

**DRAFT PHASE ONE  
INTEGRATED HERITAGE IMPACT ASSESSMENT COMPILED IN TERMS OF  
SECTION 38(8) OF THE NATIONAL HERITAGE RESOURCES ACT, 1999  
(ACT 25 OF 1999)**

**PROPOSED KHOI-SUN DEVELOPMENT (75MW SOLAR PROJECT):  
PORTION (425HA) OF THE FARM SKUITDRIFT 426, KENHARDT  
DISTRICT, NORTHERN CAPE PROVINCE**



**ON BEHALF OF: Khoi-Sun Development (Pty) Ltd**

**MARCH 2012**

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**PERCEPTION**

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**REFERENCES and ACKNOWLEDGEMENTS:**

1. Cape Town Archives
2. Chief Directorate: Surveys & Mapping
3. Deeds Office, Cape Town
4. Almond, J (2012). *Recommended exemption from further palaeontological studies and mitigation (Desktop study) – Proposed 75MW Solar facility on farm Skuitdrift 426, Kenhardt District, Northern Cape*. Unpublished report, Cape Town
5. Smith, AB (2012). *Archaeological Report - Proposed 75MW Solar Facility on Farm 426 Skuitdrift, Northern Cape Province*. Unpublished report, Cape Town
6. South African National Archives Repository
7. Surveyor General's Offices, Cape Town
8. Lower Orange River Management Plan – Unlocking the Ecotourism Potential of the River, Draft October 2008
9. SANParke. 2001. *“Kultuurerfenis: Hede and Verlede.” Omgewingsopleidingshandleiding vir die Augrabieswaterval Nasionale Park en Omgewing*. SANParke, Pretoria

**ABBREVIATIONS:**

CDSM – Chief Directorate: Surveys & Mapping, Mowbray  
 CTDO – Cape Town Deed's Office  
 DEA – Department of Environmental Affairs (National)  
 ECO – Environmental Control Officer  
 NHRA – National Heritage Resources Act, 1999 (Act 25 of 1999)  
 NID – Notice of Intent to Develop  
 HIA – Heritage Impact Assessment  
 HWC – Heritage Western Cape  
 KAB – Cape Town Archives Repository  
 PPP – Public Participation Process  
 PAWC – Provincial Administration: Western Cape  
 RoD – Record of Decision  
 SAB – National Archives Repository  
 SDF – Spatial Development Framework  
 SGO – Surveyor General's Office

DRAFT VERSION

Not for submission

**COVER PAGE:** Extract from 1906-1914 SG Maps (Source: CDSM)

## 1. INTRODUCTION

*PERCEPTION* was appointed during February 2012 by *Khoi-Sun Development (Pty) Ltd* for the provision of professional services relating to this proposal, as required in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act 25 of 1999) (NHRA). Sanction for compilation and submission of this application was provided by a representative of the developer duly authorised by way of a formal appointment (Power of Attorney) attached as Annexure 1.

This submission serves as a Heritage Impact Assessment (HIA) and includes inputs from the following specialist reports sanctioned as part of the HIA:

- Archaeological Impact Assessment (Pre-colonial, Historical) – Prof. Andrew Smith
- Historical background report – SE de Kock
- Recommendation for Mitigation from further palaeontological studies and mitigation (Desktop) – Natura Viva (Dr. John Almond)

## 2. INDEPENDENCE OF ASSESSOR

The Developer appointed *SE de Kock (PERCEPTION Heritage Planning)* as an independent professional heritage practitioner to facilitate the Heritage Impact Assessment (HIA) process running concurrently with the EIA process, the latter of which is facilitated by *Cape Environmental Practitioners (Pty) Ltd ("CapeEAPrac")*.

According to Regulation 18 of NEMA an EAP must be independent; amongst others have experience in conducting EIA's (as well as specialist reports forming part of such EIA's), perform the work relating to the application in an objective manner, comply with the Act, the environmental Regulations and all other applicable legislation, take into account, to the extent possible the matters relevant to the receiving environment, disclose all material information in the possession of the EAP that reasonably has or may have the potential of influencing a decision, or the objectivity of any submission to the competent authority, which with relation to the HIA refers to the *South African Heritage Resources Agency* as well as *Ngwao Boswa Kapa Bokoni*.

With relation to the author's appointment to compile and submit to the *South African Heritage Resources Agency* as well as *Ngwao Boswa Kapa Bokoni* a Heritage Impact Assessment in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act 25 of 1999), it is hereby declared that:

- This consultancy (including the author) is not a subsidiary, legally or financially, of the proponents;
- Remuneration for professional services by the proponent in relation to this proposal is not linked to approval by any decision-making authority responsible for permitting this proposal;
- Neither this consultancy, nor the author has any interests in secondary or downstream as a result of the authorisation of this project.

It is further hereby certified that the author has 15 years professional experience (3 years of which were abroad) as urban planner and 8 years professional experience as heritage practitioner (2 years of which were abroad). The author holds the following qualifications:

- Town and Regional Planning (B-Tech, CPUT, 1997)
- Environmental Impact Assessment Management – Heritage, Environmental (Dipl/ Masters, Dublin University, 2002)
- Architectural & Urban Conservation (CDP, UCT, 2007)
- Urban Design (CPD, UCT, 2009).

The author is professionally registered as follows:

- Town and Regional Planner – Irish Planning Institute (IRL)
- Accredited Heritage Practitioner – Association for Professional Heritage Practitioners

- Member – International Association of Impact Assessment (SA)
- Able to register as Town and Regional Planner with South African Council for Planners

### 3. BACKGROUND

This report follows notification of the South African Heritage Resources Agency by CapeEAPrac of the proposed solar installation/ Scoping and Environmental Impact reporting to be initiated in terms of the National Environmental Management Act, 1998 (Act 125 of 1998) and its subsequent response dated 11<sup>th</sup> January 2012 as summarised below (copy attached as part of Annexure 2):

- *That a Heritage Impact Assessment is required consisting of/ incorporating the following specialist studies and detailed site analysis with an integrated set of recommendations:*
  - *Archaeological Impact Assessment;*
  - *Palaeontological Impact Assessment;*
  - *Built environment issues;*
  - *Burial grounds and graves;*
  - *Analysis of Cultural landscape issues;*
  - *Analysis of Visual – Spatial issues.*

### 4. METHODOLOGY

As part of this HIA report the author has studied, visited, photographed and assessed the study area and its environs over a period of approximately two months, which more specifically involved the following:

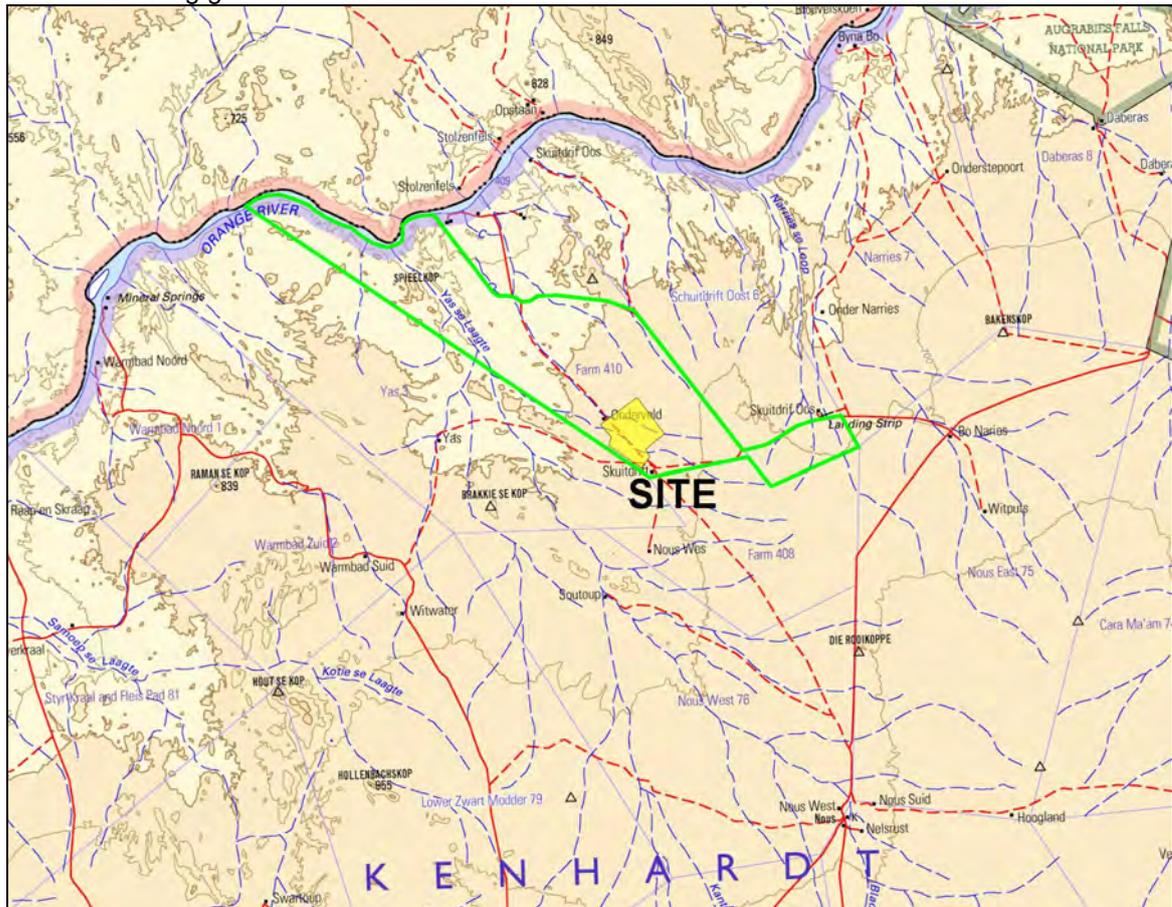
- Studying ownership history and social history pertaining to the site and its environs from relevant primary sources obtained in the National Archives, Cape Town Archives and Deeds Office;
- Field work carried out on 24<sup>th</sup> February 2012;
- Negotiations, discussions with consultant team regarding nature and detailed design of proposed development;
- Focussed public participation process aimed at soliciting heritage-related comments from community members regarding proposed development and running concurrent with EIA Process;
- With relation to compilation of this HIA:
  - Research (site specific but also local context/ environs);
  - Identification of heritage-related issues and concerns;
  - Analysis of development site and its environs;
  - Identification of contextual spatial informants;
  - Transpose findings of Archaeological Impact Assessment and Palaeontological Impact Assessment into this report;
  - Establishing cultural significance, based on criteria set out in NHRA;
  - Identification of heritage-related design informants based on the above;
  - Assess conformity of final proposed site layout to design informants identified.

### 5. DESCRIPTION OF STUDY AREA

The farm Skuitdrif<sup>1</sup> 426, located in the Kenhardt district and jurisdiction area of the Khai-Garib Local Municipality, the Siyanda District Municipality, includes a surface area of c. 7,942 ha. The property is directly south of the Orange River and west of the Augrabies National Park. The subject site (comprising approximately 425ha) is located on the northern portion of this farm as illustrated with the locality plan below. Via road the subject site is approximately 106km northeast of Pofadder and 115km northwest of Kakamas respectively. Access to the

<sup>1</sup> Variations to this spelling noted include "Schuitdrift" or "Skuitdrift"

site is from the N14 National road (turn-off 60km east of Pofadder; 70km west of Kakamas) via a 46km long gravel track.



**Figure 1:** Locality of proposed development site (highlighted yellow) and property boundary (green) (Source: 1:250,000 Topocadastral series, CDSM)



**Figure 2:** Recent aerial view of proposed development site (red) shown in relation to Skuidrift Sub-station, access road and existing buildings. Part of Skuidrift 426 boundary shown (black) (Source: Google Earth Pro)

The proposed development site is located within a flat, arid landscape bound by a series of low granite hills to the northeast. Soils were found to be sandy and overgrown with sparse vegetation including grass and low-growing shrubs interspersed. As illustrated with the recent aerial photograph (Figure 2), a narrow gravel road (also the main access road on the farm) traverses the site – continuing further northwest/ parallel to the western property boundary towards the Orange River. The existing Skuitdrift substation and a cellular mast are directly southwest of the site. From this substation a 33kV overhead line leads to the west while a 132kV overhead line leads to the east (Blouputs).

No buildings, ruins or any other structure were noted on the proposed development site. The existing Skuitdrift farmstead, just north of the site boundary, is not older than 60 years. A small building complex, including a much-altered farmstead and outbuildings older than 60 years, a modern labourer's cottage and agricultural building (most likely older than 60 years) were noted directly south- west of the site (i.e. also just outside proposed development site boundary). Annotated photographs of the site and its environs are attached as part of Annexure 3.

## 6. DEVELOPMENT PROPOSAL AND ALTERNATIVES

The proposed development is for construction of a 75MW solar energy installation and would entail clusters of 10 Photovoltaic arrays (each taking up an area of approximately 20ha). Internal electrical reticulation associated with the proposal would most likely be installed (400mm – 1000mm) underground. Access to the site would be from existing roads serving the surrounding area. Additional infrastructure to be accommodated on site would include a substation and auxiliary buildings (maintenance and storage), the exact location of which have not been finalised. The site would include an area for maintenance, storage and five water tanks each with 10 kilolitre capacity.

Possible water sources identified at this stage include a nearby water reservoir (fed by on-site boreholes), rainwater capture/storage and/or alternatively via a new pipeline following an existing track from Southern Farms situated along the Orange River (northwest of the site) as illustrated through the conceptual site layout provided to us by the developer is attached as Annexure 4. This water pipeline would be installed within or directly adjacent to the existing track between the current Skuitdrift farmstead and Orange River.

## 7. HISTORICAL BACKGROUND

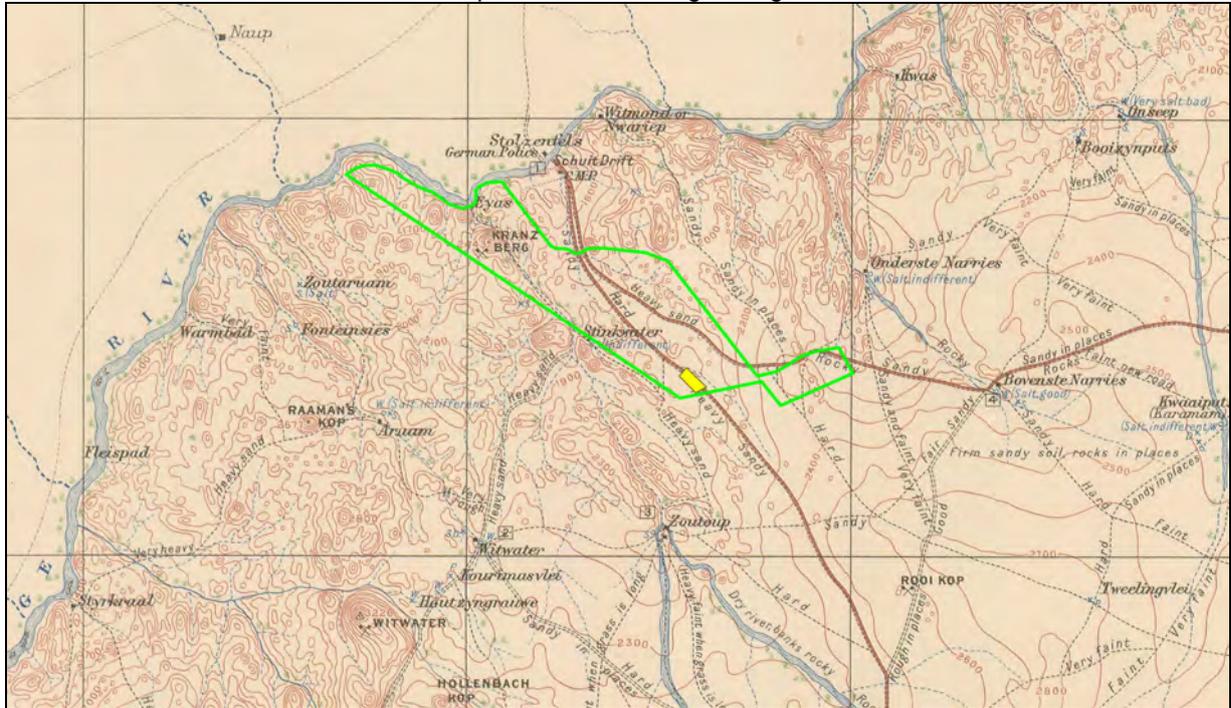
Basic historical background research was commissioned as a specialist input into this Heritage Impact Assessment report and focussed primarily on available primary sources obtained in the Cape Town Archives, National Archives Repository, Deeds Office and Surveyor General's Office.

### 7.1 Introduction

Details pertaining to earliest property ownership could not be fully researched due to logistic problems associated with unscheduled maintenance by the National Archives. However, web-based Deeds Office records ([www.deeds.gov.za](http://www.deeds.gov.za)) confirm that the Farm (Skuitdrift) 426 is currently registered to Johannes Frederik Nel and held under title deed number T35398/2003. These records further refer to current servitudes across the property registered to Eskom Holdings (Pty) Ltd and that it was created through consolidation of Farm 410 and Schuitdrift Oost 6/4 during 2002. A copy of the current S.G. Diagram (1482/2002) is attached as Annexure 5. The current property boundaries have been transposed onto a historic map of the area in Figure 3 below.

## 7.2 Early history

According to un-referenced secondary sources<sup>2</sup>, Northern Namaqualand as well as southern Namibia were occupied by the Great Namaqua tribe who were herders (goats, sheep, cattle) while the Namnykoa tribe kept primarily along the river corridor and a third group, the Einiqua, occupied the area currently forming part of the Augrabies National Park. Smaller San and "Hottentot" communities were spread out between these tribes and seem to have generally maintained sensitive relationships with their stronger neighbours.



**Figure 3:** Extract from 1906-1914 compilation of SG Maps highlighting subject development site boundary in green and proposed development site hatched in yellow (Source: CDSM)

Trekboers' moving into the interior from the c. 1770's inevitably resulted in conflict with many of these indigenous peoples and by the early 19<sup>th</sup> century the influence of various missionary groups entering the area caused many descendants of the Khoekhoen to be limited to mission land in isolated pockets in the Namaqualand and margin lands of the Richtersveld, where in some instances, their indigenous language (Nama) is still spoken by elders.

*"Prior to the construction of the Vioolsdrift high-level bridge in 1956, most vehicular traffic to and from Namibia was routed via the main road through Nakop, or by way of several river crossings, or drifts, which had been in use since the late 1700s. Among the most important crossing points were those at Goodhouse and Raaman's Drift, linking Namaqualand and the newly established mission settlement at Warmbad and the Namibian interior. These early colonial farming, trading and mission settlements and river crossings are of varying historical importance<sup>3</sup>".*

Archival sources pertaining to the subject study area are limited but it is considered likely that archaeological finds along the Orange River's banks may include buried pottery, fish bone sites and burial cairns of Nama ancestors. Older San and Holocene sites have reportedly been documented on the silt flats and in any small rock shelters or overhangs close to the Orange River and it is considered likely that old river terraces and ridges, as well as tributaries and steep sided valleys, may hold general scatters of archaeological material, especially Early

<sup>2</sup> Lower Orange River Management Plan – Unlocking the Ecotourism Potential of the River, Draft October 2008

<sup>3</sup> Section 2.2, p. 40, LOR Draft Management Plan, 2008

and Middle Stone Age. Rock engravings of San ancestors of the Nama may possibly be located on flat rocky outcrops (particularly dolerite) along the river.

More recent colonial heritage resources may include historic buildings (early farms and missions), graveyards, and possible places of conflict (Anglo-Boer war and Korana uprising<sup>4</sup>). Information obtained from SAHRA as well as other sources<sup>5</sup> indicate the following sites of cultural significance in the Skuidrift area and broader region:

- *Skuidrift*, historic river crossings; German military outpost built in 1901, ruins and graves;
- *Pella*, a Catholic mission church built in 1878, date plantations;
- *Onseepkans*, a declared national monument, mission and church as well historic bridge;
- *Goodhouse*, graves and church, historic buildings

### 7.3 General history pertaining to Skuidrift area

General archival references pertaining to the Skuidrift area include an application to the government in 1905 by a Mr. Brinkhaus of Brussel & Co to occupy a trading site in the area (presumably at the river crossing)<sup>6</sup>. The occurrence of colonial conflict is also evident through mention in general dispatches to “*arms, ammunition and saddlery surrendered by German soldiers to the Cape Mounted Police at Scuidrift*” on 11<sup>th</sup> October 1905<sup>7</sup>.

Ferries between South Africa and then South West Africa Namibia, across the Orange River was established at “*Schuidrift and Nylersdrift*” during 1911<sup>8</sup>, while reference to an “*enquiry into a boat at Schuidrift*” during 1917 was noted. Though the nature of this enquiry could not be confirmed, this seems to prove the long-standing, established nature of the ferry crossing at Skuidrift<sup>9</sup>, the former location of which would obviously have been along the river and therefore well outside the proposed development site boundary.

A new school building was established in 1918 at Nous (just southeast of the proposed development site), which suggests a sufficient number of local inhabitants to justify a school in the area<sup>10</sup>. More than one archival reference makes mention of an application by Captain Robert Kineard Farrart for lease of land to “*Dredge for precious stones in the Orange River from Schuidrift for four miles up*”<sup>11</sup>, dated 1920. Presumably this refers to land directly adjacent to the Orange River. Records also refer to lease of a certain portion of land at Schuidrift West by “*farmer GS Nel*” for a Dipping tank in 1962<sup>12</sup>.

Records pertaining to issuing of former Crown Land within the proximity of the proposed development site to private persons include the following:

- Certain portion of land named Schuidrift Oost to MWA Pretorius in 1950<sup>13</sup>;
- Certain portion of land named Schuidrift West to unnamed person in 1950<sup>14</sup>;
- Issuing of Crown Grant in respect of Schuidrift Police Reserve in 1954<sup>15</sup>.

### 7.4 Conclusions

Based on the above research the Schuidrift area, and more particularly areas within relative close proximity to the Orange River, is of high historical cultural significance due to its association with:

<sup>4</sup> c. 1868

<sup>5</sup> SANParke. 2001. “*Kultuurerfenis: Hede and Verlede.*” *Omgewingsopleidingshandleiding vir die Augrabieswaterval Nasionale Park en Omgewing.* SANParke, Pretoria

<sup>6</sup> KAB, Volume 8297, Ref. X3196

<sup>7</sup> KAB, Volume 23/93, Ref. 116

<sup>8</sup> KAB, Volume 4/509, Ref. A20

<sup>9</sup> KAB, Volume 4/510, Ref. A49

<sup>10</sup> KAB, Volume 111, Ref. B2178

<sup>11</sup> KAB, Volume 512, Ref. MM1466/20

<sup>12</sup> SAB, Volume 4277 Ref. 12619

<sup>13</sup> SAB, Volume 2729 Ref. 874

<sup>14</sup> SAB, Volume 2825 Ref. 3598

<sup>15</sup> SAB, Volume 3211 Ref. 688

- Pre-colonial history and indigenous inhabitants;
- History pertaining to border crossing at Schuitdrift;
- Various conflicts such as Anglo – German but also border wars with local tribes (including Nama wars);
- Early mining activities.

However, no archival references referring to these historic themes, which include the possibility of grave sites/ burial ground on proposed development site and/ or lands directly contiguous to it, could be located.

## 8. HERITAGE RESOURCES & ISSUES

With relation to the integrated mapping of all heritage resources and/ or occurrences noted on the site please note that:

- Integrated heritage resource mapping, including the built environment, archaeological and palaeontological occurrences are presented through Annexure 6;
- Archaeological, Palaeontological and aspects pertaining to the Built environment have been transposed into this report have been included on the above mapping where possible. Please however refer to respective specialist reports for detailed mapping and visual presentations.

### 8.1 Built environment

During fieldwork carried out on 24<sup>th</sup> February 2012 no buildings, ruins or any other structures were noted on the site. Furthermore, no structures considered to be of cultural significance were located within the proximity of the proposed development site boundaries. The existing Skuitdrift homestead (#009) is just north of the proposed development site but is not older than 60 years. Another old farmstead as well as associated outbuildings (older than 60 years) was noted directly south of the proposed site as illustrated through mapping attached as Annexure 6 and the table below.

GPS #	Coordinates	Description	> 60 yrs of age
007	S 28 35 37.0 E 19 45 10.5	Windmill	No
008	S 28 35 37.4 E 19 45 10.7	Windmill	No
009	S 28 35 44.2 E 19 45 13.9	Current Skuitdrift "Onderveld" homestead	No
023	S 28 36 41.5 E 19 46 19.0	Labourer's cottage (modern)	No
024	S 28 36 47.2 E 19 46 21.6	Farmstead (altered, gabled addition)	Yes
025	S 28 36 47.4 E 19 46 29.2	Agricultural outbuilding/ Stonewalling	Yes/ No
026	S 28 36 32.8 E 19 46 29.5	Gravesite	No

Note: Coordinates displayed in WGS84: Lat/Lon hddd° mm' ss.s"

Buildings older than 60 years noted within the direct proximity of the proposed development site included a single-storey, hipped-roof (corrugated iron) farmstead of modest design (#024). In addition to a verandah, which has been added onto the front (north-east facing) elevation, further additions to the historic core of the building include an interesting hipped-roof, gabled extension to the front elevation and single-storey rectangular flat-roofed addition to the opposite side as illustrated through photographs attached as part of Annexure 3.

This building is considered to be of moderate local architectural cultural significance. A separate flat-roofed outbuilding (garage structure), also considered older than 60 years, is situated to the rear of the farmstead and is considered to be of low local architectural cultural significance. A hipped-roof agricultural outbuilding, situated c. 200m east of the farmstead is considered to be of low local cultural significance. Stonewalling (kraal) to one side of this outbuilding is not older than 60 years.

A single grave (not older than 60 years) and at least two empty graves were noted just off a narrow track, directly south of the proposed development site. The sides of the two abandoned graves were constructed with mud bricks and cement and have been partly filled

in by wind-blown sand over time (please refer to annotated photographs, Annexure 3). The single grave (AP Nel, 1962) and two abandoned graves are not considered to be of cultural significance, are situated outside the proposed development footprint and would not be affected through the proposed development.

## **8.2 Landscape issues**

### **8.2.1 Cultural landscape context**

The term “*cultural landscape*” refers to the imprint created on a natural landscape through human habitation and cultivation over an extended period of time. While the Northern Cape has been inhabited for many ten of thousands of years (pre-colonial history) prior to Western settlement (colonial history), the nomadic lifestyles of early inhabitants are not always as evident within the landscape than the significant imprints made by humans during the last two – three hundred years. Unlike ancient landscapes in parts of the world where intensive cultivation over periods much longer than locally have allowed natural and cultural components of the landscape to become interwoven, climatic conditions prevailing with this arid, semi-desert landscape mostly precluded large-scale cultivation, save within the proximity of perennial rivers such as the Orange River or other places with a reliable water source.

Ultimately, definition of a cultural landscape is informed by the following elements, weighed through professional opinion, public values and statutory (legal) framework:

- Natural Landscape
- Public Memory
- Social History
- Historical Architecture
- Palaeontology
- Archaeology

Given the absence of early aerial photography for the area, identifying any Pre-Modern traditional landscape patterns occur within the direct proximity of the proposed development site has been met with some difficulty. In this case, primary traditional landscape features evident within the current landscape are limited to existing farm tracks, the building complex mentioned in Section 8.1 above, as well as limited agricultural use, none of which are considered to be of cultural significance. While significant cultural landscape features occur along the Orange River corridor, this falls well outside the scope of the proposed development.

## **8.3 Visual-Spatial issues**

The proposed development site would not be visible from any main roads, public vantage points or any other known area or site considered to be of local, provincial or national aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value cultural significance.

## **8.4 Archaeology**

A copy of the Archaeological Impact Assessment (AIA), compiled by Prof. Andrew Smith, is attached as Annexure 7, the findings of which are summarised below<sup>16</sup>. Kindly refer to specialist’s full report and recommendations.

There were no restrictions to the archaeological investigation and the entire study area was accessible on foot and open to inspection and assessment. Site visits were conducted on 22<sup>nd</sup> and 24<sup>th</sup> February 2012 and the footprint of the solar facility inspected for archaeological remains by walking, and a GPS track recorded any archaeological material. Tracks and

<sup>16</sup> Smith, AB (2012). *Archaeological Report - Proposed 75MW Solar Facility on Farm 426 Skuitdrift, Northern Cape Province. Unpublished report, Cape Town*

burrowing animal activity were inspected, but only around the number of koppies that exist on the farm was any material of significance found.

The conclusions are that the flat, open country has low archaeological significance, but the koppies need to be avoided by any construction teams and their vehicles. It is suggested that a 'buffer zone' of 50m extending around the base of each koppie would be adequate protection of the archaeological sites. There appear to be no other inhibitors to the solar facility from an archaeological perspective.

Waypoints of archaeological occurrences are as per table below and have been transposed onto Annexure 6.

LABEL	LONGITUDE	LATITUDE	DESCRIPTION
133	19° 46' 21.9048" E	28° 36' 45.4485" S	Skuitdrift Farmhouse
134	19° 46' 19.5572" E	28° 36' 52.3740" S	MSA quartzite core
135	19° 45' 55.6168" E	28° 36' 58.5429" S	MSA quartz flake
136	19° 45' 9.5373" E	28° 36' 30.9380" S	Road junction along fence
137	19° 45' 12.2030" E	28° 36' 18.3298" S	Crystal quartz & hornfels flakes
138	19° 45' 0.5404" E	28° 36' 4.6168" S	Quartz core/scrapper + flakes
155	19° 45' 13.9172" E	28° 35' 44.2171" S	Onderveld Farmhouse
156	19° 45' 45.8658" E	28° 36' 1.0559" S	Quartz core + few chips
157	19° 45' 53.1394" E	28° 36' 3.7239" S	Quartz flake + scrapper
158	19° 46' 3.7064" E	28° 35' 58.1609" S	Scattered quartz flakes & core
159	19° 46' 17.6278" E	28° 36' 6.8516" S	Hornfels flake

Source: Prof. Andrew B Smith

The road to the Southern Farms was also inspected, as this would be the preferred route of a water pipeline from the Orange River. No archaeological occurrences considered to be of cultural significance were noted along this route.

The only artefact concentrations of any note are around the base of the koppies on the footprint. It is recommended that in the installation of the solar panels that an area around each koppie is designated as a 'buffer zone' (perhaps 50m.) and no tracks be built through the buffer zone. From an archaeological perspective the open terrain is of low significance, as there is little cultural material to be found. With the proviso of the 'buffer zones' around the koppies, there is no other archaeological impediment to the solar facility going ahead.

Based on results of the current study it is recommended that:

- It is recommended that in the installation of the solar panels that an area around each koppie is designated as a 'buffer zone' (perhaps 50m.) and no tracks be built through the buffer zone.

## 8.5 Palaeontology

A copy of Recommendation for exemption from further palaeontological studies or mitigation, compiled by Dr. John Almond, is attached as Annexure 8, the findings of which are summarised below<sup>17</sup>. Kindly refer to specialist's full report and recommendations.

The above report indicates that the proposed development site is underlain by ancient Precambrian basement rocks (Schuitdrift Gneiss) that are approximately two to one billion years old and entirely unfossiliferous (Almond & Pether 2008). The report furthermore indicates that while alluvial gravels of the Orange River of Miocene and younger age are locally highly fossiliferous, these are highly unlikely to be found in the study area. The palaeontological sensitivity of the Skuitdrift solar plant study area is accordingly assessed as

<sup>17</sup> Almond, J (2012). *Recommended exemption from further palaeontological studies and mitigation (Desktop study) – Proposed 75MW Solar facility on farm Skuitdrift 426, Kenhardt District, Northern Cape*. Unpublished report, Cape Town

VERY LOW. As such, it is recommended that no further palaeontological studies be required in this instance.

### 8.6 *Eco-tourism*<sup>18</sup>

One of the goals of ecotourism is to offer tourists insight into the impact of human beings on the environment, and to foster a greater appreciation of our natural habitats and from an economic perspective, heritage resources may prove to be valuable resources when used in sustainable manner through eco-tourism. This may for example include investment in adaptive reuse of historic buildings so as to conserve and enhance the unique character and historic themes pertinent to this area. Heritage tourism can therefore serve as a driver for economic development, including infrastructure development and poverty alleviation through job creation. The broader region's rich archaeological, palaeontological, historical and natural heritage has the potential to provide unique tourism opportunities when developed and used in responsible and sustainable ways.

Existing eco-tourism related activities present in the broader region include e.g. walking trails, horseback riding, geological interpretive excursions, bird watching and river rafting. The Augrabies National Park – approximately 54km east of the proposed development site – is an important formal conservation area in the region. Given the isolated location of the site in relation to important tourism routes and formal conservation areas; as well as the relative low density of heritage resources considered of cultural significance noted as part of this assessment, we do not consider that the proposed development would offer significant heritage-related eco-tourism opportunities associated with the development site.

## 9. HERITAGE INFORMANTS AND INDICATORS

According to the requirements of Section 38(3) of the NHRA it is crucial that the land use planning and EIA processes be informed by and incorporate heritage informants and indicators (as done through the mapping and grading of relevant heritage resources in Section 8 of this report). It is the purpose of this Section to define heritage informants and indicators pertaining to the way in which heritage resources must be incorporated into the overall design of the proposed development and should therefore be read in conjunction with Annexure 6 (integrated mapping of all heritage resources and/ or occurrences noted).

### 9.1 *Built environment issues*

- Existing structures older than 60 years located directly southeast of the site (farmstead and two associated outbuildings) are considered to be of moderate – low cultural significance and is furthermore situated well outside the actual development footprint currently proposed. As such we are of the view that the proposal would not materially impact on these heritage resources.

### 9.2 *Cultural landscape issues*

- From a regional and natural landscape perspective, the proposed development site forms part of an isolated wilderness area well outside local tourism routes and areas (including the Orange River corridor). While the proposal would relate to a landscape modification, we do not consider that it would alter any natural or cultural landscape of cultural significance.

### 9.3 *Visual-spatial issues*

- Having regard to the above assessment, we do not consider that the proposed development would negatively impact on any heritage resource, or the spatial relationships and associations between such resources, identified as part of this process.

<sup>18</sup> Section included in accordance with requirements set by National Department of Environmental Affairs

#### 9.4 **Archaeology**

All recommendations contained in AIA, as summarised in Section 8.4 of this HIA report shall be adhered to.

#### 9.5 **Palaeontology**

It is recommended that no further palaeontological studies or mitigation be undertaken in respect of the proposed development site. Should substantial fossil remains be exposed during construction, however, the ECO should safeguard these, preferably *in situ*, and alert SAHRA as soon as possible so that appropriate action (e.g. recording, sampling or collection) can be taken by a professional palaeontologist

### 10. **PUBLIC PARTICIPATION**

Due to the fact that there are no known local heritage conservation bodies in the Skuitdrift area (registered as such with the relevant provincial heritage resources authority in terms of Section 25 of the National Heritage Resources Act, 1999 (Act 25 of 1999)), the Public Participation Process (PPP) for this HIA will be coordinated with that of the EIA Process facilitated by *Cape Environmental Assessment Practitioners (Pty) Ltd* (Cape EAPrac) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998), so as to solicit possible heritage-related comments with relation to the proposed development.

### 11. **LIMITATIONS AND ASSUMPTIONS**

- This report is limited to the assessment of the potential impact of the proposed Skuitdrift 75MW Photovoltaic Solar Power Station on heritage resources found on/ within the proximity of the development site as defined in this Heritage Impact Assessment;
- There is a limitation in terms of understanding the cumulative impacts of the project when taken in conjunction with other similar future development projects in the surrounding area;
- While every precaution was taken to accurately represent the location and extent of heritage resources with GIS software through the integrated heritage resource mapping (Annexure 6), this should be considered for illustrative purposes only – primarily due to the scale at which it is presented here.

### 12. **RECOMMENDATIONS**

Having regard to the above assessment, it is recommended:

- 12.1 That this report fulfils the requirements of a Phase One Integrated Heritage Impact Assessment (HIA);
- 12.2 That this report be subject to a Public Participation Process (PPP) as part of the existing EIA/ NEMA Process to solicit heritage-related comments to the proposed development;
- 12.3 That subsequent to the above PPP, the final site layout proposal be assessed in terms of its adherence to any heritage informants and indicators defined through this report or possible input during the PPP.

**PERCEPTION Heritage Planning**  
19<sup>th</sup> March 2012

**SE DE KOCK**

*B-Tech(TRP) MIPI TRP(IRL) EIA Mgmt (IRL) APHP*

**ANNEXURE 1  
(Power of Attorney)**

**POWER OF ATTORNEY**

I, MATTEO SMARSIWA, the undersigned being the Client, in my capacity as person holding power of attorney for \_\_\_\_\_, as Developer of a portion of the *property SKUITDRIF 426, DISTRICT KAKAMAS (425Ha/ 75MW)*, hereby nominate Stéfan de Kock of *PERCEPTION Heritage Planning*, with power of substitution, to be my agent in name, place and stead, (as set out in their quotation dated 7<sup>th</sup> February 2012) to sign on my behalf and submit to the appropriate authorities the following application, which mandate shall, without limiting the generality of the a foregoing, include:

- a.) Heritage Impact Assessment (HIA) in relation to proposed solar development on 425 hectare portion of the said property as required in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act 25 of 1999).

I hereby accept the Terms of Agreement as set out in paragraphs 6, 7, 8 and 10 of the abovementioned quotation dated 7<sup>th</sup> February 2012.

Signed at JOUHANNESBURG on 13/12/2012

  
\_\_\_\_\_  
Client/ Developer

  
\_\_\_\_\_  
Witness

  
\_\_\_\_\_  
Witness

**ANNEXURE 2  
(SAHRA Comments)**



SOUTH AFRICAN HERITAGE RESOURCES AGENCY  
111 HARRINGTON STREET, CAPE TOWN, 8000  
PO BOX 4637, CAPE TOWN, 8000  
TEL: (021) 462 4502 FAX: (021) 462 4509

DATE: 11 January 2012  
ENQUIRIES: Dr Mariagrazia Galimberti  
Archaeology, Palaeontology and Meteorites Unit  
E-mail: mgalimberti@sahra.org.za  
Web site: www.sahra.org.za

OUR REF: 9/2/032/0001  
DEA ref. number: 12/12/20/2604

**received**  
13 January 2012  
JH.

Mrs Siân Holder  
Cape Environmental Assessment Practitioners (Pty) Ltd  
1st Floor Eagles View Building  
5 Progress Street,  
George  
6530

Dear Mrs Holder,

**REQUEST FOR A HERITAGE IMPACT ASSESSMENT: Proposed Skuitdrift Solar Installation on Farm 426 Skuitdrift Northern Cape (Basic Assessment Process) (DEA ref: 12/12/20/2604)**

Thank you for your indication that a solar installation is proposed on the abovementioned property.

In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer to ensure that a **Heritage Impact Assessment** is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.

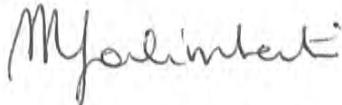
The Phase 1 Impact Assessment Report will identify the archaeological sites and assess their significance. It should also make recommendations (as indicated in section 38) about the process to be followed. For example, there may need to be a mitigation phase (Phase 2) where the specialist will collect or excavate material and date the site. At the end of the process the heritage authority may give permission for destruction of the sites.

A Palaeontological Impact Assessment must also be undertaken to assess whether or not the development will impact upon palaeontological resources.

If the property is very small or disturbed and there is no significant site the specialist may choose to send a letter to the heritage authority to indicate that there is no necessity for any further assessment.

Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewsapes must also be assessed.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M. Scheermeyer', written in a cursive style.

PP Mrs Colette Scheermeyer  
SAHRA: Archaeology, Palaeontology and Meteorites Unit  
For: CHIEF EXECUTIVE OFFICER

Copy: PHRA Northern Cape Office

**ANNEXURE 3  
(Photographs)**



**PHOTO KEY DIAGRAM**



**Photo 1:** Gravel road leading to proposed site. **Photo 2:** Mountainous and rocky landscapes on the way to proposed site. **Photo 3:** Modern Skuitdrift homestead.



**Photo 4:** Modern Skuitdrift homestead in its surrounding context.



**Photo 5:** Perspective view of proposed site from a nearby rocky hill.



**Photo 6:** Skuitdrift homestead and outbuildings with mountain range in the background.



**Photo 7 & 8:** Perspective view showing adjoining site of proposed Skuitdrift 10MW solar facility and Skuitdrift homestead.



**Photo 9:** Perspective view of natural landscape



**Photo 10 & 11:** Shallow River Bed



*Photo 12: Views across proposed development site from view point.*



*Photo 13: Perspective view of proposed site from main gravel track.*



*Photo 14: Shallow river bed traversing section of the site*



**Photo 15:** Rocky outcrop close to Inselberg



**Photo 16:** West-facing view across site



**Photo 17:** Southeast-facing view across site



**Photo 18:** Rocky outcrop (photo 15) as viewed from Inselberg closeby



**Photo 19:** South-facing view to Skuitdrift Sub-station



**Photo 20:** Access road towards northern portion of farm



**Photo 21:** Scattered quartz flakes along access road

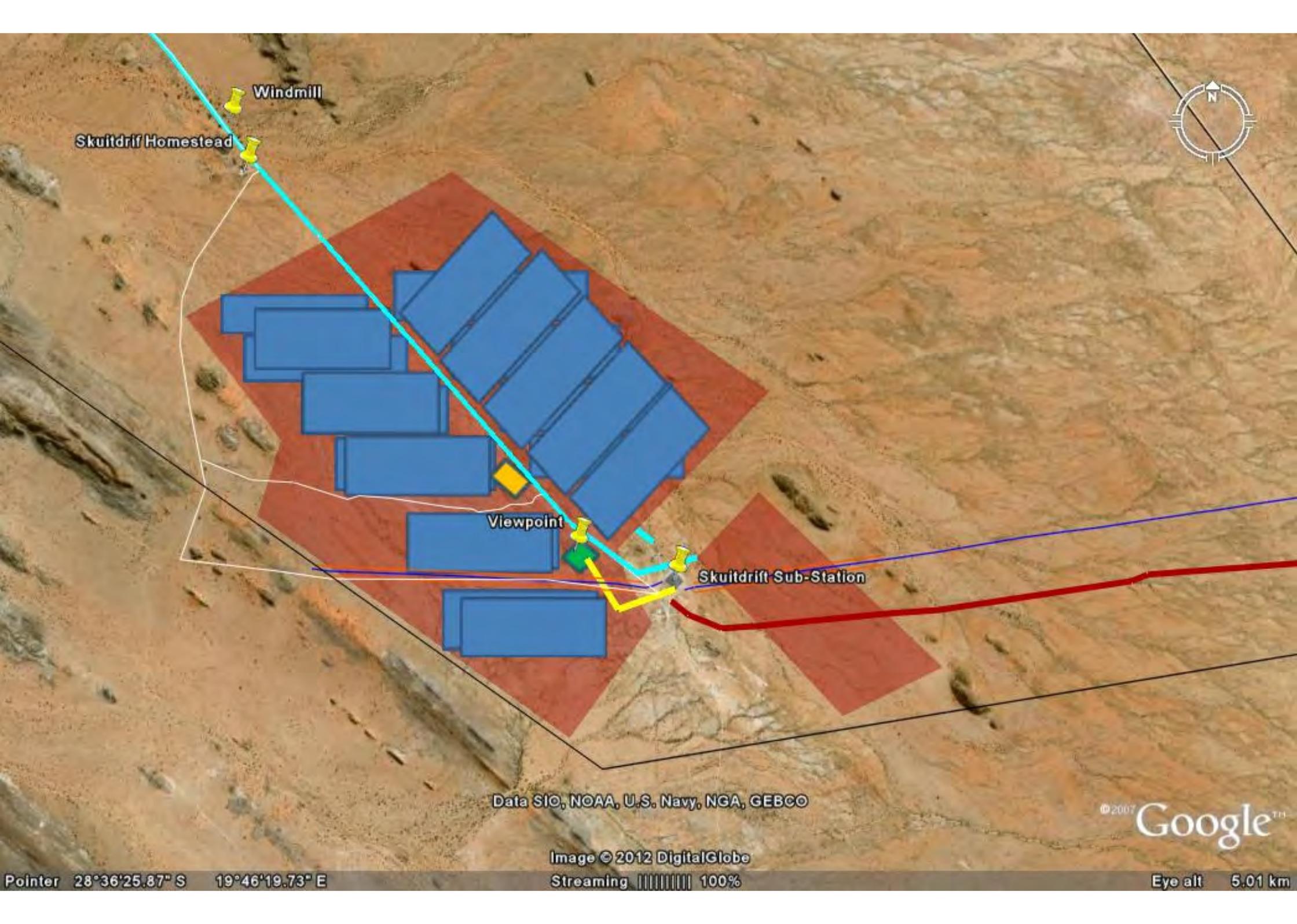


**Photo 22:** North-facing view from T-junction leading towards Southern Farms and Orange River



**Photo 23, 24, 25:** Grave neighbouring study area.

**ANNEXURE 4**  
**(Conceptual site layout)**



Windmill

Skuitdrif Homestead

Viewpoint

Skuitdrif Sub-Station

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

© 2007 Google™

Image © 2012 DigitalGlobe

Streaming ||||| 100%

Pointer 28°36'25.87" S 19°46'19.73" E

Eye alt 5.01 km

**ANNEXURE 5  
(SG Diagram)**

KOMPONENTE

- (1) Die figuur a linkerwal van Oranjerivier b C D E F G H J K L M N P Q R S T U V W X Y Z A1 T1 U1 stel voor die Restant van die Plaas No 410  
Sien Kaart No F7546/1988  
geheg aan Transportakte No 12595/1991
- (2) Die figuur A1 B1 C1 D1 E1 F1 G1 H1 J1 K1 L1 M1 N1 P1 Q1 R1 S1 stel voor Gedeelte 4 van die Plaas Schuifdrift Oost No 6  
Sien Kaart No 1479/2002  
geheg aan Transportakte No. T 35387/2003

L.G. No.

1482/2002

Goedgekeur

*Bleuwaap*

nms.  
LANDMETER-  
GENERAAL

2003.01.10

VEL 1 VAN 4 VELLE

SERWITUUTNOTAS

- ( i ) Die figuur c linkerwal van Oranjerivier b d e f g h stel voor die Onseepkans Opgaardam Serwituutgebied.  
Sien Kaart No F932/1941 geheg aan Serwituutakte No 208/1941
- ( ii ) Die figuur A1 j k m n p q r s stel voor 'n serwituutgebied van Elektriese Kragleiding.  
Sien Kaart No F9560/1996 geheg aan Serwituutakte No
- (iii) Die figuur t u v w x stel voor 'n serwituutgebied.  
Sien Kaart No F 9559/1996 geheg aan Serwituutakte No
- ( iv ) Die lyn w y stel voor die suidoostelike grens van 'n padserwituut, 6 meter wyd.  
Sien Kaart No F9559/1996 geheg aan Serwituutakte No
- ( v ) Die figuur z a1 b1 Z A1 c1 d1 e1 v stel voor 'n serwituutgebied van Elektriese Kragleiding  
Sien Kaart No F9559/1996 geheg aan Serwituutakte No
- ( vi ) Die lyn f1 g1 h1 stel voor die middellyn van 'n Elektriese Kraglynserwituut, 55 meter wyd  
Sien Kaart No 1119/2001 geheg aan Serwituutakte No

Die figuur  
a linkerwal van Oranjerivier b C D E F G H J K L M N P Q R S T U V  
W X Y Z A1 B1 C1 D1 E1 F1 G1 H1 J1 K1 L1 M1 N1 P1 Q1 R1 S1 T1 U1  
stel voor 7942,3758 hektaar grond, synde

Die Plaas Skuitdrif No 426  
en bestaan uit (1) en (2) hierbo aangehaal  
geleë in die Administratiewe Distrik Kenhardt  
Provinsie Noord-Kaap

Saamgestel in November 1997 deur my

*J L N van Zyl*

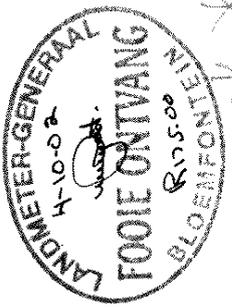
PLS0680 J L N van Zyl  
Professionele Landmeter

Hierdie kaart is  
geheg aan  
No. T35389/2003  
ged. 22/4/2003  
t.g.v.  
Registrateur van Aktes

Die oorspronklike kaarte  
is soos hierbo aangetoon.

Lêer KNHD 6  
M.S. Saamgestel  
A.P.  
Komp. GI-6 (5549)

*27/11/2003  
12/12/2003  
Wait for  
Deeds to  
respond*



L.G. No.

1482/2002

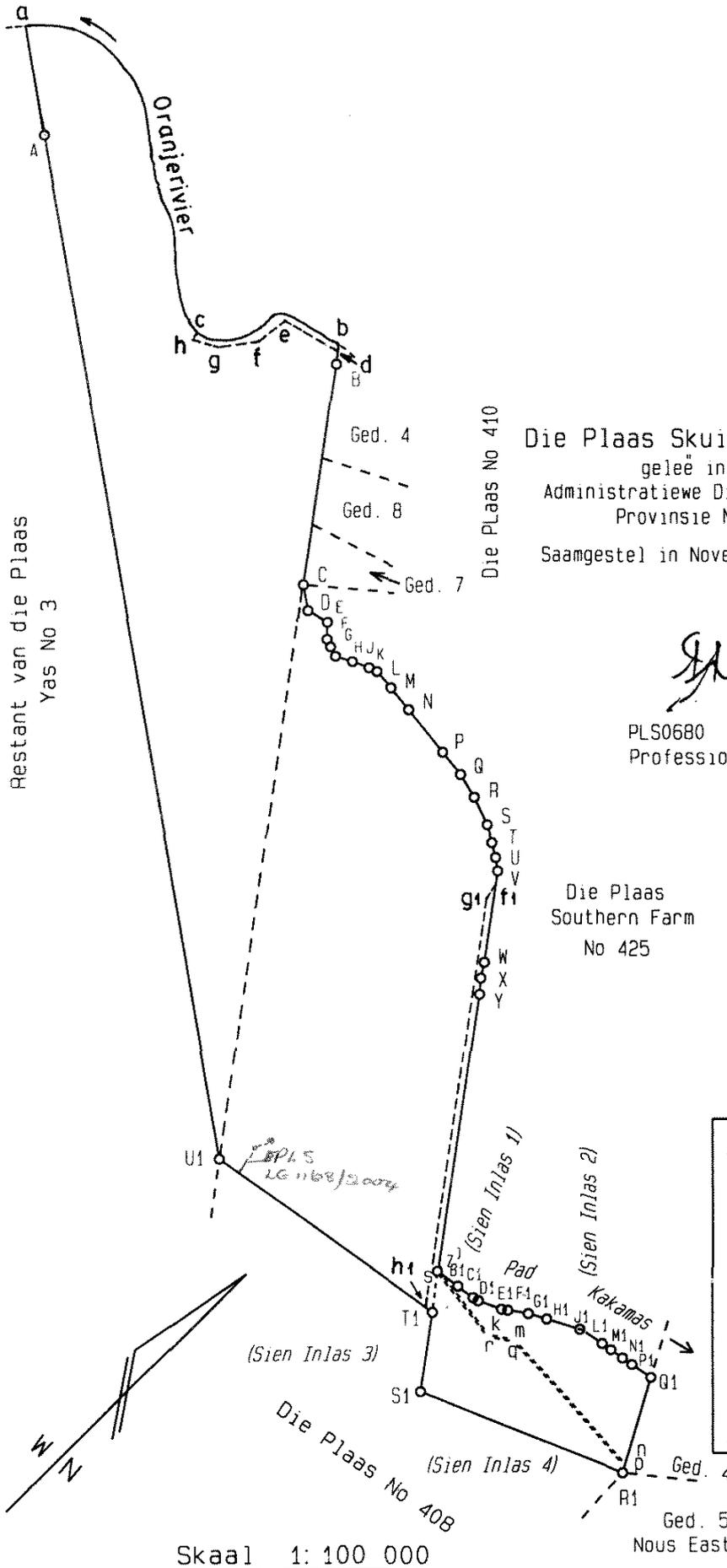
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VEL 2 VAN 4 VELLE



Die Plaas Skuitdrijf No 426

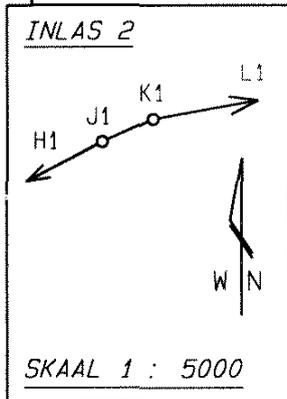
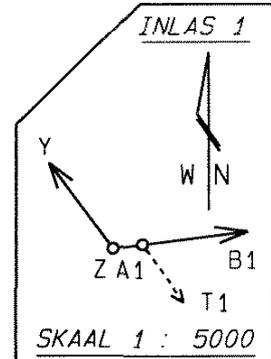
geleë in die  
Administratiewe Distrik Kenhardt  
Provinsie Noord-Kaap

Saamgestel in November 1997 deur my

*J L N van Zyl*

PLS0680 J L N van Zyl  
Professionele Landmeter

Die Plaas  
Southern Farm  
No 425



Skaal 1: 100 000

Ged. 4 Narries No 7  
Ged. 5  
Nous East No 75

INLAS 3  
SKAAL 1:5000

L.G. No.

1482/2002

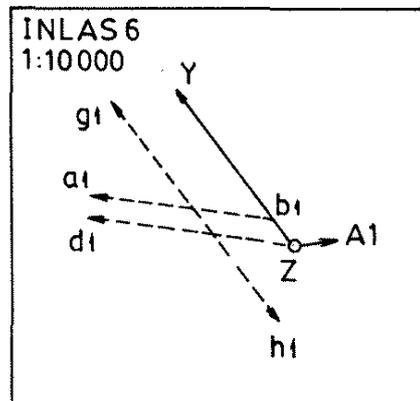
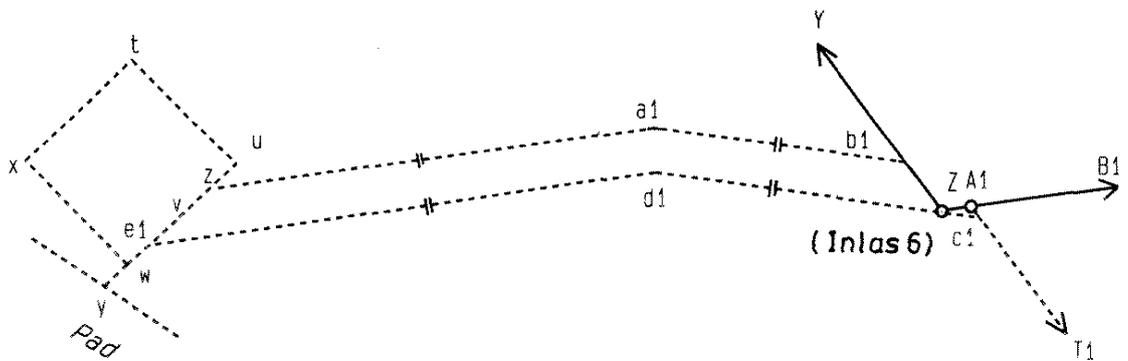
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2003.01.10

VEL 3 VAN 4 VELLE



Die Plaas Skuitdrijf No 426  
geleë in die Administratiewe Distrik Kenhardt  
Provinsie Noord-Kaap

Saamgestel in November 1997 deur my



PLS0680 J L N van Zyl  
Professionele Landmeter

INLAS No 4  
SKAAL 1:30000

L.G. No.  
 1482/2002

Goedgekeur

*Poenkamp*

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2003.01.10

VEL 4 VAN 4 VELLE

Die Plaas Skuitdrif No 426  
 geleë in die Administratiewe Distrik Kenhardt

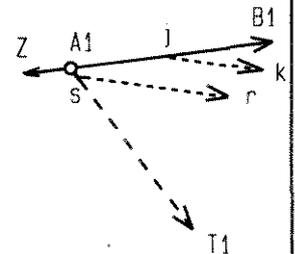
Provinsie Noord-Kaap

Opgemeet in November 1997 deur my

*J L N van Zyl*

PLS0680 J L N van Zyl  
 Professionele Landmeter

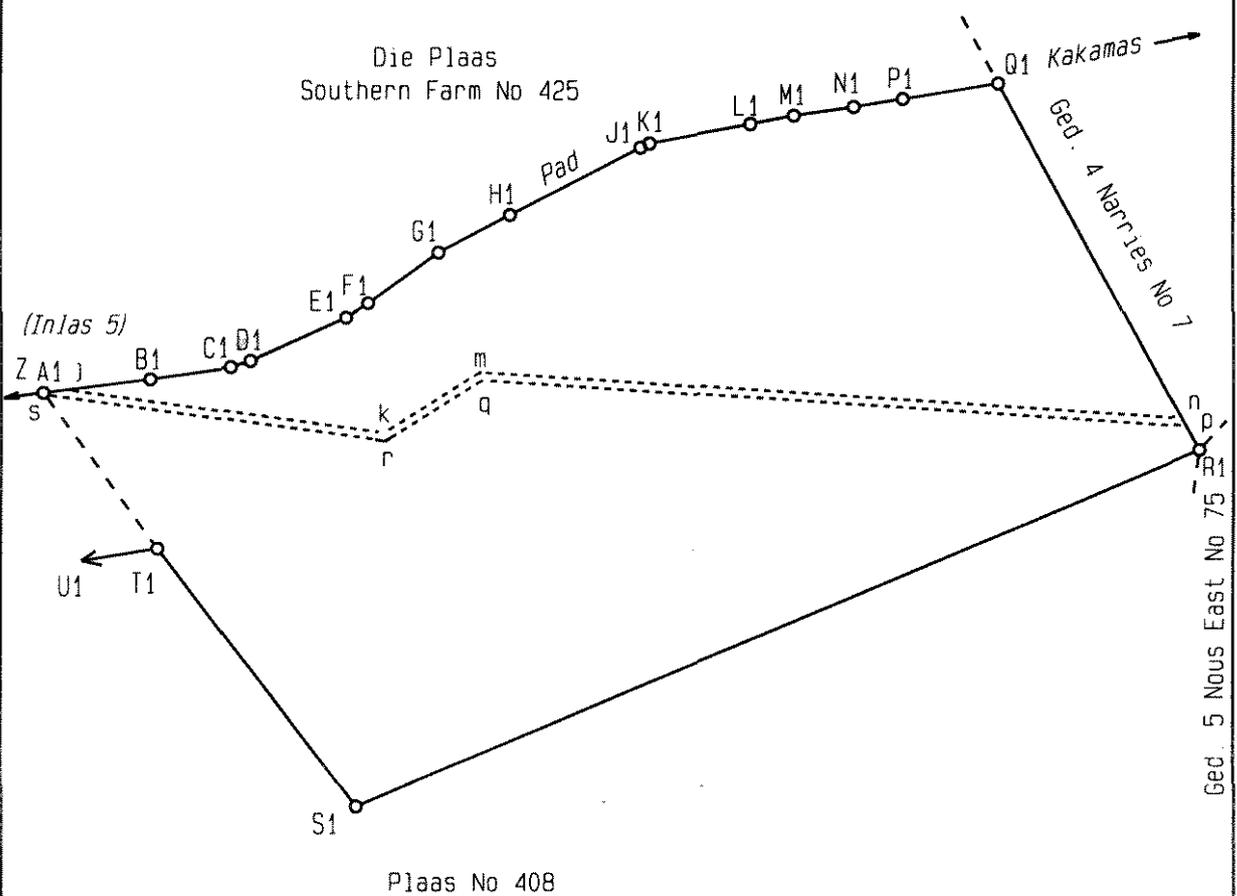
INLAS 5



SKAAL 1:7500

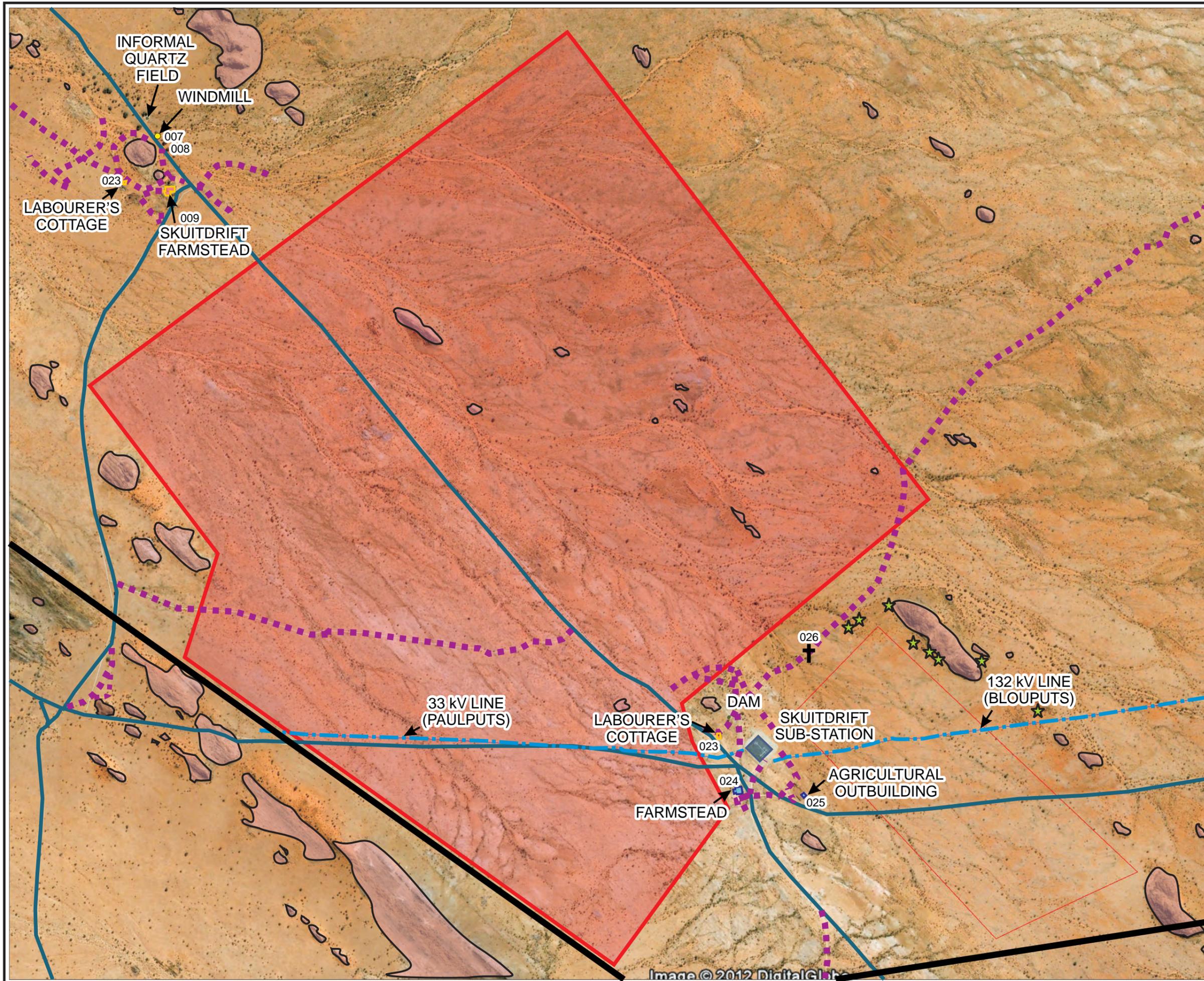


Die Plaas  
 Southern Farm No 425



Plaas No 408

**ANNEXURE 6**  
**(Integrated heritage resource mapping)**



**Project**  
**PROPOSED 75 MW SOLAR ENERGY INSTALLATION: SKUITDRIFT 426, KENHARDT DISTRICT, NORTHERN CAPE**

**Plan**  
**PHASE ONE HERITAGE IMPACT ASSESSMENT in terms of Section 38(8) of the NHRA (Act 25 of 1999)**

**Name**  
**INTEGRATED HERITAGE RESOURCE MAPPING**

- Legend**
- PROPERTY BOUNDARY
  - PROPOSED SITE
  - SKUITDRIFT SUB-STATION
  - MAIN FARM TRACKS
  - SECONDARY FARM TRACKS
  - OVERHEAD POWER LINES
  - STRUCTURES OLDER THAN 60 YEARS
  - MODERN STRUCTURE
  - ARCHAEOLOGICAL OCCURRENCES
  - INSELBERGS
  - GRAVE SITE

**Notes**  
 \* Aerial photography, Google Earth

SCALE Not to scale

HERITAGE IMPACT ASSESSMENT URBAN PLANNING  
 Mobile: 082 568 4719, Fax: 086 510 8357  
 Email: perceptionenvplg@gmail.com  
 P.O. Box 9995, George, 6530 Western Cape, South Africa

Plan No	Date	Annexure
S 75 MW/ Rev. 2	March 2012	6

**ANNEXURE 7**  
**(Archaeological Impact Assessment)**

INCLUDED IN **APPENDIX D** OF  
DRAFT SCOPING REPORT.

**ANNEXURE 8**  
**(Palaeontological Impact Assessment - Exemption)**

INCLUDED IN **APPENDIX D** OF  
DRAFT SCOPING REPORT.