

Based on the calculated traffic volumes as summarized in Table 3 above, it is clear that the additional expected traffic volumes, for both standard light vehicles (AADT), as well as expected Daily Heavy Vehicles, are very low and will not have any impact on the Transport Routes and affected major Nodes, during the Operational and Maintenance period.

## 6 TRANSPORT MANAGEMENT

### 6.1 General Transport Road Requirements

PV Solar panel manufacturers may impose their own loading and transport methods, with their own road requirements. Different requirements may be set by different manufacturers. The requirements in terms of container sizes, minimum road widths, maximum lateral and longitudinal slopes, minimum horizontal turning radii etc, will in detail be determined with co-operation of the specific selected PV Panel manufacturer and will be assessed at the Detail Design stage.

### 6.2 Abnormal Load Mass Requirements

The National Road Traffic Act (Act 93 of 1996) and the National Road Traffic Regulations, 2000 prescribe certain limitations on vehicle dimensions and axle and vehicle masses which any vehicle, using a public road, must comply with. However, certain vehicles and loads cannot be moved on public roads without exceeding the limitations in terms of the dimensions and/or mass as prescribed. Where such a vehicle or load cannot be dismantled, eg for crane transport, without disproportionate effort, expense or risk of damage, into units that can travel or be transported legally, it is classified as an abnormal load and is then only allowed to travel on public roads under an exemption permit, issued in terms of Section 81 of the National Road Traffic Act (TRH 11).

The Road Traffic Act, 1996 (Act No. 93 of 1996) and the Road Traffic Regulations made in terms of this Act, determine the permissible maximum mass limits of vehicles used on public roads in South Africa. The relevant regulations are Regulations No. 234 to 243. It is important to note that all these regulations are simultaneously applicable and that the one which prescribes the lowest mass for a particular vehicle is the applicable regulation/s.

These regulations are available from the Department of Transport or via the internet and are listed below:

<http://www.polity.org.za/polity/govdocs/regulations/1999/roadregs06.html>

- Regulation 234 : Permissible maximum axle mass load of vehicle;
- Regulation 235 : Permissible maximum axle unit mass load of vehicle;
- Regulation 236 : Permissible maximum vehicle mass;
- Regulation 237 : Permissible maximum combination mass;
- Regulation 238 : Load on tyres;
- Regulation 239 : Gross vehicle mass, gross axle mass load, gross axle unit mass load, gross

- combination mass, power to mass ratio and axle mass load of driving axle to total mass ratio not to be exceeded;
- Regulation 240 : Mass load carrying capacity of road;
- Regulation 241 : Mass load carrying capacity of bridges;
- Regulation 242 : Distribution of axle mass load and wheel mass load on vehicle fitted with pneumatic tyres;
- Regulation 243 : Axle mass load of vehicles fitted with tyres other than pneumatic tyres.

### 6.1 Liaison with Road Authorities

An extract from the Final Scoping Report (FSR), Table 4-2: “Comments Raised by Interested and Affected Parties”, on the BID, page 51, reads as follow :

Commentator	Issue Raised	Response (by SRK unless otherwise noted)
<i>N Abrahams (SANRAL)</i>	<i>Seems as if the proposed development will not have an impact on SANRAL due to distance away for the National Road N12.</i>	<i>[SRK] Noted. Any further input from SANRAL is welcomed.</i>
<i>G Julius (SANRAL)</i>	<i>SANRAL must be timeously informed regarding a proposed route for the transportation and movement of any heavy loads on the national roads that involves this development. This is to ensure that appropriate planning is involved to ensure minimum impact to the road use and potential impact on any construction related activities on the national routes.</i>	<i>[SRK] Requirements for notifying SANRAL of transportation of any heavy loads will be included as a specification on the draft EMPr.</i>

It is therefore recommended that SANRAL must be timeously informed regarding the proposed route for the transportation and movement of any heavy loads on the national roads that involves this development. This is to ensure that appropriate planning is involved to ensure minimum impact to the road use and potential impact on any construction related activities on the national routes.

## 7 RECOMMENDATIONS

It is recommended that the contents of this report be noted and included as part of the Environmental Impact Assessment (EIA) report and the detail planning and design stages, in order to implement these recommendations during the construction, operational and maintenance stages.

Recommendations to take note of are :

- 1) The preferred port of import for all PV Solar components is the Ngqura Harbour near Port Elizabeth, which is 530km from the Ngqura Harbour to Petrusville, with a 5h15 travel time.
- 2) It is recommended that the preferred Transport Route from Petrusville to the site laydown area for Phase 1, should be Alternative 1 as described in Section 4.5 :

Mainly Surfaced Roads : (23,5km)

Follow the R48 from Petrusville to the R369, to the northern entrance "Access No.2 to Site – 16,6km  
Follow the gravel Kalkpoort Road (North) from Farm entrance to Phase 1 laydown area – 6,9km

- 3) It is recommended that only 40 feet (12m) long standard shipping containers, will be used to load the PV solar panels and to transport to site.
- 4) It is therefore recommended that SANRAL must be timeously informed regarding the proposed route for the transportation and movement of any heavy loads on the national roads that involves this development.
- 5) It is recommended that the selection of the type, size and efficiency of the panels must be made very carefully with advice from experienced reputable suppliers, as this will make a huge impact on the cost efficiency of the development, the environmental footprint required on site, as well as the number of truck loads required to transport all components.
- 6) The specific Transport Operator and Crane Erection company that will be appointed, must be carefully selected and rates be compared and negotiated, based on the number off and availability of specific types of trucks and cranes or a combination of different truck and crane types, as this will determine the final transport cost and hence the success of the transportation operations, and ultimately the financial impact and profit margin on the development costs of this solar farm.

## 8 CONCLUSION

*AfriCoast Consulting Engineers (Pty) Ltd herewith presents the Transport Management and Traffic Impact Assessment Report to Kloofsig Solar (Pty) Ltd as developer of the Kloofsig PV Solar Energy facility.*

*This report forms an integral part of the supportive documentation required for the Environmental Impact Assessments (EIA) and application to DEA. An Environmental Management Plan (EMP) should be compiled, which incorporating the recommendations of this report, serving as guidelines to the Developer to comply with the requirements of the Environmental Approval documentation.*

*We trust that all applicable and related transport and traffic aspects were addressed sufficiently for the purpose of the EIA Application for this Development.*

*We trust that this report meets your approval and remain available for further enquiries or clarification of the contents of this report, if necessary.*

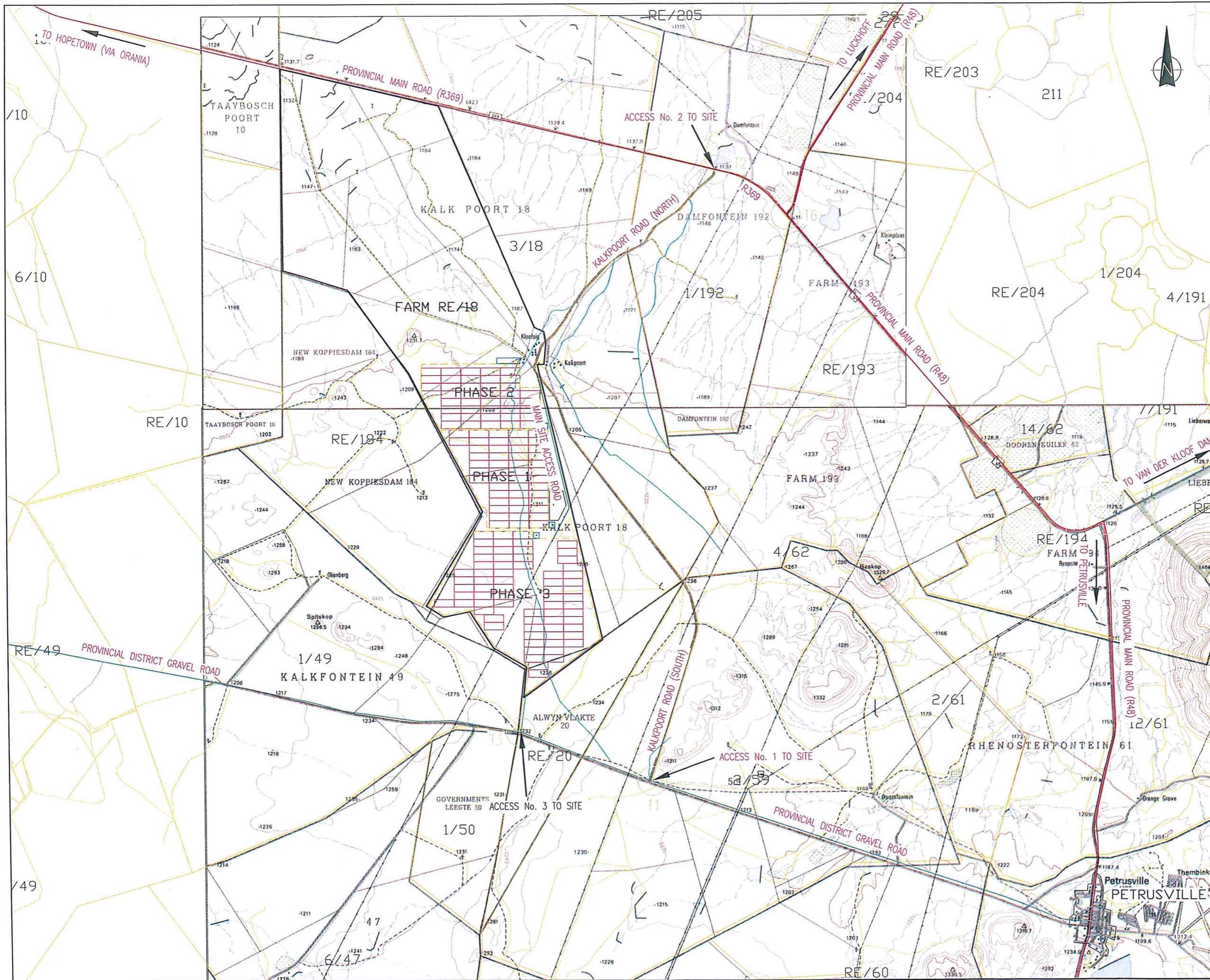
Yours faithfully,



SP Schutte B.Eng (Civil)  
Manager : Roads and Transportation  
Afri Coast Consulting Engineers (Pty) Ltd

## ANNEXURE A : MAPS AND DRAWINGS

- *Kloofsig Phase 1 Layout*
- *Site Development Plan – Phase 1 to 3*  
(*Drw R2004-RD-GA-01-PRE-00*)
- *Traffic Management Plan (Phase 1 Only)*  
(*Drw R2004-RD-TP-01-PRE-00*)



GENERAL NOTES

DRAWING NUMBER CODES

DISCIPLINE	SUBDISCIPLINE No.	STATUS
WAT	WATER	REN = TENDER
RO	ROADS	PRE = PRELIMINARY
CS	CROSS SECTION	CON = CONSTRUCTION
SW	STORM WATER	ASD = AS BUILT
ELE	ELECTRICAL	
STR	STRUCTURAL	
LS	LONGSECTION	
DE	DETAILS	
GA	GENERAL ARRANGEMENT	

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 PLOT SCALE: 1:1  
 PAPER SIZE: A1

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02				
01				

PROJECT DIRECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_

**AFRICOAST CONSULTING ENGINEERS**

Our Road/Highway Street Central, Port Elizabeth, 6001  
 PO Box 5104  
 Waterloosig 6005  
 Tel: +27 (41) 505-8000  
 Fax: +27 (41) 505-3437  
 info@africoast.com

CLIENT: **KLOOFSIG SOLAR (PTY) LTD**

PROJECT: **KLOOFSIG PV SOLAR FARM DEVELOPMENT ON FARM KALKPOORT, PORTION RE/18**

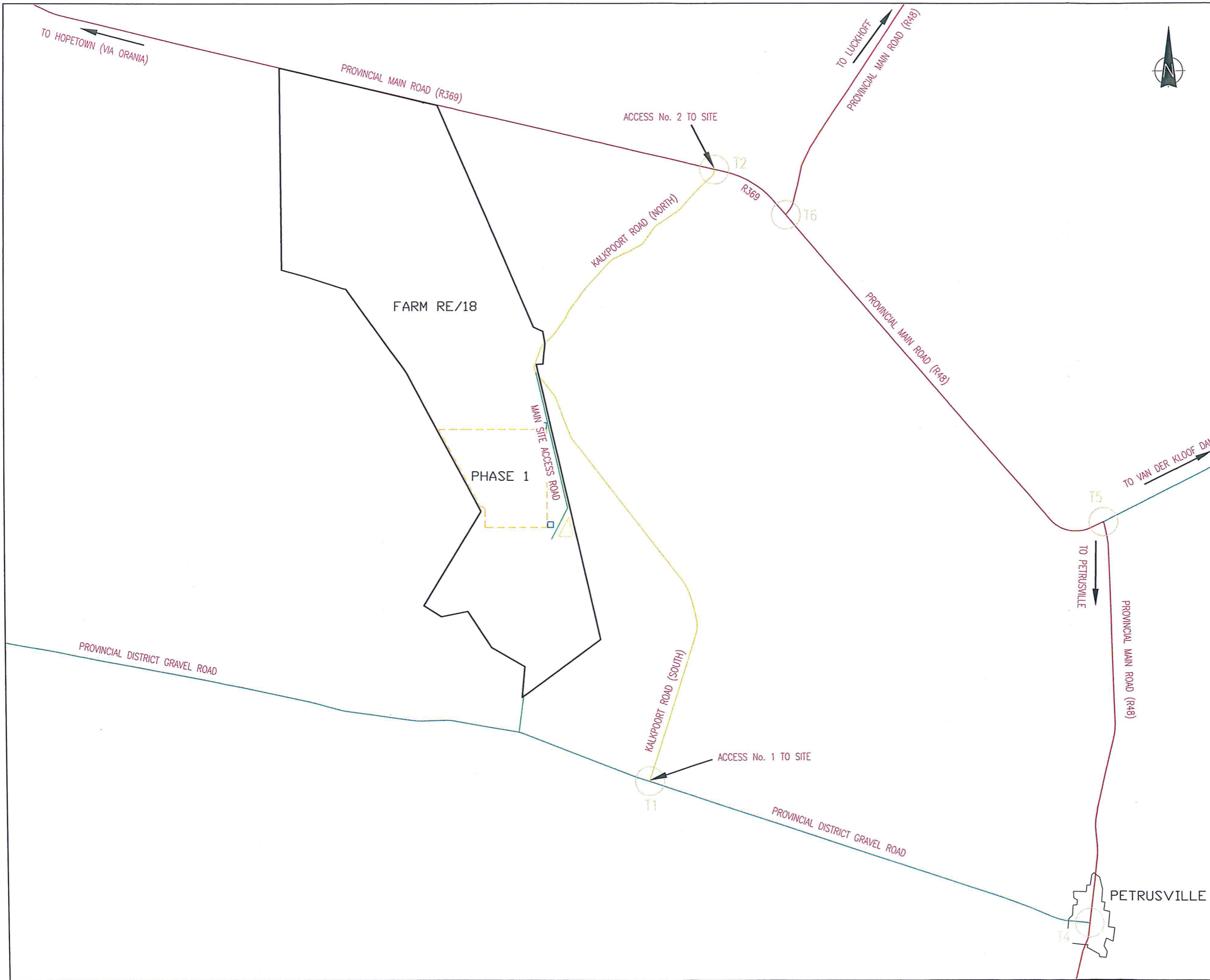
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DRAWING NUMBER: R2004-RD-GA-01

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				PRE	00

SCALE: 1:30 000

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- GENERAL NOTES**
- KLOOFSIG PV SOLAR FARM BOUNDARY
  - MAIN PROVINCIAL ACCESS ROADS (SURFACED)
  - MINOR PROVINCIAL ACCESS ROADS (GRAVEL)
  - KALKPOORT ROAD
  - NEW MAIN SITE ACCESS ROAD
  - T1 - T6 TRAFFIC INTERSECTION NODES

**DRAWING NUMBER CODES**

DISCIPLINE	SUBDIVISION No.	STATUS
WAT = WATER	LS = LONGSECTION	TEN = TENDER
RD = ROADS	XS = CROSS SECTION	PRE = PRELIMINARY
SW = STORM WATER	DET = DETAILS	CON = CONSTRUCTION
ELE = ELECTRICAL	CA = GENERAL ARRANGEMENT	ASB = AS BUILT
STR = STRUCTURAL		

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DRAWN	DRAWN			
DESIGNED	DESIGNED			
CHECKED	CHECKED			

PROJECT DIRECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_

**AFRICOAST CONSULTING ENGINEERS**  
 Cnr. Rose/Moskell Street  
 Central, Port Elizabeth, 6001  
 PO Box 5194  
 Waterloosig  
 Tel: +27 (41) 525-8920  
 Fax: +27 (41) 525-3437  
 info@afriacoast.com

CLIENT: **KLOOFSIG SOLAR (PTY) LTD**

PROJECT: **KLOOFSIG PV SOLAR FARM DEVELOPMENT ON FARM KALKPOORT, PORTION RE/18**











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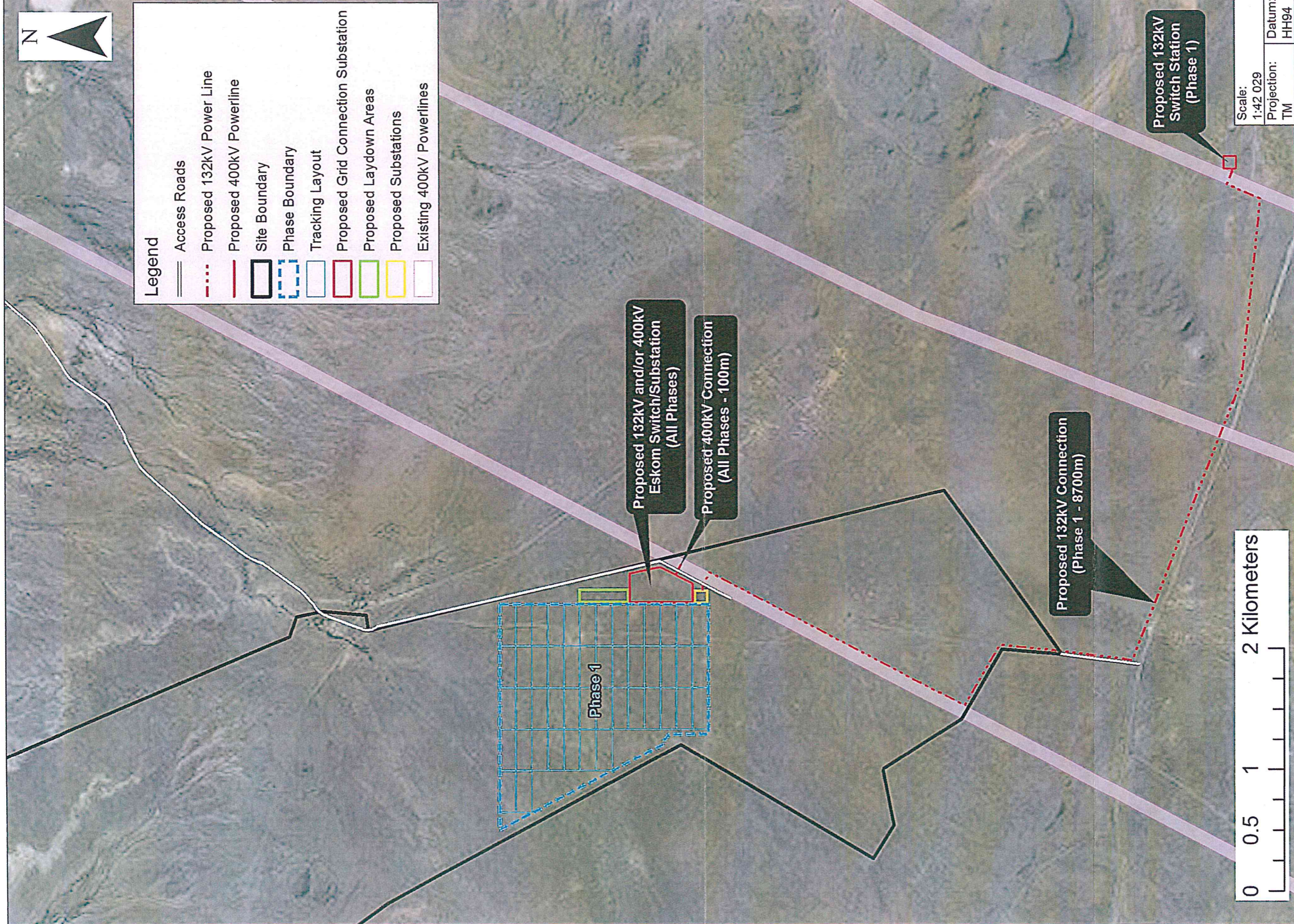
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**Legend**

-  Access Roads
-  Proposed 132kV Power Line
-  Proposed 400kV Powerline
-  Site Boundary
-  Phase Boundary
-  Tracking Layout
-  Proposed Grid Connection Substation
-  Proposed Laydown Areas
-  Proposed Substations
-  Existing 400kV Powerlines



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Projection:	TM	Datum: HH94
Central Meridian/Zone:		Lo25
Date:	04/08/2016	Compiled by: VERJ
Project No.	486618	Fig No. 006



# Kloofsig Phase 1 Layout