact Assessment be conducted for the site.

Millennium Heritage Group Pty Ltd, Eric Mathoho has prepared a desktop Heritage (HIA) Scoping Report and Dr JF. Du Randt a Palaeontological Desktop Study to describe the cultural, heritage and palaeontological landscape of the prospecting focus area. The studies are attached under **Appendix 6**. Full impact assessment studies will follow in the EIA Phase.

According to the HIA Desktop Study, prospecting pockets 4, 5 and 6 falls directly within the Richtersveld Cultural Botanical Landscape (UNESCO World Heritage Site). The Richtersveld was claimed by the Nama people as part of their traditional land and set up a conservancy for research and tourism purposes. The Nama people own the entire area, including the World Heritage Site and manage the Richtersveld National Park in conjunction with the SANPARKs and are entirely responsible for the management of the World Heritage Site. The Richtersveld Cultural Botanical Landscape was declared based on its outstanding Universal Value, namely:

- The diverse botanical landscape of Richtersveld, shaped by pastoral grazing of the Nama (way of life persist many millennia over a considerable part of southern Africa and was significant state in history in area);
- Richtersveld is one of the few areas in southern Africa where transhumance pastoralism is still practised, as a cultural landscape it reflects the tradition of the Nama. Their seasonal pastoral grazing regimes which sustain the extensive biodiversity in the area are now vulnerable,

The Nama people continue to live and graze their livestock in the area. The community conservancy is bordered to the north by the National Park and unlike the park, the Richtersveld Community Conservancy, which forms the core zone of the World Heritage Site, is not subject to diamond mining and as a result is more pristine of the two areas. The Nama language has preserved here by the Nama communities. The Nama people made this part of the world their home about two millennia ago, and because no one else has been willing to survive in this landscape, their lifestyle has not changed much in that time (Dewar 2008).

Historical records depict the Nama landscape as populated by pastoralists whose livelihood depend on the Orange River as long as 2000 years ago. The river served as the only source of permanent water for themselves and their livestock. This attracted settlements which were recorded by early European explorers as dotted along the River.

The period 1996 and 2020 saw Trans Hex Mining commission several archaeological surveys on areas the company proposed to mine for alluvial diamond mining in the Richtersveld. The southern bank (left bank) of the Orange River was surveyed (between Sendelingsdrif and Baken) revealing numerous Early, Middle and Late Stone Age sites. In 2001 the UCT Archaeology Contracts Office excavated four Later Stone Age sites on the southern bank of the Orange River (near Sendelingsdrif and just east of Jakkelsberg. More recently, Dewar and Stewart (2011) uncovered Early Stone Age sites whose antiquity of occupation dates back almost a million years ago.

Numerous Stone Age Sites were uncovered by Lita Webley along the banks of the Orange River in the Richtersveld showing deep past of the Namaqualand (Webley 1992), i.e. Two dense archaeological sites at Jakkalsberg (near Sendelingsdrif). The sites contained a unique collection of

artefacts attributed to ancestors of Nama herders. Jakkalsberg, an open site on the banks of the Orange River, has been dated between the 7th and 8th centuries AD. Please refer to the HIA Scoping for further details. The archaeology of Namaqualand is characterised by the following presented in Table 4.

Table 4: Archaeological Sites of Namaqualand

Early Stone Age Sites	Found on river flood plains and some considerable distance from the rivers.	Source
Middle Stone Age Sites	Sites including material remains are usually found scattered on river terraces, on ridges overlooking the river as well as on the higher slopes of hills.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Late Stone Age Sites	Mostly confined to riverine silt bodies. A number of herder sites were located, some of which have now been radiocarbon dated and sampled. Also present are Mid-Late Holocene sites, one of which contain a microlithic industry and have been radio-carbon dated to circa 3000 BC.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Rock engravings	Are prolific within the river valley and tributaries. Most of these are; usually they are etched onto blue dolomite. The designs tend to be abstract yet consistent. Human and animal figure are rare but present. The age of the engravings is unknown in most cases. Some appear to be fairly fresh while others are so worn and patinated that they must be of considerable age – possibly some thousands of years. The meanings of the enigmatic designs remain unknown, and their significance is unclear.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Historic sites	Usually include the foundations of colonial buildings such as mission churches, places on the river where early copper mines in the Richterveld shipped copper ore onto river barges for transport downriver. These also include the stone burial mounds of Nama herders.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008
Ethnographic sites	Consist of remains of herder encampments that are not necessarily protected by heritage legislation but are important, as they are the last physical remnants of a traditional lifestyle that is thousands of years old and rapidly changing in the 21st century. These sites are of interest to anthropologists, ethnoarchaeologists and architects who have mapped and documented the layout of these encampments in attempts to understand changes and traditional values within Nama society.	Robertshaw 1978; Smith 1995; Webley 1992; Halkett 1999, 2003; Orton et al 2005 Dewar 2008

Several archaeological sites dating to the Stone Age to recent past structures have been identified. There are probably a few more sites that could not be located from the desktop study. Most of the archaeological sites well presented by stone tool sites scattered along the Orange River banks are likely to be impacted by the proposed alluvial diamond prospecting and sampling activities.

The provincial McGregor Museum Archaeology Department has also stated during the Scoping Phase public consultations, that it has been involved in observing rock art occurences and other archaeological traces along the west bank of the Orange River in this area and notes that previous mining has adversely impacted rock art sites and other materials, and that the existence of graves adds to the exceptional sensitivity of the west bank of the Orange River in this area.

According to the HIA Scoping, heritage sites are fixed features in the environment occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. The identified sites do not present much of the problem, as current legislation allows from mitigation measures to be implemented. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/ recorded, and a management plan can be developed for future action. Those sites that are not impacted can be written into a management Plan.

It will be critical to conduct indepth consultation with the McGregor Museum on past heritage surveys done in the area and with the community members of the project area to understand the heritage significance of sites including graves and other traces along the bank of the river since they may have historical connections with the sites. (Dr D Morris, 14 Dec 2020, Official comments).

Due to the proposed work inside National and World Heritage site, the Northern Cape Department of Sports Arts and Culture and its Heritage Unit Northern Cape Heritage Resources Authority will be consulted as the authorities mandated to assist in the management of the universal values recognised in the areas listing as World Heritage. It is also prudent to obtain approval from SAHRA before any prospecting and bulk sampling activities proceed.

Stakeholder engagement will be a key element continuously for the duration of the project. Key government agencies and stakeholders to be engaged and consulted for review of the heritage report and approval of the project include:

- South African Heritage Resources Agency (SAHRA)
- Northern Cape Department of Sports Arts and Culture (DSAC)
- Northern Cape Heritage Resources Authority
- Northern Cape Provincial McGregor Museum
- Namibia Heritage Council
- UNESCO

Palaeontological Importance

According to the Palaeontological Desktop Study compiled by Dr. J.F. Du Randt the proposed prospecting will take place in an area considered to have moderate to low, to insignificant Palaeontological Sensitivity. Although fossils are scarce in the Quaternary sand and sandy soils that dominate the study site, the possibility of finding any in the study area should not be dismissed.

The rocks of the Gariep Supergroup that underlie the sediments in the western part of the study site may contain stromatolites.

The ECO should take responsibility for monitoring the excavations and development onsite. If a significant find is made the procedure stipulated under Procedure for Chance Palaeontological Finds should be followed, which includes the safeguarding of the exposed fossils and the contacting of a palaeontologist for further advice.

1.13 Regional Socio-Economic Environment

The prospecting focus area is located in Ward 1 and 2 of the Richtersveld Local Municipality situated in the Namaqua District Municipality of the Northern Cape Province. The regional centre of Namaqualand is in Springbok, and the headquarters of the Richtersveld Local Municipality is in Port Nolloth. Port Nolloth has fishing and marine diamond mining as its economic base. Alexander Bay is an existing diamond mining town.

Population

Springbok has a population of 10 000, and the overall Namaqua region has a population of 43 000 persons (Richtersveld and Nama Khoi). Overall 10.8 % of the total population of the Namaqua District reside in the Richtersveld. The municipal region had a total population of 12 487 in 2016 of which 53.1% are male, and 46.9% are female. Refer to Table 5 for the Population by group type for 2016).

Table 5: Population by group type, 2016 for Richtersveld Local Municipality

Race	2016	Percentage distribution
Black African	1 173	9.4%
Coloured	10 347	82.9%
Indian	50	0.4%
White	917	7.3%
Total	**12 487**	**100%**

Rural areas

Ward 1 includes rural areas namely Sendelingsdrif (Reuning), Kuboes, Eksteenfontein and ward 2 includes Alexander Bay, Sanddrif and Beauvallon. The Sendelingsdrif (Reuning) and Sanddrif fall within the prospecting focus area.

Dominant Economic Activity

Mining is the dominant economic activity followed by conservation in the focus area. The conservation area attracts thousands of tourists, and the mining industry employs many disadvantaged communities who rely on income from the industry.

The municipality experiences relatively high levels of unemployment and crime. Recent mine closure at Trans Hex Operations in Ward 2 has negatively impacted on the economic activities and income of people.

Other current employers in the Namaqualand include:

- Lower Orange River Diamonds (major)
- Richtersveld National Park and Orange River recreation tourism industry
- Alexander Bay coastal diamond mining

- Port Nolloth marine diamond mining
- Port Nolloth fishing industry
- Lekkersing quartzite tile mining
- Ailing copper mining industry in Springbok
- Dimension stone industry in the Springbok area

Unemployment

According to the Namakwa District Municipality IDP (2020/2021) there were a total number of 12 000 people unemployed in Namakwa in the year 2018, which is an increase of 1 760 from 10 200 in 2008. The total number of unemployed people in Namakwa is 9.4% (people seeking work). Namakwa experiences an annual average increase of 1.6% in the number of unemployed people.

Kuboes, Sanddrif and Lekkersing have an unemployment rate of between 54% and 76%.

Table 6: Number of Households, Population and Unemployment within the study site rural areas

Town	Households	Population	Unemployment
Kuboes	235	823	150
Eksteenfontein	125	719	41
Lekkersing	118	765	87
Sandrif	260	858	183
Alexander Bay	411	1760	55
Port Nolloth	3405	7562	610
Sendelingsdrif (Reuning)	130	224	16
Baken	Unknown	491	9

Water Supply (Domestic)

Richtersveld Local Municipality is an accredited Water Services Authority and provides potable water to Lekkersing, Eksteenfontein and Port Nolloth (Richtersveld IDP, 2020). Lower Orange River Diamonds Pty Ltd provides potable water to Reuning (Sendelingsdrif) and Baken towns and to its mines from pump stations on the Orange River which feed purification works at each of Baken and Reuning while further pump station at Baken provides water to Kuboes via a Kuboes pumping line on which the Kuboes purification works is located. (Draft Scoping Report, Lower Orange River Diamonds, Site Planning, 2020)

Electricity Supply

Electricity distribution in Richtersveld municipal area is done by the Richtersveld Municipality and Eskom respectively as per Table 7 below. (Richtersveld IDP, 2020)

Power supply to the West Richtersveld is by Eskom 66kV grid which feeds from the Beesbank substation in the south via the Bloeddrif substation (which supplies Bloeddrif mine and Baken mine with 22kV supply). The main Eskom line continues north-ward as a 66kV line past the Octha Substation (which supplies Reuning mine with 22kV supply) to Rosh Pinah in Namibia. (Draft Scoping Report, Lower Orange River Diamonds, Site Planning, 2020)

Table 7: Electricity Provision in Richtersveld

RICHTERVELD LOCAL MUNICIPALITY	ESKOM
Port Nolloth Town	Alexander Bay
Nollothville	Eksteenfontein
McDougalls Bay	Kuboes
	Lekkersing
	Sizamile
	Sanddrif

b) Description of the current land uses

According to the 2014 National Land Use Cover Map, the prospecting pockets correspond to the following land cover:

- Thicket/Dense bush
- Low Shrubland
- Bare-no vegetation
- Mine - bare

The current surrounding land uses to be considered include:

- Richtersveld National Park / Ais Ais Transfrontier Park (wilderness area)
- Ecotourism on the Orange River (sport fishing, river rafting, bird watching, Fish River Canyon Hike)
- RNP Campsites (Sendelingsdrift, Potjiesram)
- Diamond Mining
  - Oena Diamond Mine (Oena Mine Mineral lease Area)
  - Lower Orange River Diamonds Mineral Lease Area (Reuning, Aace Plant, Swartpoort)
- Goat grazing, livestock posts - livestock of the Nama people
- International border between Namibia and South Africa

All three prospecting pockets are located within the Richtersveld National Park on the Orange River, and prospecting/mining is prohibited in a legally protected area (new applications). Prospecting pocket 6 is located on the Orange River at Oena Mine and pockets 4 and 5 are located within the Lower Orange River Diamond Mining Right and Mineral Lease Area (Sendelingsdrif).

The proposed prospecting and bulk sampling activities will have the potential to have a significant impact on the ecotourism activities conducted along and on the Orange River.

There is a risk for poaching and illegal collection of nature resources during the prospecting period. It can however be argued that the risk should be moderate to low since Samara intends to employ 90% of its workforce from the communities of Sanddrift, Kuboes, Lekkersing and Eksteenfontein. These Richtersveld Communities are the informal land rights holders of the application areas.

There is also the potential risk that prospecting staff may illegally cross the Orange River (border) in the area of the workings. Samara will implement strict staff movement control in the areas of workings to avoid illegal border crossing. DIRCO will also be engaged as part of the EIA Process to verify and confirm the international border delimitation between South Africa and Namibia to avoid any international incidence. The confirmation on the location of the international border will be confirmed in the EIA Phase.

Importantly also, in the summer months, the local Nama herder livestock graze on the grass and riparian vegetation along the Orange River banks and islands. According to Samara, livestock farmers will continue to have access for their livestock to the Orange River. The prospecting method will not affect the normal and day to day flow of the Orange River, neither will it impact on any agricultural or farming activities taking place around the Orange River.

The impact from the existing mining operations within the Richtersveld National park on the park includes cumulative impacts of damage to cultural resources, conservation and or tourism. The prospecting and bulk sampling activities have the potential to contribute to these cumulative impacts from mining on the park.

c) Description of specific environmental features and infrastructure on the site

The below specific environmental features and infrastructure on site has been identified from desktop investigations and are still subject to in-depth field investigations.

Specific Environmental Features

- PRAA 2 and prospecting pockets 4, 5 and 6 are located within the legally protected Richtersveld National Park and Richtersveld Cultural and Botanical Landscape World Heritage Site, in which mining is prohibited by the NEMPAA. These pockets are considered no-go areas from a biodiversity perspective. The PRAA 2 is considered a wilderness area.
- PRAA 2 and the prospecting focus area is located in the Gariep Centre of plant endemism;
- All three prospecting pockets are associated with the endangered Lower Gariep Alluvial vegetation type, which is listed as a Nationally Threatened Ecosystem, 2011;
- Last untouched Meso-Orange River Terrace at Pooitjiesram within the RNP which carries endemic flora and fauna.
- Prospecting and bulk sampling will be undertaken below the Orange River 1: 100-year flood line;
- The portion of the Orange River where prospecting pockets 4, 5 and 6 are proposed is a channelled valley bottom wetland. The wetland is considered to be in a heavy critically modified ecological condition according to the NBA, 2018 dataset and is currently not protected (Ecosystem Protection Level (EPL)), and is therefore considered critically endangered (Ecosystem Threat Status (ETS)).
- The northeastern portion of PRAA 2 (including a portion of prospecting pocket 6) is located within a SubWMA that is considered an important fish corridor.
- *Namaquacypris hospes*, a fish species, is known only from the section of the Orange River below Augrabies Falls, it prefers rocky and cobble habitat. The mobilisation of sediment from the proposed prospecting and bulk sampling activities has the potential to result in habitat smothering and has the potential to have a significant impact on this species as well as the Labeos sp (mudfishes) and Labeobarbus sp. (yellowfishes) from within the river that also have the same habitat preference.
- Several protected tree species, *Boscia albitrunca*, *Vachellia erioloba* and Euclea pseudebenus, according to the National Forest Act, 1998 (Act No. 84 of 1998) are likely to be located throughout the focus area and within the prospecting pockets.
- Indigenous riverine forest along the Orange River.
- Several floral species (e.g. *Astridia herrei* (a critically endangered endemic) and *Conophytym bilobum* (a near threatened endemic) that are protected under Section 2 (Protected Species)

of the Northern Cape Conservation Act, 2009 (Act No. 9 of 2009) have the potential to be located within the focus area and within all the prospecting pockets.

- Potential existence of stone tool sites and Nama ancestral graves along the Orange River banks;
- Nama herder livestock posts along the Orange River banks.

Infrastructure or existing Mineral Rights/Lease areas on site

- Prospecting Pocket 6 falls within the Oena Mineral Lease Area.
- Pocket 5 and 4 falls within the Lower Orange River Diamonds Mineral Lease Area;
- The NamWater Rosh Pinah water abstraction point is directly downstream from potential prospecting pocket 4 (**Figure 13**).

Samara has agreed to enter into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining, between the 1: 100 year flood line and the south bank of the Orange River, within the area of the current LOR License. Oena does not object to the application.NamWater has been consulted during the Scoping Reports public review period and have submitted their initial comments stating prospecting activities are proposed downstream from their Rosh Pinah abstraction point. This is however incorrect since the abstraction point is downstream of the proposed workings. The potential impact on NamWater's abstraction point will need to be determined during the EIA Phase.

d) Environmental and current land use map

(Show all environmental and current land use features)

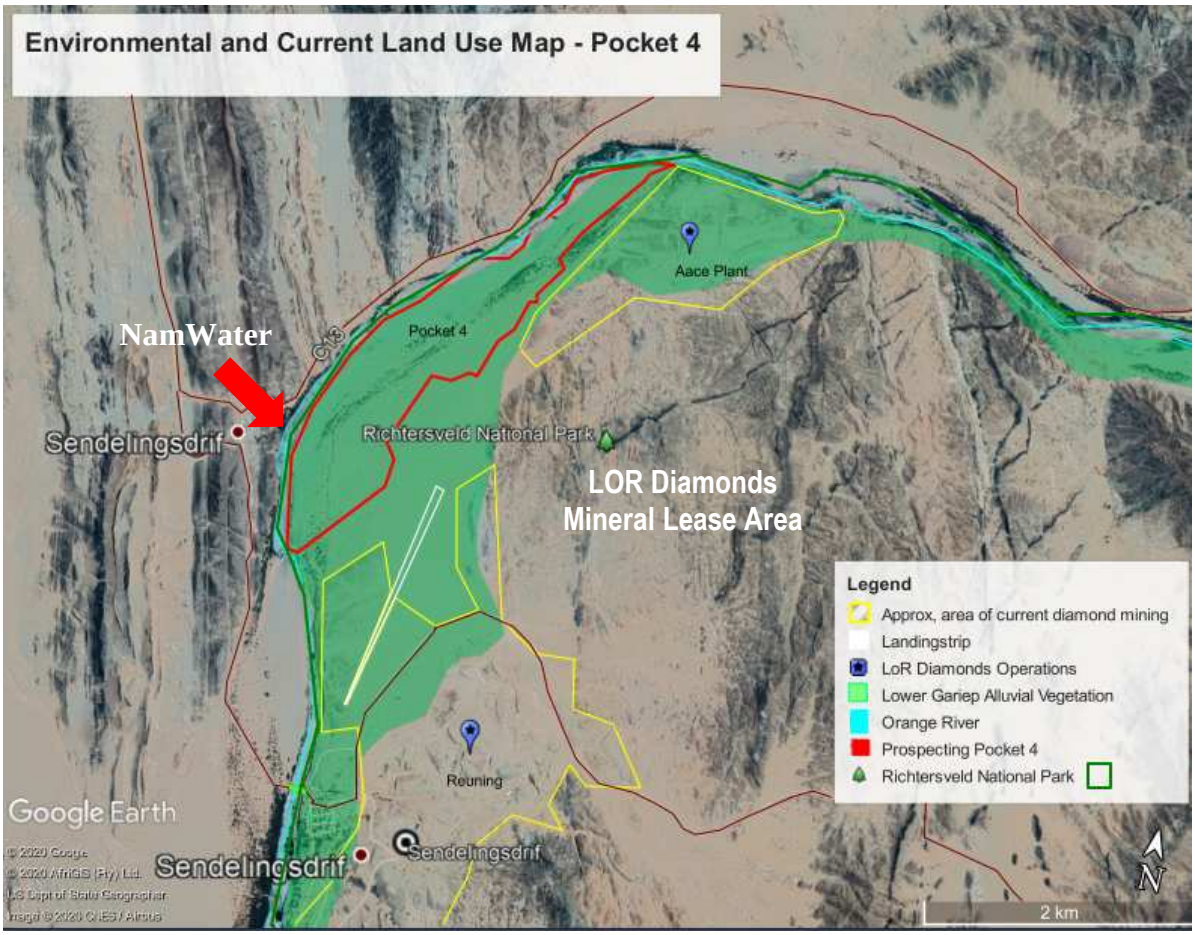


Figure 23: Environmental Features and Current Land use Map -Pocket 4

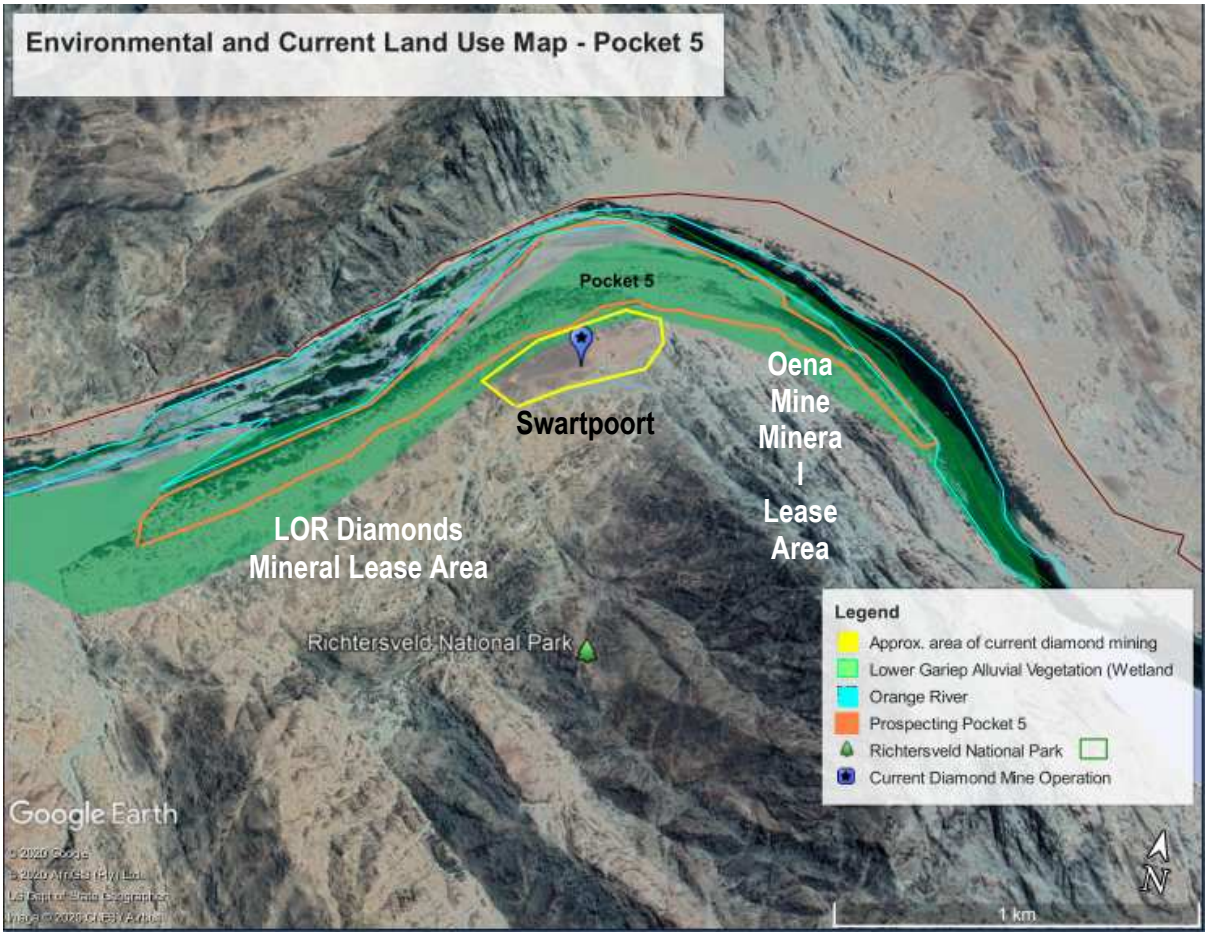


Figure 24: Environmental Features and Current Land Use Map - Pocket 5

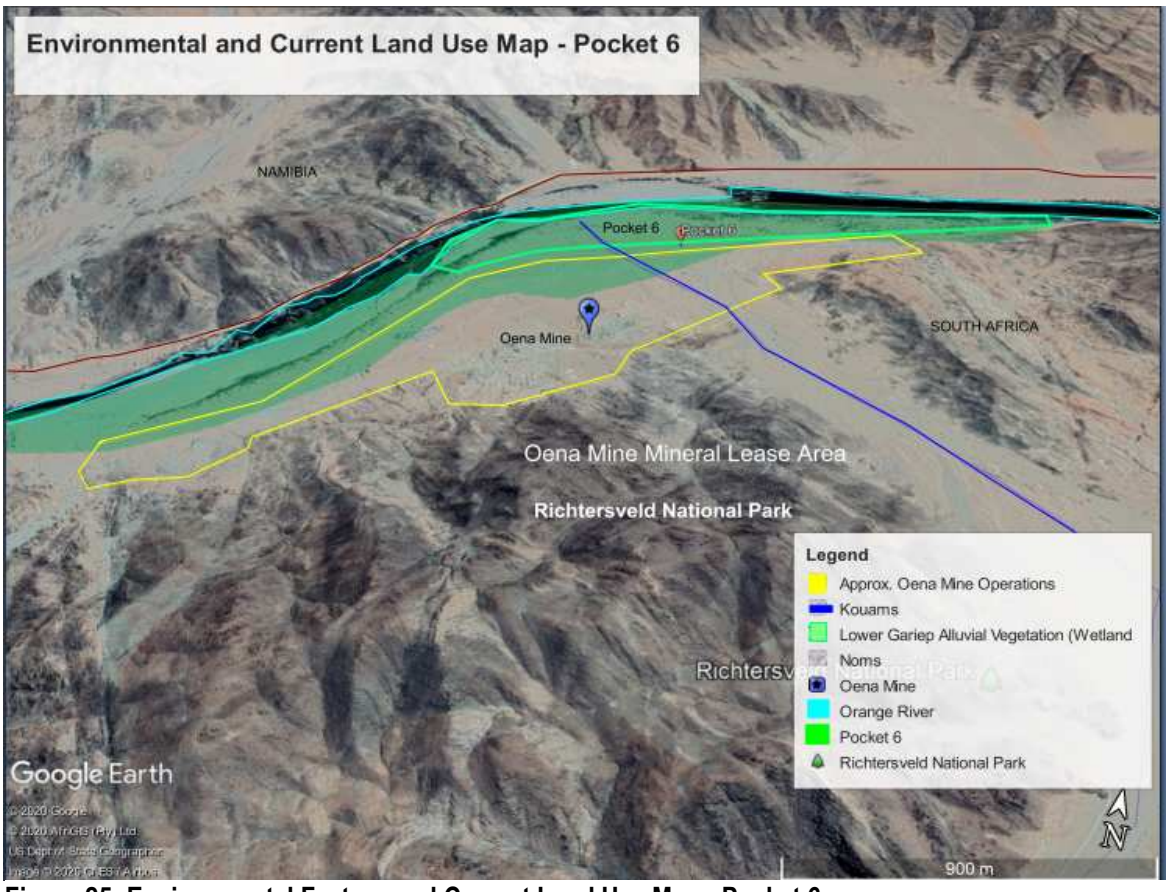


Figure 25: Environmental Feature and Current Land Use Map - Pocket 6

v. Impacts Identified

The NEMA Scoping Report template of the DMR requests that potential impacts are listed for the activity based on the initial site layout as informed by typical known impacts of activities, informed by the consultations with affected parties including as specified by a specialist. The significance, probably and duration of an impact should be gauged.

The Scoping Report lists the potential impacts identified from typical impacts known for such prospecting and bulk sampling activities, environmental attributes of the site and initial specialist inputs (**Appendix 6**). All research and screening of potential impacts, including significance rating are based on desktop investigations and are therefore considered 'worst case scenario' until able to confirm these through site investigations. The prospecting and bulk sampling activities will be conducted at a small scale in a phased manner which may reduct the potential risks significantly. This can however only be confirmed once a refined prospecting method is available and the locations of the focus areas and process infrastructure are determined. This is anticipated to be available in the draft EIR and EMPR reports. The list of potential impacts has been subject to a 30 day public review and comment period to identify any additional impacts.

The list of potential impacts is therefore considered as informed by:

- Informed by known typical impacts
- As identified by a Specialist
- As per the inputs from the I&APs

Table 8: Identified Impacts (screening assessment)

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
Non-Invasive Prospecting Activities (Desktop Study and Geological Mapping)	Selection of bulk sampling trench positions and location of fly-camp (per pocket)	Optimal planning of trenching locations within the identified prospecting pockets to avoid impact on existing mineral lease areas and unnecessary alternations to river active channel.	Known, Specialists	Positive	3	1	1	3	15	Moderate
Invasive Bulk Sampling Activites										

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
Bringing machinery , equipment and heavy vehicles to site during site establishment	Traffic	Increased vehicle movement along Halfmens Pass and existing unsurfaced mine and park roads	Known	Negative	3	3	1	2	18	Moderate
Clearing of vegetation and removal of topsoil, overburden during site establishment	Impact on Terrestrial Fauna and Flora	Habitat destruction, loss of floral and faunal communities, consequently impacting on faunal and floral biodiversity within the focus area, impacting on overall conservation targets for defined CBA's and protected areas	Known, Ecological Specialist	Negative	3	3	5	3	33	High
	Impact on Air Quality	Increased dust levels close to Sendelingsdrif. Increased dust levels along Orange River may pose a nuisance to ecotourism activities (river rafting, fishing, bird-watching) and motorists/tourists along Namibia C13 road alongside Orange River)	Known	Negative	2	1	2	2	10	Low
	Visual Impact	Impact on visual exposure and visibility (perception of sensitive receptors) due to vegetation clearance for physical infrastructure, erosion and alteration to local topography add to contrast in the landscape and will be visible to receptors	Visual Specialist	Negative	3	2	2	3	21	Moderate
Stockpiling of topsoil and overburden during site	Soil	Loss of topsoil resource (wind-erosion, scouring by concentrated run-off)	Known	Negative	2	1	5	2	16	Moderate

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
establishment and bulk sampling	Surface Water Quality	Stockpiling of topsoil and overburden to be used as part of 'temporary' stormwater management infrastructure upgradient of the workings may result in erosion, increased sediment load during rainfall events, change the paths of local water flow		Negative	3	1	2	2	15	Moderate
Establish, develop and maintain access roads, temporary roads to pockets, parking, offices, ablution facilities, storage facilities, fences and process plant site	Impact on Surface Water	Vegetation clearing, soil compaction, erosion, contamination and pollution of the local environment (including surface and groundwater	Hydrological Specialist	Negative	3	1	1	4	18	Moderate
	Impact on Aquatic Ecology (Orange River)	Soil compaction, damage/ or removal of vegetation and altered runoff	Aquatic Specialist	Negative	3	1	5	3	27	High
Construction of small temporary diversion in Orange River and impeding of water flow to limit ingress of water to bulk sampling trenches	Impact on biodiversity	Diversions and/or destruction within and around the Orange River will result in the significant loss of surrounding landscape features, and faunal habitat, impacting upon faunal species diversity and abundance;	Aquatic Specialist	Negative	3	3	5	4	36	High
	Impact on aquatic biota and community structure of Orange River	Alter aquatic habitats for aquatic macro-invertebrates and fish, and will have an impact on flow dependant species;	Aquatic Specialist	Negative	2	3	3	3	18	Moderate
		Increased sedimentation within Orange River will affect habitat integrity and aquatic biota (biota reliant on clear fast-flowing water, fish community rely on deeper refugia which can be silted up if disturbed or not managed.	Aquatic Specialist	Negative	3	3	2	4	27	High

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
	Impact on surface and groundwater	Alter the river coarse and flow characteristics, increased sedimentation, increased water flow velocity and or reduced river flow volume.	Hydrological Specialist	Negative	3	2	2	3	21	Moderate
Bulk Sampling, trenching, processing and operation of onsite infrastructure, Rotary Pan Plant	Surface Water Quality	Operation of plant for screening, concentration, processing may cause pollution (including Petro-chemicals, erosion, increased sediment load during high rainfall events)	Hydrological Specialist	Negative	3	2	2	2	18	Moderate
		Altering the bed, banks and characteristics of the watercourse, increase in sediment load during high rainfall events (elevated TSS)		Negative	3	3	2	3	24	Moderate
	Impact on Air Quality	Vehicle, equipment and machinery entrained dust, wind-erosion from exposed surfaces (high wind speeds in Richtersveld)	Known, desktop research	Negative	3	2	2	2	18	Moderate
	Impact on Biodiversity	Loss of habitat, increased erosion, leading to poor growth and establishing conditions for floral species and consequently, providing sub-optimal habitat conditions for faunal species due to movement and use of machinery, vehicles and equipment onsite	Ecological Specialist	Negative	2	3	2	3	16	Moderate
		Loss and fragmentation of already range-restricted species		Negative	2	6	5	4	30	High
		Fragmentation and habitat loss (floral and fauna species). Permanent surface scarring from bulk sampling will reduce favourable habitat for floral and faunal species		Negative	3	3	5	2	30	High

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
		Bulk sampling within the river and riparian zone lead to loss of favourable foraging habitat for avifauna and bats both in and adjacent to the prospecting areas		Negative	2	3	5	3	22	Moderate
		Impact on both in and downstream of the pockets on fauna species which are reliant on in-stream habitat and food resources		Negative	3	3	3	3	27	High
		Increased runoff and erosion resulting in a further loss of faunal and floral habitat and increased sedimentation of the Orange River		Negative	3	3	2	3	24	Moderate
		Risk of discharge of contaminated water from prospecting operations has a high likelihood of causing some degree of contamination to the receiving environmental including the Orange River leading to altered floral and faunal habitat		Negative	2	3	2	3	16	Moderate
		Resulting erosion may increase runoff and sediment loads to the Orange River and impact on water quality and could negatively affect fauna and flora		Negative	3	3	3	4	30	High
		Introduction of foreign material leads to the introduction of alien invader species, impacting on floral characteristics of the focus area. Given the location of prospecting activities alongside the Orange River, an additional pathway for the spread of alien invader species is posed; alien invader propagules can easily be carried downstream of the Orange River resulting in potential prolific spread of such species		Negative	2	1	3	3	14	Moderate

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
		outside the focus area;								
		Increased personnel onsite may result in increased risk of harvesting/overutilization of species of conservation concern. Increased personnel within the focus area inherently brings an increased risk for poaching, threatening current faunal populations		Negative	2	1	2	3	12	Low
		Prospecting within the Richtersveld Mountains, may lead to habitat and species losses within the area as personnel and individuals posing as mine personnel may move into the surrounding areas in order to harvest these species illegally.		Negative	3	2	2	2	18	Moderate
		Loss of habitat associated with Lower Gariep Vegetation Type (endangered ecosystem) and floral and faunal species within the ecosystem. Risk of fragmentation due to potential barriers to the dispersal of such species through the vegetation type		Negative	3	5	5	4	42	High
		Dumping of waste materials in the surrounding habitat will result in loss of floral and faunal habitat including potential impacts on the surrounding habitat, likely to push faunal species out of their current home ranges, resulting in increased competition for space and resources within the focus area and in the surrounding area;		Negative	2	3	2	2	14	Moderate

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
	Impact on Aquatic Ecology (Orange River) - Fish species	Mobilisation of sediment from the proposed prospecting and bulk sampling activities will result in habitat smothering and have a significant impact on *Namaquacypris hospes* as well as the Labeo sp. (Mudfish) and Labeobarbus spp. (Yellofishes) from within the river that also have this habitat preference;	Aquatic Ecologist	Negative	3	3	3	4	30	High
		Spread of alien invasive species due to edge effects caused by the clearing of vegetation for roads, prospecting, bulk sampling activities		Negative	2	3	2	3	16	Moderate
		Soil and water contamination from oils and hydrocarbons		Negative	3	2	2	2	18	Moderate
		Impact on functioning of weirs in the Orange River and affect their accuracy		Negative	2	6	3	4	26	High
		Contamination of soil and surface water and removal of vegetation leads to inability to support biodiversity		Negative	2	3	2	2	14	Moderate
		Clearing of vegetation results in exposure of soil which lead to increased runoff and erosion and ultimately increased sedimentation and changes to the geomorphological processes and sediment balance		Negative	3	3	3	4	30	High

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
	Impact on Aquatic Ecosystem - downstream Orange River Estuary (RAMSAR Site)	Sedimentation will affect the estuary function at Alexander Bay, resulting in it possibly closing if there is too much sediment deposition within t he estuary		Negative	2	6	5	4	30	High
	Visual Impact	Impact on landscape and visual character of region and sense of place associated with surroundings	Visual Specialist	Negative	3	2	2	3	21	Moderate
		Indirect visual exposure through fugitive dust generated by bulk sampling, processing and vehicle movement on unsurfaced roads		Negative	3	1	2	3	18	Moderate
		Direct visual exposure will take place due to prospecting infrastructure visible to residents in immediate vicinity and tourists visiting the Richtersveld National Park		Negative	3	2	2	3	21	Moderate
		Impact on sense of place of Orange River (impact on views of unimpacted floodplain, the appearance of the area, riparian vegetation appearance, water clarity and instream habitat)		Negative	3	2	2	4	24	Moderate
		Lighting Pollution - Lighting visible during day and night likely to cause adverse impact during night. Contribute significantly to sky flow and further reduce nigh sky quality		Negative	3	2	2	4	24	Moderate
	Impact on Air Quality	Increased dust levels due to vehicle entrained dust along unsurfaced roads	Known	Negative	3	1	2	2	15	Moderate
		Low increase in dust due to tipping of gravels into Rotary Pan (wet process)		Negative	3	1	2	1	12	Low

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
	Impact on ambient noise levels	Increased noise levels due to use of machinery, heavy vehicles, operation of pumps in the river and operation of Rotary Pan Plant	Known	Negative	3	1	2	2	15	Moderate
	Impact on Heritage and Palaeontological Resources	Potential impact on stone tool sites, Nama ancestral graves along the Orange River banks during bulk sampling, river diversions, creation of new access roads to prospecting pockets along river bank.	Archaeologist Community members	Negative	2	5	5	2	24	High
		Although fossils are scarce in the Quaternary sand and sandy soils that dominate the study site, the possibility of finding any in the study area should not be dismissed—potential impact on stromatolites.	Palaeontologist	Negative	1	1	5	4	10	Low
	Socio-Economic Impact	Bulk sampling activities may impact on the Orange River ecotourism (river rafting, sport fishing bird watching, RNP campsites)	Visual Specialist, Aquatic Specialist	Negative	2	5	2	4	22	Moderate
		Machines, equipment, fuel, oil and batteries will be stored onsite. These resources attract thieves and thus pose a security risk.	Known	Negative	2	2	2	2	12	Low
		Increase in job opportunities, skills development in the local area	Known	Positive	3	3	2	1	18	Moderate
		Illegal crossing of the border	Known, I&AP	Negative	2	2	2	3	14	Moderate

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
Abstraction and filtration of sediment-laden water from the excavations to be used in the plant with the release of filtered/clarified water back to the river channel downstream of the workings	Impact on surface water quantity and quality	Reduction of river flow volume, changes in water quality (decreased Total Suspended Solids - TSS)	Hydrological Specialist	Negative	3	3	2	3	24	Moderate
Stockpiling of diamond depleted material from the processing plant (waste material) to be used for concurrent rehabilitation of mined-out areas	Impact on surface water	Erosion, increased sedimentation load during rainfall events, change in paths of local water flow	Hydrological Specialist	Negative	3	1	2	2	15	Moderate
Ablution, fuel storage	Impact on surface and groundwater quality	▪ Possible e-coli contamination from on-site sanitation ▪ Possible Petro-chemical contamination from machinery ▪ Increased risk of erosion and sediment load	Hydrological Specialist	Negative	2	3	2	3	16	Moderate
Use and movement of vehicles along access roads	Impact on biodiversity	Loss of habitat, increased erosion, leading to poor growth and establishing conditions for floral species and consequently, providing sub-optimal habitat conditions for faunal species	Ecological Specialist	Negative	2	3	2	3	16	Moderate
	Surface water	Change in the localised drainage and flow paths with an increased localized runoff-flow	Hydrological Specialist	Negative	3	1	2	3	18	Moderate
		Altering the bed, banks and characteristics of the water course-both volume and velocity		Negative	3	1	2	3	18	Moderate

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
		impact on surface water quality from possible e-coli contamination from on-site sanitation, petrochemical contamination from machinery, increased risk of erosion and sediment load, Elevated TSS from the excavations, and or a decrease in TSS from the release of clarified return water to the river course		Negative	3	1	2	3	18	Moderate
	Traffic impact	Increased vehicle movement along Halfmens Pass, existing unsurfaced mine and park roads (within restricted diamond mining areas)	Known	Negative	3	2	2	1	15	Moderate
Decommissioning and Final Rehabilitation										
Backfilling and rehabilitation of trenched areas in Orange River and removal of equipment and infrastructure	Impact on Orange River ecosystem	Increased sedimentation by backfill material, soil and surface water contamination from hydrocarbons	Aquatic Ecologist	Negative	3	3	2	3	24	Moderate
	Impact on biodiversity (Flora)	Establishment of alien vegetation during revegetation of disturbed areas	Known	Negative	2	2	3	2	14	Moderate
	Impact of Groundwater	Erosion, increased sediment load, alteration of the watercourse	Hydrological Specialist	Negative	3	3	2	2	21	Moderate
	Impact on Surface Water	Potential contamination of surface water from hydrocarbon spillages, dismantling of fuel storage, waste disposal practice		Negative	2	2	1	2	10	Low

				SIGNIFICANCE						
Activity	**Aspect**	**Possible impact**	**Informed by Known/I&AP/Specialist**	**Status**	**Probability**	**Extent**	**Duration**	**Intensity**	**Significance Score**	**Rating**
		Increased risk of erosion and sediment load if there is a degrading of the rehabilitation areas		Negative	2	3	2	3	16	Moderate
	Impact on Air Quality	Increased dust levels along existing mining operations and at rural areas (Sendelingsdrif) due to backfilling including vehicle entrained dust from unsurfaced roads	Known	Negative	3	1	2	1	12	Low
	Increase noise levels	Use of machinery to backfill excavations, heavy vehicles to remove infrastructure from site	Known	Negative	3	1	1	2	12	Low
	Traffic Impact	Increased vehicle movement along Halfmens Pass, existing unsurfaced mine and park roads (within restricted diamond mining areas)	Known	Negative	3	2	1	1	12	Low
	Socio-Economic Impact	Loss of job opportunities due to cessation of prospecting and bulk sampling (jobs created and lost)	Known	Negative	2	1	2	3	12	Low
On-going sampling and monitoring of groundwater, surface water and water quality	Ground and Surface water	Degrading of rehabilitation site, increased erosion, increased sediment load, long-term alteration of watercourse	Hydrological Specialist	Negative	3	3	2	1	18	Moderate

vi. The methodology used in determining the significance of impacts

Based on the NEMA Scoping Report template of the DMR it requests that potential impacts are listed for the activity based on the initial site layout based on the following:

- As informed by both typical known impacts of activities and informed by the consultations with affected parties or specified by a specialist
- Significance of impact
- Probability of impact
- Duration of impact

Informed is therefore considered as:

- Informed by known typical impacts
- As identified by Interested and Affected Parties
- As identified by a Specialist

The list of identified impacts for the Samara project has been evaluated by considering several rating scales as provided under Section 3 (iv) of this report. These ratings include: extent, duration, intensity, significance, status of impact, probability. The significance of impacts has been calculated as follows:

Significance = (Extent + Duration + Intensity) X Probability

The preliminary rating of these impacts will be refined during the EIA Phase.

vii. Positive and negative impacts that the proposed activity (in terms of initial site layout) and alternatives will have on the environment and community affected

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

Important to note is that the likely prospecting focus area within PRAA 2 is presented on the Site Plan attached as **Appendix 4** and is still subject to finalisation. Similarly, the location of the processing infrastructure must still be finalised based on the recommendations to be made by specialists in the field of freshwater, biodiversity, visual, hydrological and geohydrological in order to avoid/minimise impacts on the riverbed, embankments and active channel. A more detailed Site Plan illustrating the confirmed prospecting focus area and location of processing infrastructure will be included in the draft Environmental Impact Report for the application.

There is, therefore, still only an initial site plan for prospecting focus areas, which is still subject to change.

ADVANTAGES THAT THE PROPOSED ACTIVITY MAY HAVE FOR THE COMMUNITY:

Samara is currently formulating a Social Development Plan as part of the Prospecting Right Applications. The advantages of the project are, therefore, measures against the goals of the SDP. An overview of the SDP was provided to stakeholders and authorities during the virtual public meetings undertaken on 14 December 2020.

Positive socio-economic impact:

- **Lease Agreement** – Samara will need to enter into a lease agreement with the Richtersveld CPA/communities for the use of their land for prospecting activities. Therefore rental income might emanate from the application for the community, if the application process proceeds and the right are granted by the DMRE.

- **Job creation –** 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.

  90% of Samara's labour force will be sourced from the local communities of Koeboes, Sandrift, Lekkersing, Eksteenfontein, and Sendilingsdrift. This will ensure local 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.

  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.

- **Small Enterprise Development:** Samara proposes to avail land to local artisanal miners and support them with the necessary equipment to ensure their gradual growth and sustainable development.

- **Agriculture –** Agricultural land will remain protected. Samara proposes to 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 capacitate local farmers. Samara also proposes to set up a trust that will serve as a financial support for agricultural development in the Richtersveld area.
- **Social Development -** Samara proposes to partner with provincial and local government to ensure that local schools, clinics and hospitals are operating optimally and will also prioritise school transportation and feeding schemes.
- **Innovative mining –** Samara is busy formulating an innovative diamond mining method with fewer environmental risks that currently experienced from existing diamond mining operations. The mining/prospecting model will also focus on driving a Social Development Plan to benefit the Richtersveld Community. The prospecting method currently excludes the need for a slimes dam and use of chemicals.

Disadvantages/negative impacts that the proposed activity will have on the environment and affected communities:

- PRAA 2 falls within a protected area (national park, world heritage site), wherein mining and prospecting is prohibited.
- Impact on soils
  - Soil compaction,
  - Increased runoff resulting in erosion of river embankment,
  - Loss of sandy topsoil required for rehabilitation purposes
  - Soil contamination from hydrocarbon spills from excavation and rehabilitation works
- Impact on surface and groundwater
  - Water will be abstracted from the river, yet it is understood that the net loss to the Orange River will be zero;
  - 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.
  - The Rotary Pan Plant might cause surface water pollution.
  - Petro-chemicals spillages – particularly from heavy machinery
  - Increased sediment loads (TSS) due to the mining process and disturbance of the alluvium in and along the riverbanks
  - Possible e-coli contamination from on-site sanitation
  - Potential impact on the groundwater quantity by lowering the static water level and localised dewatering during bulk sampling;
- Impact on Terrestrial Biodiversity
  - The ecosystem is extremely ecologically important and sensitive, and the proposed prospecting and bulk sampling activities pose a very significant risk to the ecology and biodiversity of the area.
  - Prospecting pose a threat to the endangered Lower Gariep Alluvial Vegetation type;
  - Loss of habitat within this endangered ecosystem will further impact on the floral and faunal communities within the ecosystem. An estimated 11 endemic species are found within the vegetation type, which having already restricted distributions will be at further risk of fragmentation especially as the

prospecting pockets will pose potential barriers to the dispersal of such species throughout the vegetation type.
- The risk is further increased, especially for prospecting pockets 4, 5 and 6, which fall within a Protected Area, and CBA1. The focus area also falls within the Gariep Centre of Plant Endemism (GC) which is associated with a high diversity of endemic plant species. As such, range restricted endemic plants will be threatened by the proposed prospecting activities.
- Several floral and faunal Species of Conservation Concern, endemic to the region, may be threatened by fragmentation and habitat destruction resulting from prospecting and bulk sampling activities.
- Potential impact on ancient gravel terrace (Potjiesram) – No-go area

- Impact on the Aquatic Ecosystem
  - The prospecting activities will take place directly adjacent and within the delineated boundary of the Orange River. The potential impact on the Orange River is, therefore, significant.
  - The Richtersveld National Park has a significantly high eco-tourism aspect including but not limited to indigenous culture, rich biodiversity, river rafting, Fish River Canyon hike, sport fishing along the Orange River, birdwatching, and desert living. The proposed prospecting and bulk sampling activities will have the potential to have a significant impact on the ecotourism of the area.
  - The mobilisation of sediment from the proposed prospecting and bulk sampling activities has the potential to result in habitat smothering and has the potential to have a significant impact on Namaquacypris hospes, a fish species, is known only from the section of the Orange River below Augrabies Falls as well as the Labeos sp (mudfishes) and Labeobarbus sp. (yellowfishes) from within the river that also have the same habitat preference.
  - The prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thus the RAMSAR wetland system. Such impact, is regarded as significant at all, will be unacceptable.
- Impact on Heritage and Palaeontological features
  - Potential impact on stone tool sites and Nama ancestral graves
  - Potential impact on stromatolites.
- Visual Impact
  - The prospecting and bulk sampling activities could have a negative impact on the landscape character, sense of place and visual quality of the area.
  - The prospecting and bulk sampling activities are likely to contribute significantly to sky glow and further reduce night sky quality.

Affected Communities

- **Disputes might arise between the communities** with regards to negotiations for lease agreement and in the process of obtaining community consent. (Community engagement in January 2021 it pivotal to provide clear project information, clear intentions with prospecting and engagement plan in terms of community consent and the EIA Process.)
- Impact on cultural heritage (potential impact on stone tool sites, Nama ancestral graves). To address the negative impact Samara has commissioned a full Heritage and Palaeontological Impact Assessment Study to survey the application area for potential cultural and heritage resources that need to be protected during prospecting and bulk

sampling. The completion of these studies will require engagement with the communities.

Several mitigation measures combined with other design management mechanisms and well-managed construction and implementation practices significantly reduce the negative impacts. Despite all of this, the risk the project poses still remains high.

viii. Possible mitigation measures that can be applied and the level of risk

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

At this point in time, specialist investigations have identified potential negative impacts that need to be investigated further during the EIA Phase. No mitigations have been provided by specialists at this stage, except for the Hydrological and Hydrological Study, which implies that mitigations measures can only be formulated and presented once the refined prospecting method is available, locations of prospecting focus areas are determined and the site has been investigated through in-depth field investigations.

The Terrestrial Biodiversity Assessment finds that Prospecting pockets 4, 5 and 6 are located within a legally protected area in which mining is not permitted, as specified by the Mining and Biodiversity Guidelines (2013) and by the Protected Areas Act, 2003 (Act No. 57 of 2003). As such, prospecting pockets 4, 5 and 6 can be considered as no-go areas from a biodiversity perspective due to their location within a legally Protected Area and must therefore be avoided. If the application proceeds, it is deemed essential that all aspects of the proposed prospecting and 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.

According to the Aquatic Ecological Scoping Report, the risk to the Orange River can be significantly reduced if prospecting and bulk sampling activities do not take place within the active channel of the Orange River and are undertaken in the low flow season with all rehabilitation completed before the rising of the river. These mitigation measures, combined with other design management mechanisms and with well-managed construction and implementation practices, could potentially lead to significantly reduced impacts. Despite all of this, the risk the project poses still remains high. 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.

The Visual Scoping Report states that management and mitigatory measures will be presented in the full Impact Assessment in line with the mitigation hierarchy, as advocated by the DMR (2013).

Possible mitigation measures for impact on heritage and cultural resources within the Richtersveld Cultural Landscape should as a priority be avoidance or designation as no-go areas. Any impact upon these features is permanent and non-reversible. For stone tool sites current legislation allows from mitigation measures to be implemented. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/ recorded, and a management plan can be developed for future action. Those sites that are not impacted can be written into a management Plan.

The Hydrological and Hydrogeological Scoping Report states that good monitoring and management, good housekeeping on-site during all phases of the project, and diligent attention to details during rehabilitation could result in a fully restored site. Mitigation includes a long-term monitoring programme to be developed based on guidelines documented in the Best Practice Guideline G3-Water Monitoring Systems (2007) available from DWS. A number of mitigation measures and management protocols will be defined based on the site-specific assessment and investigation. In general, the following principles will be applied:

- Short term mitigation measures (Construction and Operational Phases)
  - Site-specific mitigation measures must include at least:
    - Pave and bunded areas around workshops
    - On-site sanitation in accordance to DWS Guidelines
    - Surface water from excavations or groundwater from pits must be pumped to designed impoundments for treatment/filtration before reintroduction into the environment
  - Runoff from stockpiles must be contained and pumped to pollution control dams/tanks for treatment/filtration before being reintroduced into the environment
  - Spills must be cleaned up according to relevant guidelines
  - A Water Management Plan should be implemented, including the monitoring and assessment of the changes in water levels and water quality
- Long term (Operation, Decommissioning & Post closure)
  - The Water Management Plan should be implemented, including the monitoring and assessment of the changes in water levels and water quality;
  - Runoff from stockpiles must be contained and pumped to pollution treatment dams/tanks for treatment/filtration before being reintroduction into the environment;
  - Spills must be cleaned up according to relevant regulations;
  - Full and comprehensive remediation of all excavations must be done in full compliance with the environmental guidelines. Correctly filled and compacted material will ensure that the rehabilitation will, as far as possible, return the excavations to their natural – pre-bulk-sampling state.

Overall rehabilitation is proposed as a mitigation to the majority of the projects negative impacts and thus the EIA will include rigorous assessment of the rehabilitation methods available and their likelihood of successful rehabilitation of impacted areas to pre-disturbance state.

ix. The outcome of the site selection Matrix. Final Site Layout Plan.

(Provide a final site layout plan as informed by the process of consultation with interested and affected parties)

Given the site sensitivity, the potential prospecting focus area within PRAA 2 has been confirmed on a **Site Plan attached as Appendix 4.** The potential prospecting focus areas have been identified and presented in the Scoping Report**.**. These prospecting focus area positions have not been finalised and is still subject to finalisation.

The location of processing infrastructure must still be finalised based on the recommendations to be made by specialists in the field of freshwater, biodiversity, visual, hydrological and geohydrological to avoid/minimise impacts on the riverbed, embankments and active channel. A more detailed Site Plan illustrating the prospecting focus area and location of processing infrastructure will be included in the draft Environmental Impact Report for the application. I&APs

will have the opportunity to comment on the Site Plan during the Draft Environmental Impact Report and Environmental Management Programme 30 public review and comment period.

The finalised Site Plan will subsequently be included in the Final EIR & EMPr submitted to the DMRE for approval.

x. Motivate why no alternative sites where considered

The location of the prospecting pockets is based on the location of the known alluvial gravel pockets on the Orange River bed, bank and active channel. No property alternatives have been considered since historical data and current diamond mining confirms the presence of alluvial deposits on the property.

Alternative positions will be considered for the processing infrastructure based on the outcome of freshwater, biodiversity, visual, hydrological and geohydrological specialist investigations in order to avoid/minimise impacts on the riverbed, embankments and active channel.

Given the sensitive nature of the Orange River, it is imperative to first collect enough physical field data through specialist investigations to ensure that all planning of the proposed development is cogently considered and all project plans and designs adequately consider the characteristics of the river system.

The application site is subject to a significant legal implication, and in terms of the Section 22 (b) of the NEMA EIA Regulations of 2014, such application should not proceed to the EIA Phase. If the application is not permitted to proceed at the site based the legal implication, Samara may need to proceed with PRAA 1 as the alternative site, albeit a separate application.

Samara is familiar with the legal implication relevant to the site yet is convinced that the economic advantages of prospecting in the area should be considered. There are significant socio-economic advantages for the Richtersveld Community to be implemented in line with a Social Development Plan being formulated to form part of the prospecting right application.

Over the past 30 years the Richtersveld provided a number of mining opportunities however the Local People have not been part of the local Economic mainstream provided by the mining opportunities. Most of the People only participated as labours with no proper skills and capacity for Economic sustainability. The exclusion of the local people from the mainstream Economic have created a high level of unemployment, poverty, low level of skills and a disintegrated local Economic development. Previous mining operators deliberate ignored initiatives such as small enterprise development, social development, skills development the improvement of housing sanitation and Black Economic development.

Due to the absence of the above-mentioned initiatives local communities where not capacitated hence at the end of the mining operations in the aera most of the Richtersveld and surrounding areas where deeply affected by poverty and unemployment.

The abovementioned challenges remain unresolved and therefore it remains Samara’s intension to use the new mining prospecting right as a strategic mechanism to achieve the following:

- Implement our operations within the confined of a multidisciplinary collaboration approach to ensure complaints with all legislations and policies with the view to ensure future sustainability;
- To design a stakeholder relations framework to guide all operations and align them to strategic outputs of the National development plan, (NDP) Provincial growth and development strategy (PGDS) Integrated development plan(IDP), SDF and EMF of the area.
- It remains a priority to Samara to align our Social Economic programmes to National policies and strategies aiming to address economic development challenges at a local level. (*Motivation for Prospecting Right, Samara*)

xi. Statement motivating the preferred site

Provide a statement motivating the final site layout plan proposed.

Please refer to section xi. and x. above. Only the positions of the target prospecting pockets have been confirmed. The site layout plan has not been finalised since it is still subject to recommendations from specialists.

(i) Plan of Study for Environmental Impact Assessment Process

i. Description of alternatives to be considered including option of not going ahead with the activity

The following alternatives will be considered during the EIA Phase:

- Location alternatives will be considered for processing infrastructure including site camp (whether full established camp or fly camp);
- Design and layout alternatives will be considered for the processing infrastructure;
- Operational aspects of the activity (clarified water released back into the river or either supply communities with water by pumping it into municipal reservoirs);
- No-go alternative given the legal protection status of the application area as the Richtersveld National Park and World Heritage Site.

ii. Description of aspects to be assessed as part of the Environmental Impact Assessment

(The EAP must undertake to assess the aspects affected by each mining activity whether listed or not, including activities such as blasting, Loading, hauling and transport, and mining activities such as Excavations, stockpiles, discard dumps or dams, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, stormwater control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)

See Section 3(v)(viii) for aspects to be assessed as part of the EIA Phase. Specialist studies will be commissioned to investigate the impacts of bulk sampling activities on the following environmental attributes:

- Visual Impact
- Surface and Groundwater
- Terrestrial Biodiversity (Fauna, Flora and Avifauna)
- Aquatic Ecology (Orange River and associated flood plain inclusive of Fish Survey and Fish causeway design)
- Heritage Impact Assessment and Palaeontological Impact Assessment

The EAP will investigate the impacts on:

- Ambient noise;
- Ambient air quality;
- Traffic;
- Socio-Economic Impact.

The Specialists and EAP will assess the prospecting and bulk sampling rehabilitation measures proposed for implementation and likelihood of to success and will be conducted as part of the EIA Phase.

iii. Description of aspects to be assessed by specialists

Specialists have already been involved since the Scoping Phase to screen potential impacts from the project on environmental aspects. These specialist Scoping Reports are included under Appendix 6. Each specialist scoping report details the aspects to be assessed and Terms of Reference for the EIA Study (description of aspects to be assessed). The specialists will conduct field investigations during January to February 2021 and produce Impact Assessment reports by March to April 2021. The outcome of the specialist investigations will be used as input in the preparation of the EIR & EMPr. The list of aspects to be assessed and relevant appointed specialists is included in Table 9 below.

Table 9: Aspects to be assessment by Specialists

No.	Aspect	Specialist	Company	Specialist Study
1	Terrestrial Biodiversity (Fauna, Flora, Avifauna)	Stephen van Staden Kim Marais S.L Daniels	Scientific Terrestrial Services (SAS)	Terrestrial Biodiversity Impact Assessment
2	Aquatic Ecosystems including Wetland	Stephen van Staden Kim Marais Leandra Jonker	Scientific Aquatic Services (SAS)	Freshwater Ecosystem Impact Assessment Study
3	Cultural, Heritage important resources including Palaeontology	Eric Mathoho Dr J. Du Randt Neels Kruger	Millenium Heritage Dr. J Du Randt Exigo Sustainability	Heritage and Palaeontological Impact Assessment
4	Surface and Groundwater	Robert Crosby	AGES (Pty) Ltd	Hydrological and Hydrogeological Impact Assessment
5	Visual	Stephen van Staden Sanja Erwee	Scientific Aquatic Services (SAS)	Visual Impact Assessment

iv. Proposed method of assessing the environmental impacts including the method of assessing alternatives

A list of potential impacts has been identified during the Scoping Phase and the aim of the EIA process is to predict the nature of the impact, rank and quantify it. From the rating system, the impacts of most significance can be highlighted. The list of impacts will be further assessed and developed based on the recommendations by specialist investigations.

According to the EIA Regulations of 2014, a **significant impact means**:

"an impact that may have a notable effect on one or more aspects of the environment or may result in non-compliance with accepted environmental quality standards, thresholds, targets and is determined through rating the positive and negative effects of an impact on the environment based on criteria such as duration, magnitude, intensity and probability of occurrence".

The list of identified impacts for the Samara project will be evaluated by considering several rating scales as listed below. These ratings include: extent, duration, intensity, significance, status of impact, probability. The significance of impacts will be calculated as follows:

Significance = (Extent + Duration + Intensity) X Probability

The rating system is described below.

"Extent" defines the physical extent or spatial scale of the potential impact

Table 10: Assessment Methodology

Criteria: EXTENT		
"Extent" defines the physical extent or spatial scale of the potential impact		
RATING		**DESCRIPTION**
1	Site-specific	Impacts extending only as far as the activity, limited to the site and its immediate surroundings
2	Local	Impacts extending within 5km from the site boundary
3	Regional	Impacts extending to the district (20km from boundary of the site)
4	Provincial	Impacts extending to provincial scale eg. Northern Cape
5	National	Impacts were extending to within the country, i.e. South Africa.
6	International	Impacts extending beyond international border / the borders of South Africa/Namibia
Criteria: DURATION		
"Duration" defines the temporal scale		
RATING		**DESCRIPTION**
1	Immediate	Less than 1 year
2	Short term	1-5 years
3	Medium-term	6-15 years
4	Long term	Between 16 – 30 years
5	Permanent	Over 30 years. Where mitigation either by natural processes or by human intervention will not occur in such a way or in such time span that the impact can be considered transient.

Criteria: INTENSITY			
"Intensity" establishes whether the impact would be destructive or benign.			
Status	**RATING**		**DESCRIPTION**
Negative	0	Negligible	Where impacts do not really affect the environment, and no mitigation is required
	1	Low	Where impacts will result in short term effects on the social and/or natural environment, these impacts are not deemed largely substantial and are likely to have little real effect. (marginally affected)
	2	Medium	Where impacts will result in medium-term effects on the social and/or natural environment. These impacts will need to be considered as constituting a fairly important and usually medium-term change to the environment; these impacts are real but not substantial. Impacts are fairly easy to mitigate
	3	High	Whereby effects will be long term on social, economic and/or biophysical environment. These will need to be considered as constituting usually long term change to the environment. Mitigation is considered challenging and expensive
	4	Very High	Where impacts should be considered as constituting major and usually permanent change to the environment, and usually result in severe to very severe effects. Mitigation would have little to no effect on irreversibility
Criteria: INTENSITY			
Status	**RATING**		**DESCRIPTION**
Positive	0	Negligible	Where impacts affect the environment in such a way that natural, cultural and social functions and processes are not great and in instances no mitigation measures will be required. (environment not really affected)
	1	Low	Minor improvement is anticipated over a short term on the social and/or natural environment.
	2	Medium	Where moderate improvements are anticipated over a medium- to long-term on the social and/or natural environment.
	3	High	Where large improvements are anticipated over a long term on social, economic and/or bio-physical environment.
	4	Very High	This results in permanent improvements to the social/or natural environment.
Criteria: STATUS			
"Status of impact" - describes whether the impact would have a negative, neutral or positive effect on the affected environment			
RATING			**DESCRIPTION**
+	Positive		Benefit to the environment
=	Neutral		Standard / impartial
-	Negative		cause damage to the environment
Criteria: PROBABILITY			
"Probability" describes the likelihood of the impact occurring.			
RATING			**DESCRIPTION**

0	Improbable	Where the possibility of the impact occurring is low.
1	Probable	Where there is a distinct possibility that the impact will occur.
2	Highly probable	Where it is most likely that the impact will occur.
3	Definite	Where the impact will occur regardless of any prevention measures.

vi) The proposed method of assessing duration significance

Criteria: SIGNIFICANCE

"Significance"- attempts to evaluate the importance of a particular impact with mitigation measures included and also excluded. The significance was calculated using the following formula:
Significance = (Extent + Duration + Intensity) X Probability

RATING		DESCRIPTION
0-4	Very Low	Where the impacts will not influence the development, social, cultural or natural environment
5 -12	Low	Where impacts will result in short term effects on the social and/or natural environment. The impacts merit attention however are not deemed largely substantial are likely to have little real effect
13-25	Medium	Where impacts will have a medium-term effect on the social and/or natural environment. These impacts need to be considered as constituting a fairly important and usually medium-term change to the environment, these impacts can be mitigated by implementing effective mitigation measures.
26-44	High	Whereby effects will be long term on social economic and or biophysical environment. The impacts could have a major effect on the environment. This may bring forth the consideration of no-go areas/open areas on the development land regardless of mitigations implemented. Mitigation is, however, possible.
45	Very High	Whereby effects will be permanent on the social-economic and or biophysical environment. Such impacts cannot be mitigated.

v. Cumulative and Residual Impacts

Cumulative impacts are defined as the combination of multiple impacts from existing projects, the proposed project, and/or anticipated future projects that may result in significant adverse and/or beneficial impacts that would not be expected in case of a stand-alone project.

An assessment of cumulative impacts therefore considers the proposed project within the context of other similar land uses, in the local study area and greater regional context.

Residual impacts are those impacts that remain significant following the application of mitigation measures. The specialist studies to be conducted as part of the impact assessment phase of EIA will

identify and provide an assessment of both the cumulative and residual impacts which are likely to occur as a result of the proposed project.

Given the impacts of existing mining activities on the Orange River, biodiversity and cultural landscape, specialist investigations will assess the existing impacts on the environmental aspects of the study site from existing diamond mining operations and the additional pressure on the system from the prospecting and bulk sampling activities. It will be essential to assess the potential impact on the Orange River Mouth downstream from the application areas. The site was placed on the Montreux Record in 1995 and has experienced rapid degradation as a result of adjacent diamond mining activities (Alexander Bay) and flow regulation of the Orange River as a result of dam construction and water consumption. Further diversion of flow in the headwaters of the Orange River is likely to further reduce water availability in the Orange River Mouth and further compound the situation. The prospecting and bulk sampling activities have the potential to affect the Orange River Mouth and thusan added pressure to the RAMSAR wetland system.

vi. Proposed method of assessing duration significance

Refer to Section iv) and v) above.

vii. The stages at which the competent authority will be consulted

Final Scoping Report, Environmental Impact Report & Environmental Management Programme) will be submitted to organs of state for review and comment.

The Competent Authority DMRE will be consulted on various stages of the EIA process.

- Submission of a finalised Scoping Report to DMRE: Springbok for decision making which has been subjected to a 30-day public review and comment period;
- After acceptance of the Scoping Report,
- Potential site inspection with the DMR: Springbok, if requested by the competent authority
- Submission of an Environmental Impact Report & Environmental Management Programme to DMR: Springbok for decision making which has been subjected to a 30-day public review and comment period.
- .DMRE will reach a decision on the application and notify the applicant and EAP.

viii. Particulars of the public participation process with regard to the Impact Assessment Process that will be conducted

1. Steps to be taken to notify I&APs

- Hand delivering, emailing notification letters to pre-identified and registered interested and affected parties ranging from stakeholders, organs of state, local and district authorities including ward councillors;
- Hand delivering letters to the registered landowner, lawful occupiers of land (alternatively via WhatsApp, email);
- I&APs will be provided with an opportunity to register on the project database and obtain project information;

- Placing a newspaper advertisement in the Plattelander and Gemsbok newspapers to announce the start of the EIA Phase and availability of the draft EIR &EMPR for comment including scheduled public engagements;
- Placing site notices in the application area and within public frequented areas;
- Environmental reports prepared as part of the EIA process will be made available for public review and comments through hard copy distribution and availability on the Naledzi website www.naledzi.co.za/public-documents.naledzi;
- Comments and inputs on environmental reports will be facilitated by conducting public engagements (virtual meeting or focus group meetings). During such meetings the findings of the EIA study and significant environmental impacts will be discussed;
- Interested and Affected Parties will be notified of the decision made by DMR on the application for environmental authorisation for the project.

2. Details of the engagement process to be followed

During the draft EIR & EMPR report public review and comment period public engagements will be scheduled and undertaken as follows:

- Emailed notifications of the availability of draft EIR & EMPR reports this will be augmented by WhatsApps, SMS's where required;
- Newspaper advertisements will announce the availability of draft EIR & EMPR reports to I&APs. Copies of the reports will be placed at public libraries in the area and will be available for download from the Naledzi website.
- Telephone, email and WhatsApp engagements will take place to schedule public engagements with key stakeholder groups;
- Several engagements will be undertaken with DWS: Upington (Orange-Proto) (site inspections, virtual meetings);
- Government departments will be contacted via telephone, email and or virtual meetings;
- January 2021, one on one consultation/meeting with the Richtersveld Sida Hub CPA, CPA Administrator and SANPARKs
- X1 Virtual Focus Group Meeting with stakeholders still requiring consultation, absent during Scoping Phase
- X1 Public Open Day in each community (Sanddrift, Kuboes, Lekkersing and Eksteenfontein) in January 2021;
- X 1 Focus Group Meeting with local, district authorities include ward councillors
- X1 Key Stakeholders Workshop (virtual via Zoom)
- X 1 Focus Group Meeting with organs of state and authorities
- A public meeting will be held in each community during the public review period of the Draft EIR & EMPR report;
- Potential site inspection for key commenting authorities

3. Description of information to be provided to Interested and Affected Parties

I&APs will be provided with the draft EIR & EMPr reports and supporting documentation for the prospecting right applications. The EIR & EMPr will communicate the findings of the EIA Study

with I&APs. The EIR & EMPr's will be subject to a 30-day public review and comment period. The public and registered I&APs will be notified of the availability of the reports for comment, and electronic and hard copies of the reports will be made available to organs of state, key stakeholders and registered I&APs.

The final Site Plan, competent authority recommendations and all the specialist investigation reports will be included as part of the EIR & EMPr reports supporting information. The details of engagements with the DWS and details of the Water Use License Application will also be communicated to I&APs.

The findings of the EIR & EMPR will also be presented to I&APs in layman's language through virtual public engagement meetings / one-one discussions and or key stakeholders workshop.

ix. Description of tasks that will be undertaken during the environmental impact assessment process

- I&APs will be notified via email of the outcome of the DMR: Springboks decision to either accept or reject the two Samara prospecting right application Scoping Reports and commencement of the EIA Phase.
- Specialist field investigations will be conducted in end of January to February 2021 after which Specialist Investigation reports will be produced;
- The Environmental Impact Assessment Report & Environmental Management Programme and Closure & Rehabilitation Plan will be prepared for each application;
- **Round 2 of the public participation process will be undertaken:**
    - The draft EIR & EMPR reports will be made available for a 30-day public review and comment period;
    - Advertise the availability of the draft EIR & EMPR reports for public review in the Plattelander and Gemsbok newspapers;
    - The EIR & EMPr's will be placed on the Naledzi website for download and review, placed at public venues and distributed in hard/soft copies to entities and organs of state ;
    - A notification letter will be sent to registered I&APs to notify them o the availability of the draft EIR and EMPrs for public comment (via email, WhatsApp, SMS's)
    - Public engagements will be held with stakeholders to present the findings of the EIR & EMPr reports and solicit comments for inclusion in the Final EIR &EMPr reports (presentations, minutes and attendance registers will be included in the final EIR & EMPr reports). Alternative means of engagement will be implemented if public engagements are not possible due to covid-19.
    - The consolidated Issues and Response Report (IRR) will be prepared to capture all comments, objections and issues from I&APs, organs of state and key stakeholders and responded to in the IRR.
- **Final EIR & EMPR Reports**
    - The EIR & EMPR reports will be finalised, and public inputs will be included;
    - The finalised EIR & EMPr will be submitted to the DMRE within 106 days from Scoping Report acceptance. One (1) hard and soft copy (flash drive) will be submitted for each application to the DMR: Springbok
    - A site inspection with the DMRE is envisaged to the PRAA 1 and 2 sites before a decision is issued

- I&APs will be notified by email, WhatsApp, SMS's that the final reports have been submitted to the DMR for decision making. The final reports will be made available to I&APs on the Naledzi website.
- I&APs will be provided access/ notified of the DMR's decision on the applications within 14 days of the decision;
- A newspaper advertisement will be published in the Plattelander and Gemsbok newspaper and a letter will be sent to I&APs to notify them of the DMRE's decision and opportunity to lodge an appeal against the decision.

x. Measures to avoid, reverse, mitigate, or manage identified impacts and to determine the extent of residual risks that need to be managed and monitored

ACTIVITY Whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, stormwater control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)**.	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc.)** **E.g.** **Modify through an alternative method.** **Control through noise control** **Control through management and monitoring through rehabilitation..**	**POTENTIAL FOR RESIDUAL RISK**
Non-Invasive Prospecting activities			
• Desktop Study or remote sensed data • Site Geological Map • Determine/confirm bulk sample location	Optimal planning of trenching locations within the identified prospecting pockets to avoid impact on existing mineral lease areas and unnecessary impact to and alterations to river active channel.		
Invasive Bulk Sampling			
Bringing machinery, equipment, heavy vehicles to site during site establishment	**Traffic impact** – increased vehicle movement on unsurfaced roads	None	No
	Impact on Air quality – vehicle entrained dust	Dust control	No
Clearing of vegetation and removal of topsoil, overburden during site establishment	**Impact on Fauna, Flora** – habitat destruction, loss of floral and faunal communities, impact on overall conservation targets of CBA's	**Remedy**-rehabilitation, obtain permits for removal of protected species/remove, keep in nursery onsite and restore during concurrent rehabilitation.	Moderate risk Species will take time to recover/ Poor recovery.
	Impact on air quality – Increased dust from dozing off of vegetation, topsoil, overburden	Dust control measures	No
	Visual impact – visual exposure and visibility (sensitive receptors of cleared areas, altered landscape, erosion.	Remedy – rehabilitation Control – stormwater control,	Low risk

Stockpiling of topsoil and overburden during site establishment and bulk sampling	**Impact on soil -** Loss of topsoil resource	Control - stormwater management Prevent/ stop – protect from wind erosion	Low
	Surface Water Quality – Erosion, increased sediment load into river, change in path of local water flow	**Control –** stormwater management control and plan Control - Design measures (use coarse gravel as erosion protection) Prevent - place– correct erosion damage Remedy -rehabilitate eroded areas	Moderate Risk
Access road - Establish, develop and maintain access roads, temporary roads to pockets, parking, offices, ablution facilities, storage facilities, fences and process plant site	Surface Water Impact	Stormwater control Avoidance Remedy – immediate spill clean up	Low
	Impact on Aquatic ecology (Orange River)	Remedy - rehabilitation	Moderate
Small temporary diversions, realignment of the watercourse to gain access to alluvial material for excavation	Impact on Terrestrial Ecology	Remedy- rehabilitation Modify – small diversions (limit scale)	Low risk
	Impact on Aquatic Ecology	Remedy- rehabilitation Modify – small diversions (limit scale) Erosion control Control – Trapping of sediment	Due to scale, low
	Impact on surface and groundwater	Remedy- rehabilitation Design measures on diversion structures to allow adequate flow Modify – small diversions (limit scale) Erosion control Control – Trapping of sediment	Low
Excavation of ten (10) trenches from	Impact on surface water quality	Avoidance	Low-moderate

Orange River bed, banks and active channel (1: 100 flood line) and operation of onsite infrastructure, Rotary Pan Plant, ablution, office, parking etc		Design measures (bunding) Control erosion, trap sediment Stormwater control	
	Impact on air quality	Dust control at Rotary Pan Plant, excavations (water sprayers-generally wet process)	No
	Impact on Terrestrial Ecology	**Remedy** - obtain permits for removal of protected species/remove, keep in nursery onsite and restore during concurrent rehabilitation. Control through continuous monitoring Alternative site plan **Modify** – limit scale Erosion control measures **Remedy** through full rehabilitation	Moderate
	Impact on Aquatic Ecology (Orange River, potentially the Orange River Mouth which is a RAMSAR site already experiencing degradation due to current diamond mining)	**Stop** – obtain necessary authorisation prior to activities in 1:100 year flood line Prevent Rigorous erosion and sediment control Continuous monitoring Avoid contamination, littering Control – alien invasive species management plan	Low
	Visual impact	Dust control Remedy through rehabilitation Modify through design measures	Low
	Impact on ambient noise levels	Noise control (limit to day time operations)	
	Impact on Heritage and Paleontological Resources	Avoid	Low

		Control - ECO monitor excavations Remedy – follow chance finds protocol, obtain permits for removal/relocation	
	Socio-economic impact	Security control Control – keep operations small (limit scale of open excavations)	Low
Abstraction and filtration of sediment-laden water from the excavations to be used in the plant with the release of filtered/clarified water back to the river channel downstream of the workings	Impact on surface water quantity and quality (reduction in river flow volume, decreased Total Suspended Solids)	Remedy – obtain license from DWS	Low
Stockpiling of diamond depleted material from the processing plant (waste material) to be used for concurrent rehabilitation of mined-out areas	Impact of surface water (erosion, sedimentation load into river, path of local water flow)	Erosion control Stormwater management Control sediment	Moderate
Temporary access roads (and movement along existing unsurfaced roads	Impact on Terrestrial Ecology	Erosion control Remedy – through rehabilitation Conservation of topsoil for successful rehabilitation	Moderate
	Surface water impact		Moderate
	Traffic impact	N/a	No
	Impact on air quality	Dust control	No
Ablution, fuel storage	Impact on surface and groundwater quality	Stop/Prevent through design measures, Avoidance - placement outside 1:100 yr flood line. Pollution control, Control through management and monitoring Remedy – immediate spill clean-up	Low

		Stormwater control and management Erosion control Control sediment by trapping	
Final Rehabilitation (Backfilling and rehabilitation of trenches and removal of equipment and infrastructure)	Impact on Aquatic Ecology	Erosion control Control sediment by trapping Avoidance of contamination, Remedy-immediate clean-up	Low
	Impact on Terrestrial Ecology (Flora)	Control – alien invasive species management plan, monitoring	Further spread of alien invasive species if not controlled.
	Impact on Surface water	Control – stormwater management, including monitoring and assessment of changes in water levels and water quality. Erosion and sediment control Spills to be avoided and / remedied (immediate clean up) Remedy – comprehensive remediation in full compliance with environmental guidelines. Control – Monitor rehabilitation success	Low
	Impact on air quality	Dust control	No
	Noise impact	Control – noise control	No
	Traffic	N/A	No
	Socio-economic (limited job losses)	N/A	N/A

POTENTIAL FOR RESIDUAL RISK

The provisional planning is for full rehabilitation of the bulk-sampling excavations using the same material that was excavated. The rehabilitation will be according to the environmental guidelines and is to be properly filled and compacted to 'fully' restore the beds and banks of the watercourse. Good monitoring and management, good housekeeping on-site during all phases of the project, and diligent attention to details during rehabilitation could result in a fully restored site.

I) Other Information Required by the Competent Authority

i) Compliance with the provisions of Section 24(4)(a) and (b) read with Section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998), the EIA Report must include the

(2) Impact on the socio-economic conditions of any directly affected person

Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as Appendix 3 and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

- **Impact on the Orange River ecotourism industry (river rafting, sport fishing, bird watching):**
  - Richtersveld National Park has a significantly high eco-tourism aspect including biodiversity, river rafting, Fish River Canyon Hike, sport fishing along the Orange River. The prospecting and bulk sampling activities have the potential to have a significant impact on the ecotourism of the area

- **Existing diamond mining operations:**
  - LOR has confirmed that they currently hold the mining rights for alluvial diamonds on the area which the PRAA 2 covers.
  - Placement of prospecting laydown areas and contractors camp/fly camp will need to be placed on existing diamond mining operation mineral lease areas.
  - Samara has engaged LOR and agreed to enter into an exclusive collaboration agreement with LOR to explore the economic feasibility of mining, between the 1: 100 year flood line and the left bank of the the Orange River, within the area of the current LOR License
- **Crime and Safety:**
  - Contractors/fly camps will need to be established for the proposed prospecting and bulk sampling activities. Machines, equipment, fuel, oil and batteries will be stored onsite. These resources attract thieves and thus pose a security risk. Samara will fence in the prospecting and bulk sampling activities and implemented access control, including site security. Further management measures will be investigated in the EIA Phase.

(3) Impact any national estate referred to in Section 3 (2) of the National Heritage Resources Act

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as Appendix 3 and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

A Heritage and Palaeontological Scoping Report has been prepared and is included under Appendix 6.

Stone tool sites scattered along the Orange River banks are likely to be impacted by the proposed alluvial diamond prospecting and sampling activities. Any impact on these features

will be permanent and non-reversible. The identified sites do not present much of the problem, as current legislation allows from mitigation measures to be implemented. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/ recorded, and a management plan can be developed for future action. Those sites that are not impacted can be written into the management Plan.

The provincial McGregor Museum Archaeology Department has also stated during the Scoping Phase public consultations, that it has been involved in observing rock art occurences and other archaeological traces along the west bank of the Orange River in this area and notes that previous mining has adversely impacted rock art sites and other materials, and that the existence of graves adds to the exceptional sensitivity of the west bank of the Orange River in this area. It will be critical to conduct indepth consultation with the McGregor Museum on past heritage surveys done in the area and with the community members of the project area to understand the heritage significance of sites including graves and other traces along the bank of the river since they may have historical connections with the sites. (Dr D Morris, 14 Dec 2020, Official comments).

The Palaeontological Desktop Study revealed that prospecting would take place in an area considered to have moderate to low, to insignificant Palaeontological Sensitivity. Fossils are scarce in the Quaternary sand and sandy soils that dominate the study site, but the site might contain stromatolites. The specialist recommends that an ECO should take responsibility for monitoring the excavations and development onsite. If a significant find is made the procedure stipulated under Procedure for Chance Palaeontological Finds should be followed, which includes the safeguarding of the exposed fossils and the contacting of a palaeontologist for further advice.

Due to the proposed work inside National and World Heritage site, the Northern Cape Department of Sports Arts and Culture and its Heritage Unit Northern Cape Heritage Resources Authority will be consulted as the authorities mandated to assist in the management of the universal values recognised in the areas listing as World Heritage. It is also prudent to obtain approval from SAHRA before any prospecting and bulk sampling activities proceed.

m) Other matters required in terms of section 24 (4)(A) and (B) of the Act

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as Appendix 4).

The specific prospecting pocket locations have been chosen based on the location of the mineral resource, thus making an alternative site selection null and void.

However if the application is not permitted to proceed at the preferred location, Samara will need to focus prospecting and bulk sampling activities to PRAA 1, albeit a separate application.

PLEASE REFER TO NEXT PAGE FOR UNDERTAKING BY EAP.

n) UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I __**Marissa Ilse Botha**_____ HEREWITH UNDERTAKE THAT THE INFORMATION PROVIDED IN THE FOREGOING REPORT IS CORRECT, AND THAT THE COMMENTS AND INPUTS FROM STAKEHOLDERS AND INTERESTED AND AFFECTED PARTIES HAVE BEEN CORRECTLY RECORDED IN THE REPORT.

_____
SIGNATURE OF EAP:
DATE: **2021/01/10**

o) UNDERTAKING REGARDING LEVEL OF AGREEMENT

I __**Marissa Ilse Botha**_____ HEREWITH UNDERTAKE THAT THE INFORMATION PROVIDED IN THE REPORT IS CORRECT, AND THAT THE LEVEL OF AGREEMENT WITH THE INTERESTED AND AFFECTED PARTIES AND STAKEHOLDERS HAS BEEN CORRECTLY RECORDED AND REPORT HEREIN.

Please note that no agreement has been reached with

_____
SIGNATURE OF EAP:
DATE: 2020/11/12

APPENDIX 1 – EAP PROFESSIONAL REGISTRATION

APPENDIX 2 – EAP CV

APPENDIX 3 – LOCALITY MAPS

3.1 REGIONAL CONTEXT MAP
3.2 REGULATION 2(2) LOCALITY MAP
3.3 APPLICATION SKETCH PLAN
3.4 KEY PLAN SHOWING EXISTING MINING RIGHT AREAS

APPENDIX 3.5
LOWER ORANGE RIVER DIAMONDS Pty Ltd and SAMARA MINING PTY LTD AGREEMENT

APPENDIX 3.6 – MOTIVATION FOR PROSPECTING RIGHT BY SAMARA MINING PTY LTD

APPENDIX 4 –
SITE PLAN,
ROTARY PAN PLANT PROCESS FLOW CHART
ROTARY PAN PLANT DESIGN

APPENDIX 5 – PUBLIC PARTICIPATION REPORT

APPENDIX 5.1 – I&AP DATABASE

APPENDIX 5.2 – DMRE APPLICATION ACCEPTANCE LETTERS

APPENDIX 5.3 – DMRE GRANTED EXTENSION

APPENDIX 5.4 – NEWSPAPER TEARSHEETS

APPENDIX 5.4 – PROOF OF PRIOR NOTIFICATION TO DEFF PROTECTED AREAS AND DWS

APPENDIX 5.5 – PROOF OF SITE NOTICE PLACEMENT

APPENDIX 5.6 – PROOF OF DRAFT SCOPING REPORT DISTRIBUTION FOR COMMENT

APPENDIX 5.7 – PROOF OF COMMUNITY MEETING ARRANGEMENTS AND CANCELLATION

APPENDIX 5.8 – MINUTES OF VIRTUAL MEETINGS

APPENDIX 5.9 – COPIES OF COMMENTS SUBMITTED TO I&APS, STAKEHOLDERS, ORGANS OF STATE

APPENDIX 6.1 – DEA SCREENING REPORT

APPENDIX 6.2 – SPECIALIST DECLARATIONS

APPENDIX 6 – SPECIALIST INVESTIGATIONS