



Application for a Mining Right and Environmental Authorisation of the proposed Palmietkuilen Mine, Gauteng Province

Notification of Intent to Develop

Project Number:

CNC4065

Prepared for:

Anglo Operations (Pty) Ltd

August 2016

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Project Code:	CNC4065

Name	Responsibility	Signature	Date
Justin du Piesanie Heritage Management Consultant: Archaeologist ASAPA Member: 270	NID Compilation Recommendations	Cillerani	July 2016
Johan Nel HRM Unit Manager ASAPA Member: 095	Technical Review	AM	

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1 Introduction

Pandospan (Pty) Ltd (Pandospan forms part of the Canyon Group of Companies) concluded a contract with Anglo Operations (Pty) Ltd (AOL) in support of the acquisition of a prospection right for coal. The enviro-legal applications for the project will be managed by Pandospan on behalf of AOL, the project applicant.

Pandospan propose to initiate their Palmietkuilen Mining Project (the Project) pending necessary environmental and other authorisations.

In terms of the requirements of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA) as amended, a Mining Right Application (MRA) must be submitted to the Department of Mineral Resources (DMR) for the Project. In support of the MRA, an Environmental Impact Assessment (EIA) process must be undertaken in accordance with the new EIA Regulations, 2014 (GN R 982) promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), as amended.

To this affect, Pandospan enlisted the services of Digby Wells Environmental (hereinafter Digby Wells) to undertake the necessary studies and compilation of an EIA and Environmental Management Plan (EMP) in support of their Environmental Authorisation (EA) Application.

This report constitutes the Notification of Intent to Develop (NID) in accordance with the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA) to inform the South African Heritage Resources Agency (SAHRA) and Mpumalanga Provincial Heritage Resources Authority (MPRHA) of the proposed Project.

2 Project details

In June 2016, Pandospan concluded a contract with Anglo Operations Ltd (hereinafter Anglo) in terms of the acquisitions of a Prospecting Right (DMR Ref: GP 30/5/1/1/2 (201/10026) PR) on Portions 1, 2, 4, 9, 13 and 19 of Palmietkuilen 241 IR. This Project is situated to the east of Springs in the Sedibeng District of Gauteng Province. The enviro-legal applications of the Project will be managed by Pandospan on behalf of AOL as the applicant.

This Project entails the establishment of a new open pit coal mine and supporting infrastructure. Proposed mining methods include bench and strip mining techniques. Drilling and blasting will be employed to remove overburden or bedrock and expose the coal seams. The extracted coal will be transported via haul roads and stored on a Run of Mine (RoM) stockpile area. It is proposed that the coal be transported to the processing plant via conveyor for beneficiation, after which the coal product will stored prior to distribution. From the processing plant, the coal product is proposed to be transport to the Welgedacht siding for distribution rail or directly via truck to the relevant markets.

A temporary discard dump containing one year's capacity will be constructed to store discard before being either rewashed or backfilled into mined out areas.



Table 1: Project location details

Name of property/ies	Palmietkuilen 241 IR
Street address or location (e.g.: Off R44)	Off R29, 7.5 km east of Springs
Erf or farm number/s	Palmietkuilen 241 IR Portions 1, 2, 4, 9, 13 & 19
Coordinates of approximate	26° 15' 7.073" S
centre of project area	28° 33' 39.643" E
Town	Springs
District Municipality	Sedibeng District Municipality
Responsible Municipality	Lesedi Local Municipality
Extent of property	3421.94 ha
Maximum extent of proposed development	1159.12 ha
Current use	Agriculture
Predominant land use/s of surrounding properties	Agriculture and urban settlement

Table 2: Landowner details

Name	Property	Notified
Transnet Ltd	Palmietkuilen 241 IR Portion 1	
Eskom Holdings Ltd	Palmietkuilen 241 IR Portion 4	
Eskom Floidings Eta	Palmietkuilen 241 IR Portion 13	
Palmietkuilen (Pty) Ltd	Palmietkuilen 241 IR Portion 2	Yes
i aimetkulleri (i ty) Ltu	Palmietkuilen 241 IR Portion 19	
Paterson Management (Pty) Ltd	Palmietkuilen 241 IR Portion 9	



3 Assessment processes

The following impact assessment processes are currently being conducted for the proposed project.

Table 3: Current assessment processes

Legislation (e.g. NEMA, MPRDA, etc.)	Current phase of assessment process (e.g. Scoping, EIA, etc.)	Authorities who has / will receive information	Capacity of Authorities
MPRDA	Scoping	Department of Mineral Resources (DMR)	Consenting
NEMA	Scoping	Department of Environmental Affairs (DEA)	Commenting
NHRA	Notification of Intent to	SAHRA	Commenting
INITIVA	Develop	PHRA-G	Commenting

These assessments are required in terms of legislated and / or regulated activities outlined in Sections 3.1 to 0 below.

3.1 EIA Regulations listed activities

The proposed development will include the following activities listed in the EIA Regulations, which generally require impact assessments.

Table 4: Identified listed activities

NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase		
Listing Notice	Listing Notice 1: GN R 983				
X – 9 (i) and /or (ii)	38(1)(a)	Water pipelines. The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water- (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for bulk transportation of water or storm water or storm water or storm water drainage inside a road reserve; or	Construction & Operation		





NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
		(b) where such development will occur within an urban area.	
		Process water, waste water, return water pipelines	
		The development and related operation of infrastructure exceeding 1000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes –	
		(i) with an internal diameter of 0,36 metres or more; or	
X – 10 (i) or	38(1)(a)	(ii) with a peak throughput of 120 litres per second or more;	Construction & Operation
(ii)		excluding where-	Operation
		(a) such infrastructure is for bulk transportation of sewage, effluent, process water, waste	
		water, return water, industrial discharge or slimes inside a road reserve; or	
		(b) where such development will occur within an urban area.	
		Development of open pit and topsoil dump-	
		he development of-	
	38(1)(c)(i)	infrastructure or structures with a physical footprint of 100 square metres or more;	Operation
V 40 (vii)		where such development occurs-	
X – 12 (xii)		(a) within a watercourse;	
		(b) in front of a development setback; or	
		(c) if no development setback exists, within 32 metres of a watercourse, measured from	
		the edge of a watercourse	
		Pollution control dam	
X –13	38(1)(c)(i)	The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50,000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.	Construction & Operation
		Mining through wetlands / pans	
		The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from-	
X – 19	38(8)	(i) a watercourse;	Operation
		(ii) the seashore; or	
		(iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water	
		mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation,	



NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
		removal or moving-	
		(a) will occur behind a development setback;	
		(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or	
		(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.	
		Roads on site	
		The development of-	
X –24 (ii)	38(1)(a)	(ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding-	Construction & Operation
		(a) roads which are identified and included in activity 27 in Listing Notice 2 of 2014; or	Operation
		(b) roads where the entire road falls within an urban area.	
Listing Notice	2: GN R 984		
		Diesel storage, explosives magazine	
X – 4	38(8)	The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	Operation
		Water Use Licence	
X – 6	38(8)	The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent.	Operation
		Site establishment and vegetation removal.	
X –15	38(1)(c)(i)	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for-	Construction &
	00(1)(0)(1)	(i) the undertaking of a linear activity; or	Operation
		(ii) maintenance purposes undertaken in accordance with a maintenance management plan.	
X – 17 38(8) moraling approximation and state of an approximation and state of the state o		Pre- construction	



NEMA Activity No.	NHRA Trigger	Description	Expected duration/phase
Waste Activitie	es – GN R 92	1	
Category B 4 (1)	38(8)	The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage. (Slurry dam)	Operation
Category B 4 (10)	38(1)(c)(i)	The construction of a facility for a waste management activity listed in Category B of this Schedule	Construction
Category B 4 (11)	38(1)(c)(i)	The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	Operation

3.2 NHRA Section 38(1) activities

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

Table 5: NHRA Section 38 triggers

	NH	IRA S	Section 38 (1) Activities / Triggers	Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
\boxtimes	а	-	v linear development or barrier 00 m	Pipelines and roads
	b	Any	bridge or similar structure >50 m	-
	С		development or activity that will unge the character of a site:	-
	\boxtimes	i	≥5 000m² in extent	Site clearing, open pit mining, PCD
		ii	Involving ≥3 existing erven/ subdivisions	-
		iii	Involving ≥3 or more erven/ divisions consolidated within past 5 years.	-
	d	Rezoning of a site ≥10 000m² in extent		-
\boxtimes	е	Other triggers, e.g.: in terms of other legislation, (i.e.: National Environment Management Act, etc.) MPRDA, NEMA, NEM: WA		



3.3 Identified / known heritage resources and potential impacts

Certain categories of heritage resources, if identified / existing, generally require heritage assessments to be conducted before any development may take place. These categories may also be formally or generally protected in terms of the NHRA:

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

NHRA Section		Description
		Places, buildings, structures and equipment of cultural significance
	2/2)/-)	Description of resource: Historical werfs and structures older than 60 years
	3(2)(a)	Potential impact: Damage and/or destruction
		Type of protection if identified: General protection under Section 34 of the NHRA
		Places to which oral traditions are attached or which are associated with living
	3(2)(b)	Description of resource: None identified
		Potential impact: None
		Type of protection if identified: N/A
		Historical settlements and townscapes
	2(2)(0)	Description of resource: None identified
	3(2)(c)	Potential impact: None
		Type of protection if identified: N/A
		Landscapes and natural features of cultural significance
	3(2)(d)	Description of resource: None identified
		Potential impact: None
		Type of protection if identified: N/A
	3(2)(e)	Geological resources of scientific or cultural importance
		Description of resource: The project area is underlain by the <i>Vryheid Formation</i> with a very high palaeontological sensitivity.
		Potential impact: Potential for destruction and/or damage to fossiliferous material during the construction and operation phases of the Project
		Type of protection if identified: General protection under Section 35 of the NHRA
		Archaeology and/or palaeontology (Including archaeological sites and material, fossils, rock art, battlefields & wrecks)
	3(2)(f)	Description of resource: None identified
		Potential impact: None
		Type of protection if identified: N/A
		Graves and burial grounds (e.g. ancestral graves, graves of victims of conflict, historical graves & cemeteries)
	3(2)(g)	Description of resource: Burial grounds and graves, including a Public Memorial for Malay, coloured and native soldiers who past during World War 2 occur in proximity to or within the site-specific study area



	HRA ection	Description							
		Potential impact: Damage and/or destruction							
		Type of protection if identified: General protection under Section 36 and 37 of the NHRA							
		Other human remains							
	2/2)/b)	Description of resource: None identified							
	3(2)(h)	Potential impact: None							
		Type of protection if identified: N/A							
		Sites of significance relating to the history of slavery in South Africa							
	3(2)(i)	Description of resource: None identified							
		Potential impact: None							
		Type of protection if identified: N/A							
		Movable objects							
	3(2)(i)	Description of resource: None identified							
	3(2)(j)	Potential impact: None							
		Type of protection if identified: N/A							

4 Illustrative Material

Please refer to the Heritage Scoping Report (HSR) and Appendix B for a Locality Plan for the Project.

5 Recommendation

The specialist heritage recommendations and ToR for further assessment for the proposed Project are presented in Table 7.

Table 7: Specialist heritage recommendations

Is a	Is a Heritage Impact Assessment required?								
If NC	If NO, provide motivation: N/A								
If YE	If YES, provide suggested components that may be required or undertaken during HIA.								
	Archaeology		Architecture						
\boxtimes	Built Environment	\boxtimes	Burial Grounds and Graves						
	Palaeontology		Public Participation						
	Townscapes		Visual Impact						

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Other:

The EA process is scheduled to continue with an impact assessment phase during which a full EIA will be undertaken and submitted for adjudication by the competent authorities. As part of this process, and in compliance with Section 38(8) of the NHRA, an HIA will be completed during this phase.

It is proposed that the HIA considers the following components:

- Section 34 Built Structures:
- Section 35 Archaeology;
- Section 36 Burial grounds and graves; and
- Section 37 Public monuments and memorials.

The HIA will include assessments of the identified heritage resources to determine CS and Field Ratings, the intensity of predicted heritage impacts on heritage resources by projected related activities and the development of reasonable and feasible management and mitigation measures.

Based on our understanding of the Project and through experience on similar projects, we are of the opinion that inclusion of a detailed palaeontological assessment will not add value at this stage. While it is acknowledged that the site-specific study area is underlain by lithostratigraphy that is palaeontologically sensitive, fossils that may be of scientific value commonly occur in the shale lenses between coal seams at sub-surface levels (Bamford, 2016). Furthermore, Bamford (2016) notes that neither additional desktop nor field assessments would reveal any additional information until excavation of the coal seams themselves take place.

Considering the aforementioned reasoning, a Request for Exemption (RfE) from further palaeontological assessment will be made on the basis that a Fossil Chance Find Procedure is included in the final EMP as a condition of authorisation.

The following Fossil Chance Finds Procedure compiled by Bamford is recommended:

Phase	Procedure						
Construction	Surface excavations should be monitored by the geologist and any fossil material disturbed should be put aside and the palaeontologist called to inspect the material within a reasonable timeframe in order to minimise delays to the project. The geologist should also receive from the palaeontologist some photographs and descriptions of what palaeontological material to look out for.						
	The schedule of monitoring should be set up between the mine and palaeontologist and the agreement letter submitted to SAHRA.						
	If it is not feasible for the palaeontologist to visit the mine timeously then digital photographs of good quality and resolution should be sent to the palaeontologist to assess and make recommendations.						
	From visits or photographs supplied the palaeontologist must make the following recommendations:						
	 Material is of no value so development can proceed, or Fossil material is of some interest so a representative sample should be carefully collected and put aside for further study and incorporated into a recognised repository (Ditsong Museum, 						

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	Council for Geosciences, Pretoria; Evolutionary Studies Institute, University of the Witwatersrand, Johannesburg) and a permit obtained from SAHRA for the removal of the fossils, then development may proceed, or Fossils are scientifically important and the palaeontologist must obtain a SAHRA permit to excavate the fossils and put them into a recognised repository, then development may proceed.					
Operational		ional and the coals and shales are exposed the sit the mine to see what fossils are present. Then , can be followed.				
		a report should be sent to SAHRA by the st detailing the fossil finds and where they are				
Decommissioning	and seams, rescue any	search through the dumps and exposed shales fossil material of scientific interest, store it in a it is available for future research, and then the ed.				
Recommendation mad	e by:					
Name: Justin du Piesan	ie	Name: Johan Nel				
Capacity: Heritage M Archaeologist	fanagement Consultant:	Capacity: HRM Unit Manager				

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Appendix A: Specialist CV



Mr. Justin du Piesanie

Heritage Management Consultant: Archaeologist

Social Sciences Department

Digby Wells Environmental

1 Education

Date	Degree(s) or Diploma(s) obtained	Institution
2013	Continued Professional Development Programme, Architectural and Urban Conservation: Researching and Assessing Local Environments	University of Cape Town
2008	MSc	University of the Witwatersrand
2005	BA (Honours) (Archaeology)	University of the Witwatersrand
2004	BA	University of the Witwatersrand
2001	Matric	Norkem Park High School

2 Language Skills

Language	Written	Spoken
English	Excellent	Excellent
Afrikaans	Proficient	Good

3 Employment

Period	Company	Title/position
08/2011 to present	Digby Wells Environmental	Heritage Management Consultant: Archaeologist

Digby Wells and Associates (South Africa) (Pty) Ltd (Subsidiary of Digby Wells & Associates (Pty) Ltd). Co. Reg. No. 2010/008577/07. Fern Isle, Section 10, 359 Pretoria Ave Randburg Private Bag X10046, Randburg, 2125, South Africa

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Period	Company	Title/position
2009-2011	University of the Witwatersrand	Archaeology Collections Manager
2009-2011	Independent	Archaeologist
2006-2007	Maropeng & Sterkfontein Caves UNESCO World Heritage Site	Tour guide

4 Professional Affiliations

Position	osition Professional Body								
Member	Association for Southern African Professional Archaeologists (ASAPA);	270							
	ASAPA Cultural Resources Management (CRM) section								
Member	International Council on Monuments and Sites (ICOMOS)	14274							
Member	Society for Africanist Archaeologists (SAfA)	N/A							

5 Publications

■ Huffman, T.N. & du Piesanie, J.J. 2011. Khami and the Venda in the Mapungubwe Landscape. Journal of African Archaeology 9(2): 189-206

6 Experience

I have 5 years experiences in the field of heritage resources management (HRM) including archaeological and heritage assessments, grave relocation, social consultation and mitigation of archaeological sites. During my studies I was involved in academic research projects associated with the Stone Age, Iron Age, and Rock Art. These are summarised below:

- Wits Fieldschool Excavation at Meyersdal, Klipriviersberg Johannesburg (Late Iron Age Settlement).
- Wits Fieldschool Phase 1 Survey of Prentjiesberg in Ugie / Maclear area, Eastern Cape.
- Wits Fieldschool Excavation at Kudu Kopje, Mapungubwe National Park Limpopo Province.



- Wits Fieldschool Excavation of Weipe 508 (2229 AB 508) on farm Weipe, Limpopo Province.
- Survey at Meyerdal, Klipriviersberg Johannesburg.
- Mapping of Rock Art Engravings at Klipbak 1 & 2, Kalahari.
- Survey at Sonop Mines, Windsorton Northern Cape (Vaal Archaeological Research Unit).
- Excavation of Kudu Kopje, Mapungubwe National Park Limpopo Province.
- Excavation of KK (2229 AD 110), VK (2229 AD 109), VK2 (2229 AD 108) & Weipe 508 (2229 AB 508) (Origins of Mapungubwe Project)
- Phase 1 Survey of farms Venetia, Hamilton, Den Staat and Little Muck, Limpopo Province (Origins of Mapungubwe Project)
- Excavation of Canteen Kopje Stone Age site, Barkley West, Northern Cape
- Excavation of Khami Period site AB32 (2229 AB 32), Den Staat Farm, Limpopo Province

Since 2011 I have been actively involved in environmental management throughout Africa, focusing on heritage assessments incompliance with International Finance Corporation (IFC) Performance Standards and other World Bank Standards and Equator Principles. This exposure to environmental, and specifically heritage management has allowed me to work to international best practice standards in accordance with international conservation bodies such as UNESCO and ICOMOS. In addition, I have also been involved in the collection of quantitative data for a Relocation Action Plan (RAP) in Burkina Faso. The exposure to this aspect of environmental management has afforded me the opportunity to understand the significance of integration of various studies in the assessment of heritage resources and recommendations for feasible mitigation measures. I have work throughout South Africa, as well as Burkina Faso, the Democratic Republic of Congo, Liberia and Mali.

7 Project Experience

Please see the following table for relevant project experience:



Project Title	Project Location	Date:		Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Klipriviersberg Archaeological Survey	Meyersdal, Gauteng, South Africa	2005		Survey of residential development in Meyersdal. This included the recording of identified stone walled settlements through detailed mapping and photographs. Included was the Phase 2 Mitigation of two stone walled settlements	Archaeological Impact Assessments	Researcher, Archaeological Assistant	2 Months		excavations and reporting	Archaeological Resource Management (ARM) Prof T.N. Huffman thomas.huffman@wits.ac.za
Sun City Archaeological Site Mapping	Sun City, Pilanesberg, North West Province, South Africa	2006	2006	Recording of an identified Late Iron Age stonewalled settlement through detailed mapping	Mapping	Archaeological Assistant, Mapper	1 Month	Sun City	mapping	Archaeological Resources Management (ARM) Prof T.N. Huffman thomas.huffman@wits.ac.za
Witbank Dam Archaeological Impact Assessment	Witbank, Mpumalanga, South Africa	2007		proposed residential	Archaeological Impact Assessment	Archaeological Assistant	1 Week		Archaeological Impact Assessment	Archaeological Resources Management (ARM) Prof T.N. Huffman thomas.huffman@wits.ac.za
Archaeological Assessment of Modderfontein AH Holdings	Johannesburg, Gauteng, South Africa	2008		Archaeological survey and basic assessment of Modderfontein Holdings	Archaeological Impact Assessment	Archaeologist	1 Month		Completed the assessment of 13 properties	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com
Heritage Assessment of Rhino Mines	Thabazimbi, Limpopo Province, South Africa	2008			Heritage Impact Assessment	Archaeologist	2 Weeks	Rhino Mines		Archaeological Resources Management (ARM) Prof T.N. Huffman thomas.huffman@wits.ac.za
Cronimet Project	Thabazimbi, Limpopo Province, South Africa	2008		Archaeological survey of Moddergat 389 KQ, Schilpadnest 385 KQ, and Swartkop 369 KQ,	Archaeological Impact Assessment	Archaeologist	1 Weeks	Cronimet	Completed field survey and reporting	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com



Project Title	Project Location	Date:	Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Eskom Thohoyandou SEA Project	Limpopo Province, South Africa	2008	Heritage Statement defining the cultural landscape of the Limpopo Province to assist in establishing sensitive receptors for the Eskom Thohoyadou SEA Project	Heritage Statement	Archaeologist	2 Months	Eskom	Completed Heritage Statement	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com
Wenzelrust Excavations	Shoshanguve, Gauteng, South Africa	2009	Contracted by the Heritage Contracts Unit to help facilitate the Phase 2 excavations of a Late Iron Age / historical site identified in Shoshanguve	Excavation and Mapping	Archaeologist	1 Week	Heritage Contracts Unit	Completed excavations	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com
University of the Witwatersrand Parys LIA Shelter Project	Parys, Free State, South Africa	2009	Mapping of a Late Iron Age rock shelter being studied by the Archaeology Department of the University of the Witwatersrand	Mapping	Archaeologist	1 Day	University of the Witwatersrand	Completed mapping of the shelter	University of the Witwatersrand Karim Sadr karim.sadr@wits.ac.za
Transnet NMPP Line	Kwa-Zulu Natal, South Africa	2010	Heritage Survey of the Anglo-Boer War Vaalkrans Battlefield where the servitude of the NMP pipeline	Heritage Impact Assessment	Archaeologist	1 Week	Umlando Consultants	Completed survey	Umlando Consultants Gavin Anderson umlando@gmail.com
Archaeological Impact Assessment – Witpoortjie Project	Johannesburg, Gauteng, South Africa		Heritage survey of Witpoortjie 254 IQ, Mindale Ext 7 and Nooitgedacht 534 IQ for residential development project	Archaeological Impact Assessment	Archaeologist	1 Week	ARM	Completed survey for the AIA	Archaeological Resources Management (ARM) Prof T.N. Huffman thomas.huffman@wits.ac.za
Der Brochen Archaeological Excavations	Steelpoort, Mpumalanga, South Africa	2010	Phase 2 archaeological excavations of Late Iron Age Site	Archaeological Excavation	Archaeologist	2 Weeks	Heritage Contracts Unit	Completed excavations	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com



Project Title	Project Location			Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
De Brochen and Booysendal Archaeology Project	Steelpoort, Mpumalanga, South Africa	2010	2010	Mapping of archaeological sites 23, 26, 27, 28a & b on the Anglo Platinum Mines De Brochen and Booysendal	Mapping	Archaeologist	1 Week	Heritage Contracts Unit	'' "	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com
Eskom Thohoyandou Electricity Master Network	Limpopo Province, South Africa	2010	2010	Desktop study to identify heritage sensitivity of the Limpopo Province	Desktop Study	Archaeologist	1 Month	Strategic Environmental Focus		Strategic Environmental Focus (SEF) Vici Napier vici@sefsa.co.za
Batlhako Mine Expansion	North-West Province, South Africa	2010	2010	Mapping of historical sites located within the Batlhako Mine Expansion Area	Mapping	Archaeologist	1 Week	Heritage Contracts Unit	'' "	Heritage Contracts Unit Jaco van der Walt jaco.heritage@gmail.com
Kibali Gold Project Grave Relocation Plan	Orientale Province, Democratic Republic of Congo	2011	2013	Implementation of the Grave Relocation Project for the Randgold Kibali Gold Project	Grave Relocation	Archaeologist		Randgold Resources	relocation of	Kibali Gold Mine Cyrille Mutombo Cyrille.c.mutombo@kibaligold.com
Kibali Gold Hydro- Power Project	Orientale Province, Democratic Republic of Congo	2012	2014	Assessment of 7 proposed hydro-power stations along the Kibali River	ESIA	Heritage Consultant	2 Years	Randgold Resources	Completed Heritage Impact Assessment	Randgold Resources Charles Wells Charles.wells@randgoldreources.com
Everest North Mining Project	Steelpoort, Mpumalanga, South Africa	2012	2012	Heritage Impact Assessment on the farm Vygenhoek	EIA and EMP	Heritage Consultant	6 Months	Aquarius Resources	Completed Heritage Impact Assessment	Aquarius Resources
Environmental Authorisation for the Gold One Geluksdal TSF and Pipeline	Gauteng, South Africa	2012	2012	Heritage impact Assessment for the proposed TSF and Pipeline of Geluksdal Mine	EIA and EMP	Heritage Consultant	4 Months	Gold One International	Completed Heritage Impact Assessment	Gold One International
Platreef Burial Grounds and Graves Survey	Mokopane, Limpopo Province, South Africa	2012	2012	Survey for Burial Grounds and Graves	Burial Grounds and Graves Management Plan	Heritage Consultant	4 Months	Platreef Resources	, ,	Platreef Resources Gerick Mouton



Project Title	Project Location			Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Resgen Boikarabelo Coal Mine	Limpopo Province, South Africa	2012		Archaeological Excavation of identified sites	Archaeological Excavation	Heritage Consultant		Resources Generation	Completed excavation and reporting, destruction permits approved	Resources Generation Louise Nicolai
Bokoni Platinum Road Watching Brief	Burgersfort, Limpopo Province, South Africa	2012		Watching brief for construction of new road	Watching Brief	Heritage Consultant		Bokoni Platinum Mine	Completed watching brief, reviewed report	Bokoni Platinum Mines (Pty) Ltd
SEGA Gold Mining Project	Burkina Faso	2012	2013	Socio Economic and Asset Survey	RAP	Social Consultant	3 Months	Cluff Gold PLC	Completed field survey and data collection	Cluff Gold PLC
SEGA Gold Mining Project	Burkina Faso	2013	2013	Specialist Review of Heritage Impact Assessment	Reviewer	Heritage Consultant	1 Week	Cluff Gold PLC	Reviewed specialist report and made appropriate recommendations	Cluff Gold PLC
Consbrey and Harwar Collieries Project	Breyton, Mpumalanga, South Africa	2013		Heritage Impact Assessment for the proposed Consbrey and Harwar Collieries	EIA and EMP	Heritage Consultant	2 Months	Msobo	Completed Heritage Impact Assessments	Msobo
New Liberty Gold Project	Liberia	2013		Implementation of the Grave Relocation Project for the New Liberty Gold Project	Grave Relocation	Heritage Consultant	5 Months	Aureus Mining	Grave Relocation completed	Aureus Mining
Falea Uranium Mine Environmental Assessment	Falea, Mali	2013		Heritage Scoping for the proposed Falea Uranium Mine	Environmental Assessment	Heritage Consultant	2 Months	Rockgate Capital	Completed scoping report and recommended further studies	Rockgate Capital
Putu Iron Ore Mine Project	Petroken, Liberia	2013		Heritage impact Assessment for the proposed Putu Iron Ore Mine, road extension and railway line	EIA and EMP	Heritage Consultant	6 Months	Atkins Limited	Heritage Impact	Atkins Limited Irene Bopp Irene.Bopp@atkinsglobal.com



Project Title	Project Location	Date:		Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Sasol Twistdraai Project	Secunda, Mpumalanga, South Africa	2013	2014	Notification of intent to Develop and Heritage Statement for the Sasol Twistdraai Expansion	NID	Heritage Consultant		ERM Southern Africa	Heritage Statement	ERM Southern Africa Alan Cochran Alan.Cochran@erm.com
Daleside Acetylene Gas Production Facility	Gauteng, South Africa	2013		Project Management of the heritage study	NID	Project Manager		ERM Southern Africa	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ERM Southern Africa Kasantha Moodley Kasantha.Moodley@erm.com
Exxaro Belfast, Paardeplaats and Eerstelingsfontein GRP	Belfast, Mpumalanga, South Africa	2013		Grave Relocation Plan for the Belfast, Paardeplaats and Eerstelingsfontein Projects	GRP	Project Manager, Heritage Consultant	2 Years	Exxaro	Burial Grounds and Graves consultation complete and applications to authorities submitted for permitting	Exxaro Johan van der Bijl Johan.vanderbijl@exxaro.com
Nzoro 2 Hydro Power Project	Orientale Province, Democratic Republic of Congo	2014		Social consultation for the Relocation Action Plan component of the Nzoro 2 Hydro Power Station	RAP	Social Consultant	2 Months	Randgold Resources	introductory	Kibali Gold Mine Cyrille Mutombo Cyrille.c.mutombo@kibaligold.com
Eastern Basin AMD Project	Springs, Gauteng, South Africa	2014		Heritage Impact Assessment for the proposed new sludge storage facility and pipeline	EIA and EMP	Heritage Consultant	2 Months	AECOM	Completed HIA and submitted to the authorities	AECOM
Soweto Cluster Reclamation Project	Soweto, Gauteng, South Africa	2014	2014	Heritage Impact Assessment for reclamation activities associated with the Soweto Cluster Dumps	EIA and EMP	Heritage Consultant	3 Months	ERGO		ERGO Greg Ovens greg.ovens@drdgold.com
Klipspruit South Project	Ogies, Mpumalanga, South Africa	2014		NID and Heritage Statement for the Section 102 Amendment of the Klipspruit Mine EMP	EIA and EMP	Heritage Consultant	6 Months	BHP Billiton	HIA finalised and submitted to the authorities	BHP Billiton



Project Title	Project Location	Date:	Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Klipspruit Extension: Weltevreden Project	Ogies, Mpumalanga, South Africa		NID and Heritage Statement for the expansion of the Klipspruit Mine	EIA and EMP	Heritage Consultant	6 Months	BHP Billiton	HIA finalised and submitted to authorities	BHP Billiton
Ergo Rondebult Pipeline Basic Assessment	Johannesburg, South Africa	2014 2014	NID and Heritage Statement for the construction of the Rondebult Pipeline	ВА	Heritage Consultant	1 Week	ERGO		ERGO Greg Ovens greg.ovens@drdgold.com
Kibali ESIA Update Project	Orientale Province, Democratic Republic of Congo	2014 2014	Update of the Kibali ESIA for the inclusion of new open-cast pit areas	ESIA	Heritage Consultant		Randgold Resources	assessment and	Randgold Resources Charles Wells Charles.wells@randgoldresources.com
GoldOne EMP Consolidation	Westonaria, Gauteng, South Africa	2014 2014	Gap analysis for the EMP consolidation of operations west of Johannesburg	Gap Analysis	Heritage Consultant	1 Month	Gold One International	Gap analysis complete and proposed way forward submitted	Gold One International
Yzermite PIA	Wakkerstroom, Mpumalanga, South Africa	2014 2014	Palaeontological Assessment for the Yzermyne Project	PIA	Project Management	1 Month	EcoPartners	and submitted to	EcoPartners San Oosthuizen san@ecopartners.co.za
Sasol Mooikraal Basic Assessment	Sasolburg, Free State, South Africa	2014 2014	Heritage Basic Assessment for the proposed Mooikraal Pipeline	НВА	Heritage Consultant	4 Months	Sasol Mining	Completed Heritage Basic Assessment and submitted to the authorities	
Everest North Mining Project	Steelpoort, Mpumalanga, South Africa		EIA and EMP for the Aquarius Everest North Mining Project	EIA and EMP	Project Manager	1 Year	Aquarius Resources	amended and	Aquarius Resources Robyn Mellett Robyn.Mellett@aquariussa.co.za
Oakleaf ESIA Project	Bronkhorstspruit, Gauteng, South Africa	2014 2015	Heritage impact Assessment for the Oakleaf Project	EIA and EMP	Heritage Consultant		Oakleaf Investment Holdings	HIA report finalised and submitted to the authorities	



Project Title	Project Location	Date:		Description of the Project	Role of Firm in the Project	Own Role in the Project	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Rea Vaya Phase II C Project	Johannesburg, Gauteng, South Africa	2014	2014	Heritage Impact Assessment on 2 structures along Rea Vaya Routing	HIA	Project Manager	1 year	Iliso Consulting	HIA report finalised and submitted to the authorities	Iliso Consulting
NTEM Iron Ore Mine and Pipeline Project	Cameroon	2014	2015	Review of Heritage Impact Assessment for the NTEM ESIA	EIA and EMP	Specialist Reviewer		International Mining and Infrastructure Corporation plc	Specialist reports reviewed and comments provided	
Imvula Project	Kriel, Mpumalanga, South Africa	2014	2015	Heritage Scoping Report for Imvula EIA	EIA and EMP	Heritage Consultant	1 Year 4 Months	Ixia Coal	Project completed and submitted	
Sibanye WRTRP	Gauteng, South Africa	2014	2016	Heritage Impact Assessment for the Sibanye WRTRP	EIA and EMP	Heritage Consultant	On-going	Sibanye	Project is on-going	
VMIC Vanadium EIA Project	Mokopane, Limpopo, South Africa	2014	2015	Heritage Impact Assessment for the Vanadium Project	EIA and EMP	Heritage Consultant	1 Year	VM Investment Company	HIA report finalised and submitted to the authorities	
NLGM Constructed Wetlands Project	Liberia	2015	2015	Heritage Assessment for the proposed constructed wetlands	HIA	Heritage Consultant	1 Month	Aureus Mining	HIA report finalised and submitted	
ERPM Section 34 Destruction Permits Applications	Johannesburg, Gauteng, South Africa	2015	2015	Section 34 Destruction Permit Applications for the SEV and Cason Shafts	HIA and S.34 Applications	Project Manager	4 Months	Ergo Mining	Application submitted and permits received	Ergo Mining Greg Ovens greg.ovens@drdgold.com
JMEP II EIA	Botswana	2015	2015	Heritage Impact Assessment for the JMEP II Wellfields	HIA	Heritage Consultant	2 Months	Jindal	HIA completed and submitted to authorities	
Gino's Building Section 34 Destruction Permit Application	Gauteng, South	2015	2016	Heritage Impact Assessment and Section 34 Destruction Permit Application	HIA and S. 34 Applications	Project Manager	On-going	Bigen Africa Services (Pty) Ltd	Project is on-going	Bigen Africa Services (Pty) Ltd Kamantha Veerasamy Kamantha.Veerasamy@bigenafrica.com
EDC Block Refurbishment Project	Johannesburg, Gauteng, South Africa	2015	2016	Heritage Impact Assessment and Section 34 Permit Application	HIA and S. 34 Applications	Project Manager	On-going	Bigen Africa Services (Pty) Ltd	Project is on-going	Bigen Africa Services (Pty) Ltd Taka Sande Taka.Sande@bigenafrica.com



Project Title	Project Location	Date:	Description of the Project	Role of Firm in the Project	•	Time involved (man months)	Name of Client	Contract Outcomes	Reference
Transmission Line	• •		Heritage Impact Assessment		Heritage Consultant		Namane Resources (Pty) Ltd	Project is on-going	
Diversion and Rail			Heritage Impact Assessment		Heritage Consultant		Namane Resources (Pty) Ltd	Project is on-going	





Mr Johan Nel

Unit manager: Heritage Resources Management

Social Sciences

Digby Wells Environmental

1 Education

Date	Degree(s) or Diploma(s) obtained	Institution
2014	Integrated Heritage Resources Management Certificate, NQF Level 6	Rhodes University
2002	BA (Honours) (Archaeology)	University of Pretoria
2001	BA	University of Pretoria
1997	Matric with exemption	Brandwag Hoërskool

2 Language Skills

Language	Speaking	Writing	Reading
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

3 Employment

Period	Company	Title/position
2009/2011 to present	Digby Wells Environmental	Manager: Heritage Resources Management unit
2005/2010-2011	Digby Wells Environmental	Archaeologist
2010/2005- 2005/2010	Archaic Heritage Project Management	Manager and co-owner
2003-2007		Freelance archaeologist



	Rock Art Mapping Project	Resident archaeologist
2002-2003	Department of Anatomy, University of Pretoria	Special assistant: Anthropology
2001-2002	Department of Anatomy, University of Pretoria	Technical assistant
1999-2001	National Cultural History Museum & Department of Anthropology and Archaeology, UP	Assistant: Mapungubwe Project

4 Experience

Johan Nel has 13 years of combined experience in the field of cultural heritage resources management (HRM) including archaeological and heritage assessments, grave relocation, social consultation and mitigation of archaeological sites. I have gained experience both within urban settings and remote rural landscapes. Since 2010 I have been actively involved in environmental management that has allowed me to investigate and implement the integration of heritage resources management into environmental impact assessments (EIA). Many of the projects since have required compliance with International Finance Corporation (IFC) requirements and other World Bank standards. This exposure has allowed me to develop and implement a HRM approach that is founded on international best practice and leading international conservation bodies such as UNESCO and ICOMOS. I have worked in most South African Provinces, as well as Swaziland, the Democratic Republic of the Congo, Liberia and Sierra Leone. I am fluent in English and Afrikaans, with excellent writing and research skills.

5 Project Experience

5.1 Archaeological Surveys and Impact Assessments

2003-2004. Freelance consulting archaeologist. Roodt & Roodt CC. RSA. Archaeological surveys. Specialist.

2004-2005. Resident archaeologist Rock Art Mapping Project. University of KwaZulu-Natal. Kwazulu-Natal, RSA. Rock art mapping & recording. Specialist.

5.2 Archaeological Mitigation

2007. Archaeological investigation of Old Johannesburg Fort. Johannesburg Development Agency. Gauteng, RSA. Archaeological mitigation. Project manager.



- 2008. Final consolidated report: Watching Brief on Soutpansberg Road Site for the new Head Offices of the Department of Foreign Affairs, Pretoria Gauteng. Imbumba-Aganang D & C Joint Venture. Gauteng, RSA. Watching Brief. Project manager.
- 2011. Sessenge archaeological site mitigation. Randgold Resources. Doko, DRC. Archaeological mitigation. Specialist.
- 2011. Mitigation of three sites, Koidu Kimberlite Project. Koidu Holdings SA. Koidu, Sierra Leone. Archaeological mitigation. Project manager.
- 2012. Boikarabelo Phase 2 Mitigation of Archaeological Sites. Ledjadja Coal (Pty) Ltd. Limpopo, RSA. Archaeological permitting and mitigation. Project manager.
- 2012. Additional Archaeology Mitigation of Sites. Ledjadja Coal (Pty) Ltd. Limpopo, RSA. Archaeological permitting and mitigation. Project manager.
- 2013. Archaeological Excavations of Old Well, Rhodes University, Grahamstown. Rhodes University. Eastern Cape, RSA. Archaeological mitigation. Specialist.
- 2014. Archaeological Site Destruction. Ledjadja Coal (Pty) Ltd. Limpopo, RSA. Archaeological permitting and mitigation. Project manager.

5.3 Heritage Impact Assessments

- 2005. Final consolidated Heritage Impact Assessment report: Proposed development of high-cost housing and filling station, Portion of the farm Mooiplaats 147 JT. Go-Enviroscience. Mpumalanga, RSA. Heritage Impact Assessment. Project manager.
- 2006. Final report: Heritage resources Scoping survey and preliminary assessment for the Transnet Freight Line EIA, Eastern Cape and Northern Cape. ERM Southern Africa (Pty) Ltd. Northern & Eastern Cape, RSA. Heritage Scoping Assessment. Project manager.
- 2007. Proposed road upgrade of existing, and construction of new roads in Burgersfort, Limpopo Province. AGES South Africa (Polokwane). Limpopo, RSA. Heritage Impact Assessment. Project manager.
- 2007. Recommendation of Exemption: Above-ground SASOL fuel storage tanks located at grain silos in localities in the Eastern Free State. Sasol Group Services (Pty) Ltd. Free State, RSA. Letter of Exemption. Project manager.
- 2008. Summary report: Old dump on premises of the new Head Offices, Department of Foreign Affairs, Pretoria, Gauteng. Imbumba-Aganang D & C Joint Venture. Gauteng, RSA. Archaeological Impact Assessment. Project manager.
- 2008. Van Reenen Eco-Agri Development Project. Go-Enviroscience. Kwazulu-Natal & Free State, RSA. Heritage Impact Assessment. Project manager.



- 2008. Heritage Impact Assessment for proposed water pipeline routes, Mogalakwena District, Limpopo Province. AGES South Africa (Polokwane). Limpopo, RSA. Heritage Impact Assessment. Project manager.
- 2008. Phase 1 Heritage and Archaeological Impact Assessment: Proposed establishment of an access road between Sapekoe Drive and Koedoe Street, Erf 3366 (Extension 22) and the Remainder of Erf 430 (Extension 4). AGES South Africa (Polokwane). Limpopo, RSA. Heritage Impact Assessment. Project manager.
- 2008. Heritage resources scoping survey and preliminary assessment: Proposed establishment of township on Portion 28 of the farm Kennedy's Vale 362 KT, Steelpoort, Limpopo Province. AGES South Africa (Polokwane). Limpopo, RSA. Heritage Scoping Assessment. Project manager.
- 2008. Randwater Vlakfontein-Mamelodi water pipeline survey. Archaeology Africa CC. Gauteng, RSA. Heritage Impact Assessment. Specialist.
- 2010. Heritage Impact Assessment for conversion of PR to MRA. Georock Environmental. Northwest, RSA. Heritage Impact Assessment. Project manager.
- 2010. Temo Coal Project. Namane Commodities (Pty) Ltd. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2011. Marapong Treatment Works. Ceenex (Pty) Ltd. Limpopo, RSA. Archaeological Impact Assessment. Project manager.
- 2011. Complete Environmental Authorisation. Rhodium Reefs Ltd. Limpopo, RSA. Archaeological Impact Assessment. Specialist.
- 2011. Big 5 PV Solar Plants. Orlight (Pty) Ltd. Western and Northern Cape, RSA. Heritage Impact Assessment. Specialist.
- 2011. Heritage Impact Assessment for Koidu Diamond Mine. Koidu Holdings SA. Koidu, Sierra Leone. Heritage Impact Assessment. Specialist.
- 2012. TSF and Pipeline. Gold One. Gauteng, RSA. Heritage Impact Assessment. Project manager.
- 2012. Kangra Coal Heritage Screening Assessment. ERM Southern Africa (Pty) Ltd. Mpumalanga, RSA. Heritage Screening Assessment. Project manager.
- 2012. Environmental and Social Studies. Platreef Resources (Pty) Ltd. Limpopo, RSA. Heritage specialist advice. Project manager.
- 2012. ESKOM Powerline EIA. Ledjadja Coal (Pty) Ltd. Limpopo, RSA. Notification of Intent to Develop. Project manager.
- 2012. Falea Project ESIA. Denison Mines Corp. (Rockgate Capital Corp). Falea, Mali. Heritage Impact Assessment. Specialist.



- 2012. EIA for Proposed Emergency Measures to Pump and Treat. AECOM SA (Pty) Ltd. Gauteng, RSA. Heritage Impact Assessment. Specialist.
- 2012. Tonguma Baseline Studies. Koidu Holdings SA. Tonguma, Sierra Leone. Heritage Impact Assessment. Specialist.
- 2012. Vedanta IPP. Black Mountain Mining (Pty) Ltd. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2012. Boikarabelo Railway Realignment. Ledjadja Coal (Pty) Ltd. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2012. Platreef ESIA. Platreef Resources (Pty) Ltd. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2012. Roodekop EIA. Universal Coal Development 4 (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Specialist.
- 2012. Kangala HIA. Universal Coal Development 1 (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment and permitting. Specialist.
- 2012. Roodepoort Strengthening. Eskom Holdings SOC Ltd. Gauteng, RSA. Notification of Intent to Develop. Specialist.
- 2012. Trichardtsfontein EIA / EMP. Xstrata Coal South Africa. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2012. Zandbaken EIA/EMPR. Xstrata Coal South Africa. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2013. ATCOM Tweefontein NID. Jones & Wagener (Pty) Ltd. Mpumalanga, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2013. Roodepoort Heritage Impact Assessment. Fourth Element Consulting (Pty) Ltd. Gauteng, RSA. Heritage Impact Assessment. Project manager.
- 2013. JHB BRT Phase 2 Heritage Impact Assessment. Iliso Consulting (Pty) Ltd. Gauteng, RSA. Heritage Impact Assessment. Project manager.
- 2013. Kangra Coal HIA. ERM Southern Africa (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Project manager.
- 2013. Slypsteen Bulk Sample Application. Summer Season Trading (Pty) Limited. Northern Cape, RSA. Heritage Impact Assessment. Project manager.
- 2013. Kempton Park Heritage Statement and NID. ERM Southern Africa (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Project manager.
- 2013. Sasol Twistdraai CFD. ERM Southern Africa (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Project manager.
- 2013. HRS & NID River Crossings Upgrade. Iliso Consulting (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Project manager.



- 2013. Waterberg Prospecting Right Applications. Platinum Group Metals (Pty) Ltd. Limpopo, RSA. Notification of Intent to Develop. Project manager.
- 2013. Landau Waste Licence Application. Anglo Operations (Pty) Limited. Mpumalanga, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2013. Prospecting Right Consultation Report. Rustenburg Platinum Mines Limited. Mpumalanga, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2013. Witrand Prospecting EMP. Rustenburg Platinum Mines Limited. Mpumalanga, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2013. EMP Amendment for CST. Copper Sunset Trading (Pty) Ltd. Mpumalanga, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2013. Maseve IFC ESHIA. Maseve Investment (Pty) Ltd. Mpumalanga, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2013. Dalyshope ESIA. Anglo Operations (Pty) Limited. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2013. Klipfontein Opencast Project. Bokoni Platinum Mines (Pty) Ltd. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2013. Consbrey and Harwar MPRDA EIA/EMP. Msobo Coal (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Specialist.
- 2013. Slypsteen 102 EMP Amendment. Summer Season Trading (Pty) Limited. Northern Cape, RSA. Heritage Impact Assessment. Specialist.
- 2013. Putu Iron Ore ESIA. Atkins Limited Incorporated. Putu, Liberia. Heritage Impact Assessment. Specialist.
- 2013. Ash backfilling at Sigma Colliery. Sasol Mining (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Specialist.
- 2013. Syferfontein Block 4 Underground Coal Mining for Sasol. Sasol Mining (Pty) Ltd. Mpumalanga, RSA. Notification of Intent to Develop. Specialist.
- 2013. Prospecting Right Amendment to Include Bulk Sampling. Sikhuliso Resources (Pty) Ltd. Mpumalanga, RSA. Notification of Intent to Develop. Specialist.
- 2013. Nooitgedacht EIA, EMP Amendment & Gap Analysis. Xstrata Coal South Africa. Limpopo, RSA. Heritage Impact Assessment. Specialist.
- 2014. Gold One EMP Consolidation Phase 0. Gold One. Gauteng, RSA. Heritage Impact Assessment. Reviewer / specialist.
- 2014. Kilbarchan Audit and EIA. Eskom Holdings SOC Ltd. Kwazulu-Natal, RSA. Heritage Impact Assessment. Reviewer / specialist.



- 2014. Klipspruit Extension Environmental Assessment. BHP Billiton Energy Coal South Africa Limited. Mpumalanga, RSA. Heritage Impact Assessment. Reviewer / specialist.
- 2014. Klipspruit South BECSA EIA. BHP Billiton Energy Coal South Africa Limited. Mpumalanga, RSA. Heritage Impact Assessment. Reviewer / specialist.
- 2014. EIA/EMP Soweto Cluster. DRD GOLD ERGO (Ergo Mining (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2014. London Road Heritage Statement. ERM Southern Africa (Pty) Ltd. Gauteng, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2014. Grootegeluk MPRDA, NEMA and IWULA. Exxaro Coal (Pty) Ltd. Limpopo, RSA. Notification of Intent to Develop. Reviewer / specialist.
- 2014. Kibali ESIA & EMP Update. Randgold Resources. Doko, DRC. Heritage Impact Assessment. Specialist.
- 2014. Nokuhle Colliery NEMA Process. HCl Coal (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Specialist.
- 2014. HRM Process for Hendrina Wet Ashing. Lidwala Consulting Engineers (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Specialist.
- 2014. Weltevreden NEMA. Northern Coal (Pty) Ltd. Mpumalanga, RSA. Heritage Impact Assessment. Specialist.
- 2014. Sasol Sigma Mooikraal Pipeline BA. Sasol Mining (Pty) Ltd. Mpumalanga, RSA. Notification of Intent to Develop. Specialist.

5.4 Burial Grounds and Graves Consultation and Relocation

- 2005. Report on exhumation, relocation and re-internment of 49 graves on Portion 10 of the farm Tygervallei 334 JR, Kungwini Municipality, Gauteng D Georgiades East Farm (Pty) Ltd. Gauteng, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2005. Southstock Collieries Grave Relocation. Doves Funerals, Witbank. Mpumalanga, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2005. Social consultation for Smoky Hills Platinum Mine Grave Relocation. PGS (Pty) Ltd. Limpopo, RSA. Stakeholder consultation on burial grounds and graves. Social consultant.
- 2005. Social consultation for Elawini Lifestyle Estate Grave Relocation. PGS (Pty) Ltd. Mpumalanga, RSA. Stakeholder consultation on burial grounds and graves. Social consultant.



- 2006. Social consultation for Zonkezizwe Grave Relocation. PGS (Pty) Ltd. Gauteng, RSA. Stakeholder consultation on burial grounds and graves. Social consultant.
- 2006. Social consultation for Motaganeng Residential Development Grave Relocation. PGS (Pty) Ltd. Mpumalanga, RSA. Stakeholder consultation on burial grounds and graves. Social consultant.
- 2006. Social consultation for Zondagskraal Coal Mine Grave (Pty) Ltd. Mpumalanga, RSA. Stakeholder consultation on burial grounds and graves. Social consultant.
- 2007. Exploratory excavation of an unknown cemetery at Du Preezhoek, Fountains Valley, Portion 383 of the farm Elandspoort 357 JR, Pretoria, Gauteng. Bombela Civil Joint Venture. Gauteng, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2007. Final consolidated report: Phase 2 test excavations ascertaining the existence of alleged mass graves, Tlhabane West, Extension 2, Rustenburg, Northwest Province. Bigen Africa Consulting Engineers. Northwest, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2007. Repatriation of Mapungubwe Human Remains. Department of Environmental Affairs and Tourism. Limpopo, RSA. Repatriation. Project manager.
- 2008. Report on skeletal material found at Pier 30, R21 Jones Street off-ramp, Kempton Park. Bombela Civil Joint Venture. Gauteng, RSA. Heritage Scoping Assessment. Project manager.
- 2011. Kibali Grave Relocation. Randgold Resources. Doko, DRC. International grave relocation. Specialist.
- 2012. Platreef Platinum Mine Burial Grounds and Graves Census. Platreef Resources (Pty) Ltd. Limpopo, RSA. Stakeholder consultation on burial grounds and graves. Project manager.
- 2013. New Liberty Grave Relocation Process. Aureus Mining Inc. Kinjor, Liberia. International grave relocation. Project manager.
- 2013. Bokoni Burial Grounds and Grave Census and Grave Relocation Plan. Bokoni Platinum Mines (Pty) Ltd. Limpopo, RSA. Stakeholder consultation on burial grounds and graves. Project manager.
- 2014. Arnot Colliery Grave Relocation Project. Exxaro Coal (Pty) Ltd. Mpumalanga, RSA. Burial grounds and graves consultation, permitting and relocation. Project manager.
- 2014. Paardeplaats and Belfast RAPs. Exxaro Coal (Pty) Ltd. Mpumalanga, RSA. Burial grounds and graves consultation, permitting and relocation. Reviewer / specialist.
- 2014. Thabametsi EIA, EMP, IWULA, IWWMP and PPP. Exxaro Coal (Pty) Ltd. Limpopo, RSA. Stakeholder consultation on burial grounds and graves. Specialist.



5.5 Research Reports and Reviews

- 2007. Research report on cultural symbols. Ministry of Intelligence Services. RSA. Research report. Project manager.
- 2007. Research report on the remains of kings Mampuru I and Nyabela. National Department of Arts and Culture. RSA. Research report. Project manager.
- 2012. Baseline Scoping and Pre-feasibility Songwe Rare Earth Element Project. Mkango Resources Limited. Songwe, Malawi. Heritage Impact Assessment. Reviewer / specialist.
- 2013. Fatal Flaw Analysis and EIA Process for AMD Man in Eastern Basin. AECOM SA (Pty) Ltd. Gauteng, RSA. Heritage Impact Assessment. Reviewer / specialist.

6 Professional Registration

Position	Professional Body	Registration Number
Council member	Association for Southern African Professional Archaeologists (ASAPA);	095
	ASAPA Cultural Resources Management (CRM) section	
Member	International Association of Impact Assessors (IAIA)	N/A
Member	International Council on Monuments and Sites (ICOMOS)	13839
Member	Society for Africanist Archaeologists (SAfA)	N/A

7 Publications

Authors and Year	Title	Published in/presented at
Nel, J. (2001)	Cycles of Initiation in Traditional South African Cultures.	South African Encyclopaedia (MWEB).
Nel, J. 2001.	Social Consultation: Networking Human Remains and a Social Consultation Case Study	Research poster presentations at the. Bi-annual Conference (SA3) Association of Southern African Professional Archaeologists the National Museum, Cape Town



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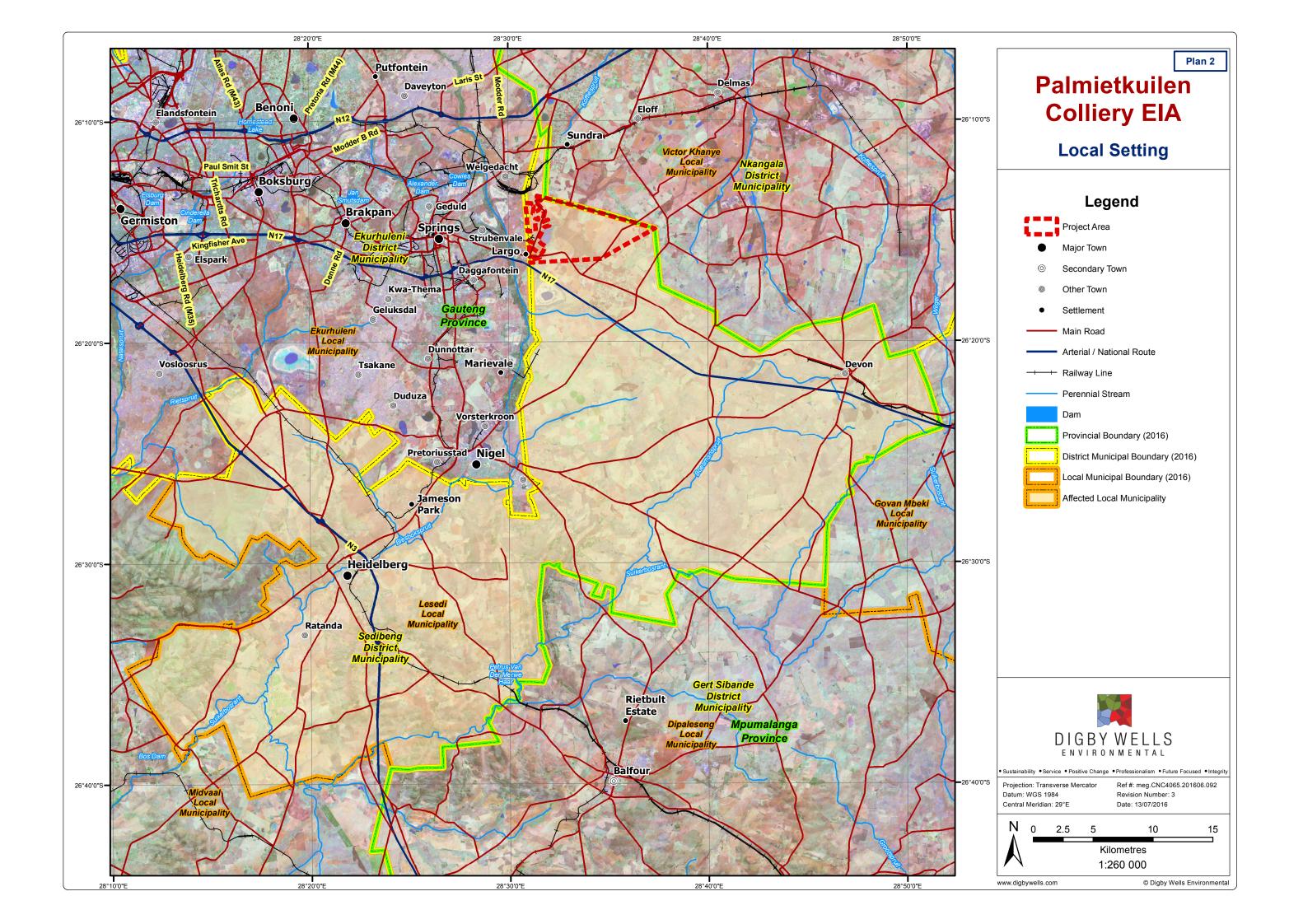
Notification of Intent to Develop

Application for a Mining Right and Environmental Authorisation of the proposed Palmietkuilen Mine, Gauteng Province

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Appendix B: Locality Plan



Notification of Intent to Develop

Application for a Mining Right and Environmental Authorisation of the proposed Palmietkuilen Mine, Gauteng Province





Appendix C: Background Information Document





Background Information Document for:

Proposed Palmietkuilen Coal Mining Project, Springs



DMRREF NO: GP30/5/1/2/2/10047MR

Project Number:

CNC4065

Prepared for:

Pandospan (Pty) Ltd(a subsidiary of the Canyon Group)

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1 Introduction

Pandospan (Pty) Ltd (a subsidiary of the Canyon Group), on behalf of Anglo Operations Pty Limited (AOL), is applying for a Mining Right to mine coal on Portions 1, 2, 4, 9, 13 and 19 of the Farm Palmietkuilen 241 IR, near Springs in the Gauteng Province of South Africa. The proposed Project area falls within the Sedibeng District Municipality and borders the Province of Mpumalanga.

This Background Information Document (BID) has been developed to:

- Provide a description of the proposed Project;
- Provide an overview of the environmental regulatory processes which will be undertaken in accordance with the South African legislation; and
- Provide details of the Public Participation Process (PPP) and how stakeholders can become involved.

Digby Wells Environmental (Pty) Ltd. has been appointed by Pandospan, as the mining right cessionary, to undertake the enviro-legal applications relevant to this Project.

2 Project Description

The applicant is planning the development of a new open pit coal mining operation, located near Springs within the Gauteng Province, to be known as the Palmietkuilen Coal Mining Project. The Project is a greenfields development with the infrastructure based on Portions 2 and 19 of the Farm Palmietkuilen 241 IR.

It is proposed to extract the coal through open pit mining and the Project is anticipated to have a Life of Mine of approximately 47 years. It is anticipated that the mine will produce 2 400 000 tonnes of coal per annum to supply to local and international markets.

The proposed infrastructure required on site includes the following:

- Access and haul roads;
- Office blocks:
- Workshops;
- A coal processing plant including a filter press;
- Stockpile areas;

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- Pollution control dams;
- Slurry dams;
- A return water dam;
- Stormwater trenches and berms; and
- A future development area (to be confirmed).

The establishment of the open pit will lead to the establishment of topsoil, subsoil, and overburden stockpiles. Once coal is extracted it will initially be stored on a Run of Mine (ROM) stockpile before being fed to a processing plant on site which will crush and screen the coal. From there, slurry will be sent to the dense media separator and the remaining solid discard will be placed back into the void. Coal product will be stockpiled on the product stockpile and thereafter transported by truck to the Welgedacht Siding located approximately 2 kilometres (km) from the proposed Project area. The Welgedacht siding is linked to the major rail networks in the area and coal will be transported from there to the relevant markets. Surface water management infrastructure will also be required, thus a pollution control dam will be constructed for all mine-affected water. A slurry dam is also proposed and the slurry will be fed to a Filter Press Plant to extract coal fines to convert into coal "cakes", which will also be sold as product. Figure 3-1 below is a Locality Map of the proposed Project area.

3 Legislative Process

The proposed Project will trigger listed activities in terms of the National Environmental Management Act, 1998 (Act No 107 of 1998) (NEMA), and the Environmental Impact Assessment (EIA) Regulations¹ (NEMA Regulations) thereunder, promulgated in 2014. The following application will be made available to the Department of Mineral Resources (DMR) as competent authority for the proposed project:

An integrated Environmental Authorisation Application will be submitted to the DMR for listed activities associated with a Mining Right in accordance with the NEMA and the EIA Regulations, 2014 below; and waste management activities in accordance with the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA);



- Regulation GN R983 Listing Notice 1, which sets out a list of activities which may not commence without environmental authorisation from the competent authority and which must follow the basic assessment procedure as provided for in regulation 19 to 20 of the NEMA EIA Regulations;
- Regulation GN R984 Listing Notice 2, which sets out a list of activities which may not commence without environmental authorisation from the competent authority and which must follow the scoping and EIA procedure as provided for in regulation 21 to 25 of the NEMA EIA Regulations; and
- Regulation GN R985 Listing Notice 3, which sets out specific listings per provincial area which may not commence without environmental authorisation from the competent authority and which must follow the basic assessment
- A Mining Right in terms of Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

In addition to the above, the following applications will be submitted:

- Water Use License Application (WULA) in accordance with the National Water Act. 1998 (Act No. 36 of 1998) (NWA) for activities associated with the installation of pipes and pumps that will pump water from particular resources directly to the processing plant to the Department of Water and Sanitation (DWS); and
- Approval from the South African Heritage Resources Agency (SAHRA in accordance with the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA) for all the activities undertaken.

As per these Applications, Canyon (on behalf of Anglo) must undertake a Scoping and Environmental Impact Assessment (EIA) Process.



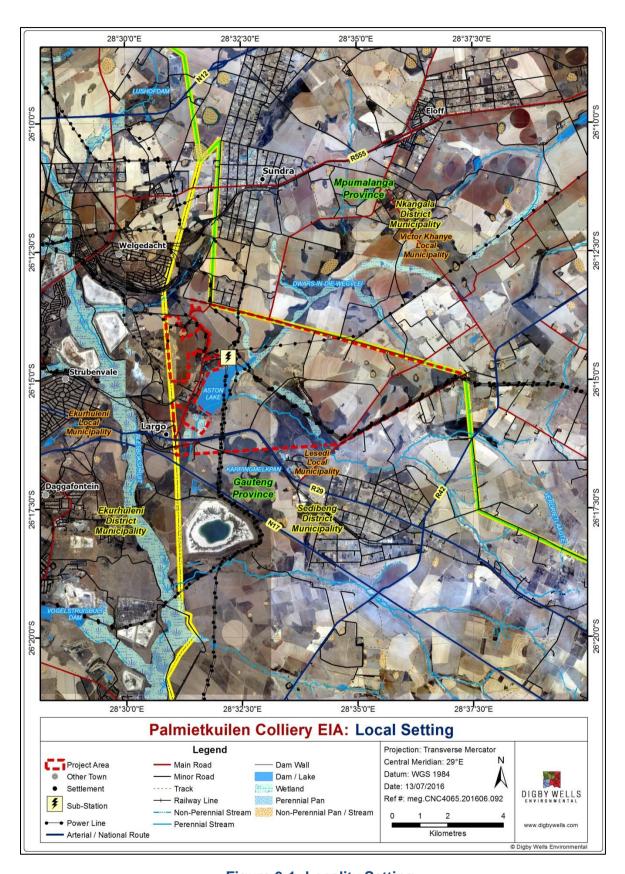


Figure 3-1: Locality Setting



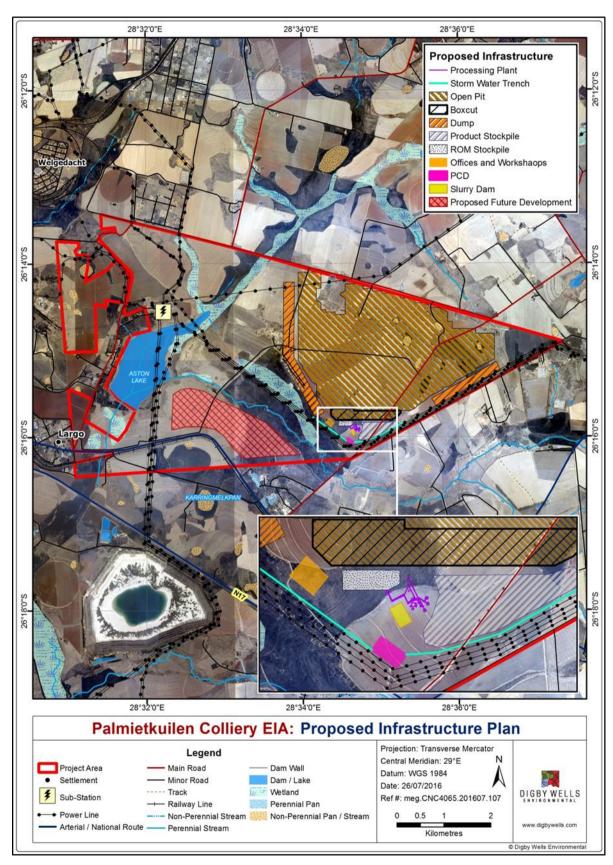


Figure 3-2: Proposed Infrastructure Plan



3.1 Specialist Studies

To complete the EIA, the following specialist studies will be undertaken to determine potential impacts that this Project might have, these specialist studies include:

- A Social Impact Assessment (SIA);
- Visual Impact Assessment (VIA);
- Geographic Information Systems (GIS) Mapping;
- Pedological Assessment (Soils, Land capability and land use);
- Groundwater Impact Assessment:
- Surface Water (Hydrology) Impact Assessment and Conceptual Storm Water Management Plan (SWMP);
- Air Quality Impact Assessment;
- Noise Impact Assessment;
- Fauna and Flora Impact Assessment;
- Wetland Delineation and Impact Assessment;
- Rehabilitation Plan and Closure Cost Report;
- Traffic Impact Assessment; and
- Blasting and Vibrations Impact Study.

3.2 Public Participation Process (PPP)

Affected stakeholders who are interested in this particular proposed project are welcome to register as an Interested and Affected Party (I&AP) to be involved in the Public Participation Process (PPP). The PPP is in agreement with the EIA Regulations 2014 (GN R982), under the NEMA. Notifications are done by means of letters, SMS's, emails, a newspaper advertisement in the local newspaper as well as site notices (which include locations of the Scoping Reports for public review, as well as a locality map of the project site). A Public Meeting will be held during the Scoping and the EIA Phase.

With submission of the application to the DMR, the formal 300 day EIA process has been initiated, as per the NEMA Regulations (2014). The Scoping Reports are

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available to stakeholders for a period of 30 days to provide comment following the submission of the application. The EIA Phase will commence roughly two months after the Scoping Phase; EIA Reports will be made available for another 30-day comment period. A decision about the Environmental Authorisation Application will be received from the DMR after the submission of the finalised EIA Reports and I&APs will be informed thereof accordingly.

Further information regarding the project can be found on the Digby Wells website (www.digbywells.com) under Public Documents.

Registered I&APs will be informed about availability of reports and scheduled stakeholder meetings via their preferred means of communication (SMS, email, post or fax). Comments raised by stakeholders will assist in informed decision-making for authorities, and provides information to be considered by the project team and specialists conducting studies.