



AFRICAN HERITAGE CONSULTANTS CC

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DR. UDO S KÜSEL

Tel: (012) 567 6046 Fax: 086 594 9721
Cell: 082 498 0673
E-mail: udo@nconnect.co.za
Website: www.africanheritage.co.za

P.O. Box 652
Magalieskruin
0150

A. PHASE I CULTURAL HERITAGE RESOURCES IMPACT ASSESSMENT

- (a) **A PHASE I CULTURAL HERITAGE RESOURCES IMPACT ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF A NEW 6.656 KILOMETRE POWER LINE TO SUPPLY ALEXANDRIA IN THE BUSHBUCKRIDGE AREA MPUMALANGA PROVINCE. SAHRIS Case ID 5631
CONTRACT NUMBER: 4600042166; PURCHASE ORDER 4501625271
PROJECT NUMBER: ALEXANDRIA – MKAL 15**

(b) REPORT COMPILED BY

Dr. Udo S. Küsel; African Heritage Consultants CC
P.O. Box 652, Magalieskruin, 0150
Tel: (012) 567 6046; Fax: 086 594 9721; Cell: 082 498 0673
E-mail: ido@nconnect.co.za

(c) DEVELOPER AND CONSULTANT INFORMATION

Prepared for: Developer and owner

Eskom Distribution Northern Region
Contact person: Galaletsang Motlalekgosi
P.O. Box 1567, Nelspruit, 1200
Tel: 013 755 9615; Fax: 013 755 9660
E-mail: motlalgg@eskom.co.za

(d) Date of report: 23 June 2014

B. EXECUTIVE SUMMARY

The proposed new power line will run from Calcutta Township to Cork settlement near Hazyview. The vegetation is Lowveld bushveld which has been overexploited. The proposed route runs just north of Calcutta and crosses the railway line. From this point it runs eastwards through bushveld vegetation and then just north of Cork to join an existing power line.

No important cultural heritage resources or graves were found on or near the route of the proposed new power line.

There is no objection from a cultural heritage resources point of view to the construction of the new power line as none important cultural heritage resources or graves were found along the route.

If during construction any cultural heritage resources or graves are unearthed all work has to be stopped until the site has been inspected and mitigated by a cultural heritage practitioner.

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D. BACKGROUND INFORMATION ON PROJECT:

(a) Whether the report is part of a scoping report/EIA/HIA or not

Part of a HIA

(b) Type of development (e.g. low cost housing project, mining etc).

Electrical infrastructure (22kV power line)

(c) Whether re-zoning and/or subdivision of land is involved.

Subdivision of land

(d) Developer and consultant and owner and name and contact details;

Prepared for:

Developer: Eskom-land

Owner: Chief Nkuna ML, Private Bag 3024, Mkhuhlu, 1246

(e) Terms of Reference

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of paleontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

(f) Legislative requirements of Act 25 of 1999.

Protected sites in terms of the National Heritage Resources Act, Act No. 25 of 1999

The following are the most important sites and objects protected by the National Heritage Act:

- Structures or parts of structures older than 60 years.
- Archaeological sites and objects.
- Paleontological sites.
- Meteorites.
- Ship wrecks.
- Burial grounds.
- Graves of victims of conflict.
- Public monuments and memorials.

- Structures, places and objects protected through the publication of notices in the Gazette and Provincial Gazette.
 - Any other places or objects, which are considered to be of interest or of historical or cultural significance.
- 1.1 Geological sites of scientific or cultural importance.
 - 1.2 Sites of significance relating to the history of slavery in South Africa.
 - 1.3 Objects to which oral traditions are attached.
 - 1.4 Sites of cultural significance or other value to a community or pattern of South African history

E. BACKGROUND TO THE ARCHAEOLOGY AND HISTORY OF THE AREA

Heritage reports consulted on SAHRIS (May 2014) demonstrate a general low level of archaeological remains, and then also with a low significance, in the Bushbuckridge and Klaserie area. These consist mostly of dispersed and ephemeral Stone Age lithics, and the remains of African farmer and historical settlements as attested by middens that contain ceramics, polished stone implements, lower grinders and faunal remains. It is evident in an overview of the prehistoric period and historical events of Mpumalanga in general that the region has been extensively settled over time (Bergh 1999a; Celliers 2012). Bergh (1999b:107, 1999c:220) points out that 12 000 ha from Bushbuckridge northwards were in December 1894 allocated as a reserve to the eastern-Sotho of the Pulana under Kobêng. According to ZAR promulgation all of the Pulana had to move into the reserve set aside for them. Failure to do so would result in prosecution under the 'Plakkerwet'. The reservation included the farms Champagne 247, Orinoco 248, Dwarsloop 249 and Maviljan 250 (Bergh 1999c:220).

Early Iron Age sites in Mpumalanga are particularly important in yielding data on early farming practices, routes of movement of different African farming communities within the region that are represented by diverse ceramic traditions and different facies; and also data that reflect ritual practices (Huffman 2007). It is therefore expected that archaeological settlements marked by the remains of houses and middens that contain ceramics, faunal and other food waste; stone-walled enclosures; and also smelting sites with evidence of metal production, should be present in the study region. The findings of the following reports demonstrate an apparent lack of surface archaeological and other heritage remains that probably result from the generally dense vegetation cover that limits archaeological visibility.

In view of the dense settlements accompanied by infrastructural developments within the footprint of the report area it is expected that burial places and sealed sub-surface archaeological remains will constitute the most probable heritage resources that could be present. For example, Murimbika (2005 Permit ID 1772) exhumed and relocated a skeleton at road D4442 in the Madjembeni Village near Bushbuckridge in the Bohlabela District. Wits Enterprise (2007) in a heritage assessment for the Marite Shopping Centre at Bushbuckridge documented seven burial places with a total of 31 graves. Coetzee (2009) in a survey for a proposed bus depot on Dwarsloop 248KU to the north of Bushbuckridge recorded only burial places.

Distinctive archaeological localities also feature. In a survey undertaken by the then National Cultural History Museum for borrow pits to be used for the upgrading of the R40 road between Bushbuckridge and Klaserie, a clay vessel in a termite mound was recorded (National Cultural History Museum 2001). This is a well-known practice used to harvest alates, the winged forms of termites. This phenomenon is a feature of the lowveld (personal comm. S du Toit), around Eiland and towards the National Kruger Park (Van Schalkwyk & Moifatswane 2000).

Küsel (2005) found only very low levels of Stone Age lithics in his survey of a portion of Kapama Hoedspruit (Guernsey 81KU) north of Klaserie. No heritage resources of significance were recorded in a subsequent survey for three alternative power lines from the existing Mbumbu Traction substation to the proposed Tsakani substation that will run through the farms Burlington 217KU, Islington 219KU, Edinburg 228KU, Ludlow 227KU and Eglington 225KU (Küsel 2011).

Antonites (2005) acquired a permit (No. 80/05/11/017/51) for the mitigation of an Iron Age locality and several graves at the Bushbuckridge clay brick factory.

A survey on Happyland recorded isolated Middle Stone Age (MSA) lithics and a single Eiland potsherd in erosional contexts (GPS 24° 21' 55.1"S; 30° 56' 39"O) and with undecorated sherds in the river bed (Nasionale Kultuurhistoriese Museum 1995). In 2007 Gaigher proposed a Phase 2 for ZEE 01 on Happyland. Gaigher (2008) undertook a survey for Triviron Environmental for the proposed development of Zandspruit Estates on the remainder of the farm Happyland 241KT in the Maruleng Municipality situated in the south-eastern quadrant of the Limpopo Province within the Bohlabela District Municipal Area. He recorded a locality with an Iron Age or historical ash midden containing decorated and undecorated ceramics, stone upper grinders/polishers and faunal remains in erosional contexts (ZEE 001 landing strip) and also historical farm structures (ZEE 002, ZEE 003). A Phase 2 was recommended to ascertain the significance of the heritage features. Pelser (2008) subsequently applied for a permit (No.80/08/05/012/51 ID 1071) for mitigation at ZEE 001. No report on the Phase 2 could be found.

Celliers (2012) in his report on Portion 17 of the farm Acornhoek 212KU located in Bushbuckridge Local Municipality similarly recorded the ephemeral remains of historical settlements in the form of demolished dwellings and a single lower grinder.

Pelser (2013) in a Phase 1 HIA for the upgrade of the Wits Rural Facility: Training & Research Centre I on Portion 175 of the Farm Guernsey 81KU, between Klaserie and Acornhoek, reported that the structures to be impacted upon had no heritage significance. He also found archaeological remains consisting of a single undecorated pottery fragment and two lower grindstones that were assigned a low heritage significance.

A survey undertaken for the proposed Mkhuhlu Traffic Training Academy on the remainder of the farm Calcutta 294KU, Bushbuckridge, recorded some undecorated ceramics and upper and lower grinders. Local informants did mention a historic grave that could not be located (Van Wyk Rowe 2013a). In another survey for the proposed Nkambeni Cemetery near Kiepersol, that falls within the general area of this report, Van Wyk Rowe (2013b) indicated that although ceramics and upper and lower grinders were also recorded, none of the archaeological remains

or historical structures were of significance. Another survey on the farm Sieraad 386JU in the Komatipoort area by the same author (Van Wyk Rowe 2013c) yielded a single Later Stone Age (LSA) artefact.

eThembeni Cultural Heritage (2006), in a survey for the upgrading of the Acornhoek Dam, found no heritage resources.

However, it should be noted research undertaken by Helgaardt Prinsloo of UP at the Klaserie Dam with students in the late 1980s/early1990s, revealed a rich subsurface Early Iron Age ceramic assemblage. No data on this collection could be found through an internet search.

In view of the geological history of the region it is likely that sites from the earlier periods are now buried. Such localities will only be visible in erosional contexts or through infrastructural development that exposes underlying remains.

F. DESCRIPTION OF THE PROPERTY OF AFFECTED ENVIRONMENT

(a) Details of area surveyed:

- Full location Data for Province, Magisterial District/Local Authority and property (e.g. farm/erf) name and number etc.;

Bushbuckridge Municipality Mpumalanga Province
Portion 0 Farm Calcutta 294 KU & Portion 0 Farm Ronaldsey 283 KU

- Location map(s)/ orthophotos of the general area. These must include the map name and number (e.g. 3313 DC Bellville). Maps must include at least a 1:50 000 and (if) available also a 1:10 000 (i.e. most detail possible). Large scale colour satellite photos make a useful addition. Maps should be preferable at least A4 size.
 - 1/50 000 Map Newington 2431CD
- Either the Location Map or the Site Map must have the polygon of the area surveyed marked on it and full geographical co-ordinates for all relevant points and where applicable, indication of the area to be developed (footprint).

Attached pages 13 to 29

Co-ordinates of power line

Pole Number	Description	Latitude	Longitude
1.	Beginning of line	S24° 57' 36.2	E31° 14' 58.7"
28.	Railway crossing	S24° 57' 18.17"	E31° 16' 29.6"
59.	Bend and crossing 132kV power line	S24° 56' 55.28"	E31° 16' 29.62"
60.	Bend and crossing 132kV power line	S24° 56' 53.47"	E31° 18' 13.76"
66.	Road crossing	S24° 56' 42.81"	E31° 18' 27.74"
69.	End of power line	S24° 56' 36.6"	E31° 18' 35.3"

(b) Description of the Methodology

The proposed route of the power line runs through an area which originally was Lowveld bushveld. A large section of the line is on the outskirts of two townships and the rest through bushveld where most of the large trees have been chopped down. Visibility was good as the area is overgrazed. The route was inspected on foot and by vehicle. All heritage reports on the area were searched as well as the database of the National Cultural History Museum.

G. DESCRIPTION OF SITES MAPPED

The first section of the proposed route starts on the outskirts of Calcutta Township and runs parallel to existing power lines. This area is overexploited and illegal dumping takes place in the area up to the railway line – see photographs.





From here the power line route runs eastwards towards Cork Township through bushveld vegetation and crosses a small river and some dongas. Most large trees have been cut down as building material or for firewood – see photographs.



From this point the line runs just north of Cork Township and crosses a new road under construction to join the existing power line 100 metres east of this new road – see photographs.



This area is not well known for archaeological sites and no important Heritage Sites or graves were found on or near the proposed route of the power line.

H. DESCRIPTION OF THE ARTEFACTS, FAUNAL, BOTANICAL OR OTHER FINDS AND FEATURES

None

I. CLEAR DESCRIPTION OF BURIAL GROUNDS AND GRAVES

None

J. EVALUATION AND RATING (FIELD RATING)

Not applicable

K. STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

Not applicable

L. RECOMMENDATIONS

There is no objection to the construction of the new power line from a cultural heritage point of view as none important heritage sites or graves were found along the route.

If during construction any cultural heritage resources or graves are unearthed all work has to be stopped until the site has been inspected and mitigated by a cultural heritage practitioner.

M. CONCLUSION

No important cultural heritage resources sites or graves were found near the proposed route of the new power line.

N. BIBLIOGRAPHY

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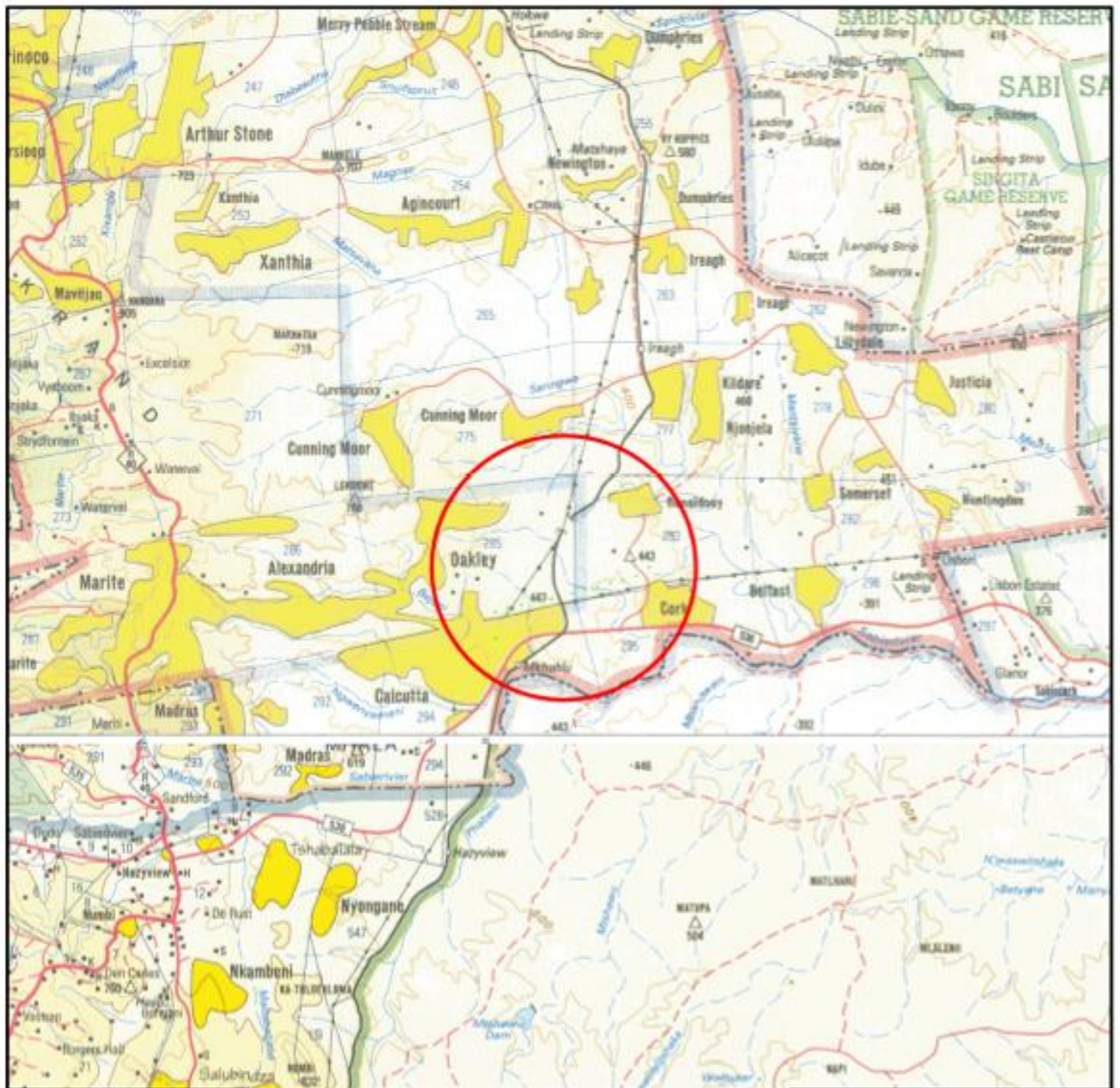
substation that will run through the following farms: Burlington 217KU; Islington 219KU; Edinburg 228KU; Ludlow 227KU; Eglington 225 KU, Mpumalanga Province.

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O. APPENDICES

- Locality Map page 13
- Eskom Distribution Map of power line route pages 14 – 28
- Google Map page 29

LOCALITY PLAN



Disclaimer:
Geographic Mapping Services
are not responsible for any errors
or omissions contained on this map.

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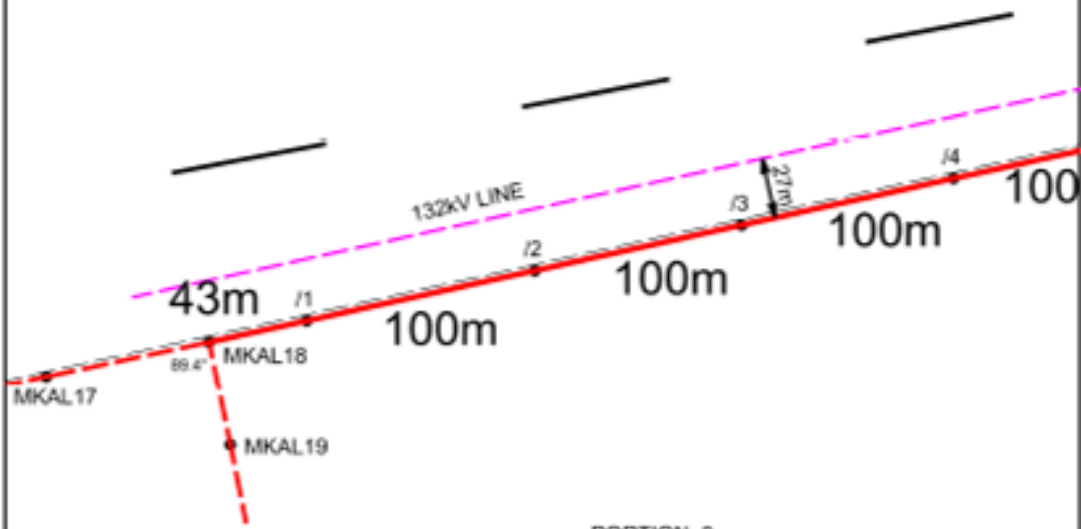
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COORDINATE SYSTEM:LO84/31



PAGE 1 of 15

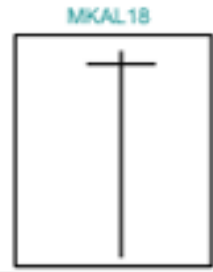
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CALCUTTA 294 JU

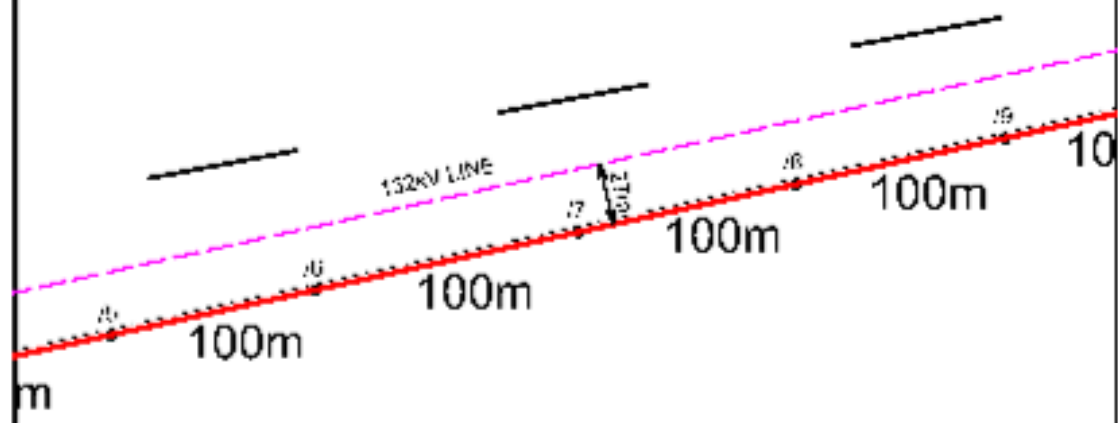
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Project no: MKAL15
NAME : ESKOM
Total Length of line:6.656km



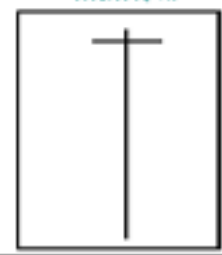
NOTE: RED PEGS on site indicate structure position.

PLEASE NOTE:
No protected trees/plants may be cut/trimmed/removed unless the applicable tree permit is issued and handed to the construction contractor.



SECTION 0
CALCUTTA 294 JU

GGN/10/10



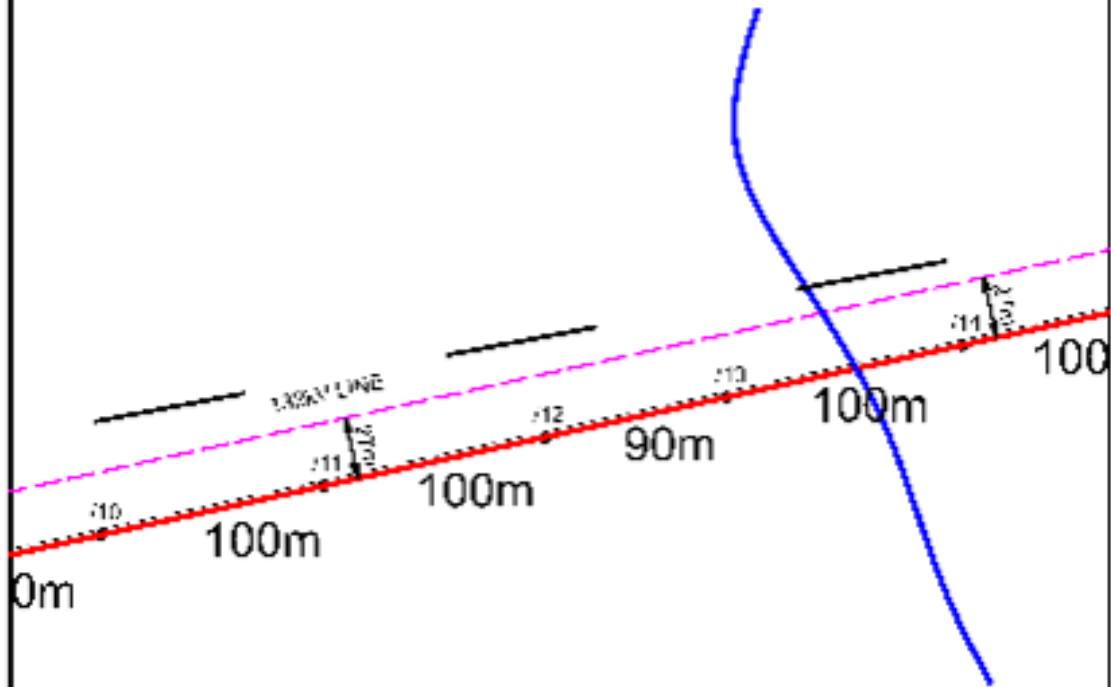
NOTE: THE POINTS ARE APPROXIMATE POSITIONS

PLEASE NOTE:
No proposed trees/plants may be cut/trimmed/removed unless the applicable tree permit is issued and handed to the construction contractor.

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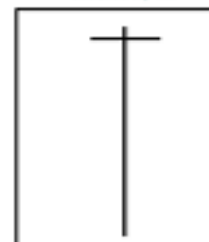
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PAGE 3 of 15
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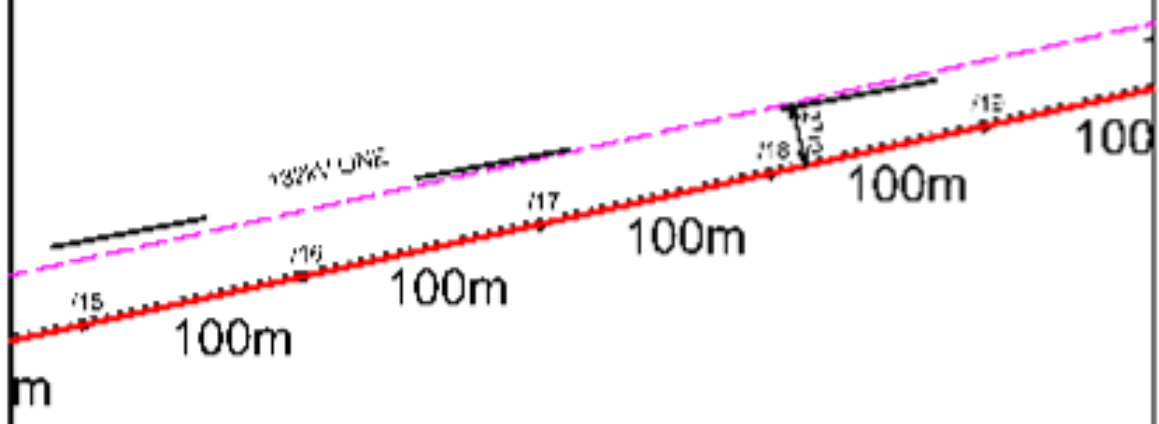
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CALCUTTA 294 JU

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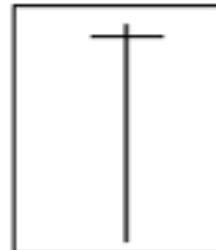
NOTE: PFD PFGS are the
natural boundary position.

PLEASE NOTE:
No protected trees/palis may be cut/removed/removed
unless the applicable tree permit is issued and handed
to the construction contractor.



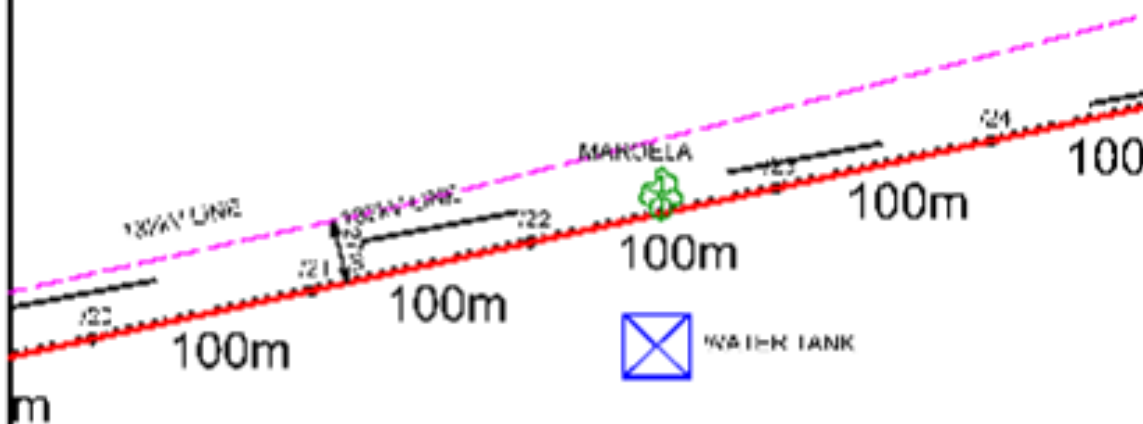
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CALCUTTA 294 JU

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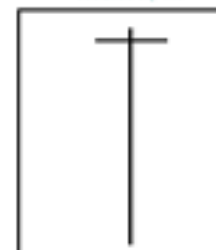
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unless the applicable tree permit is issued and handed
to the construction contractor.



PORTION 0
CALCUTTA 294 JU

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NOTE: FOR BEARS AND SHE
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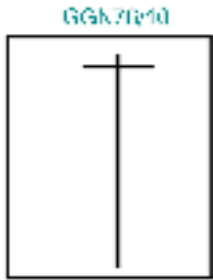
PLEASE NOTE:
No protected trees/palis may be cut/removed/removed
unless the applicable tree permit is issued and handed
to the construction contractor.



Note: Poles 27 and 28 are existing steel tower like structures. The stringing between these poles is in place; therefore, no profile required for this crossing of the rail and existing 22kV line.
 The ground clearance at each respective pole has been surveyed and found to be 14.2m from the ground to the attachments on each pole.

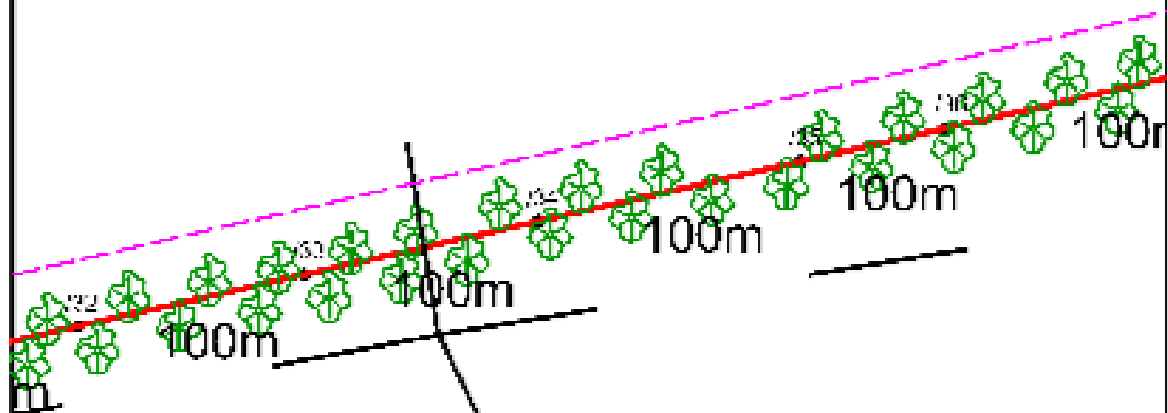
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PLEASE NOTE:
 No proposed trees/plants may be cut/trimmed/removed unless the applicable tree permit is issued and handed to the construction contractor.





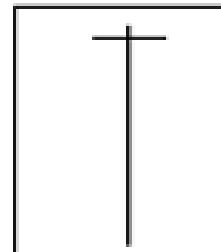
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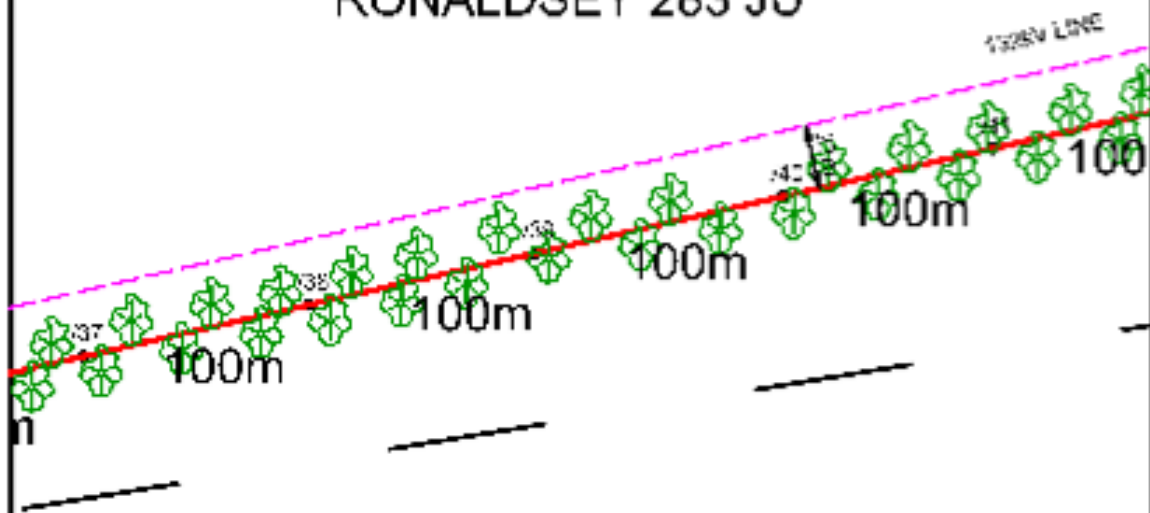


NOTE: PORTION 01 AND 02
INCLUDE SURVEYED POSITION

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No protected trees/plants may be cut, trimmed, or removed
unless the applicable tree permit is issued and handed
to the construction contractor.



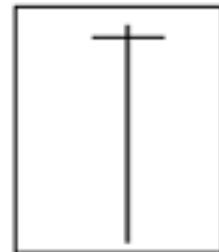
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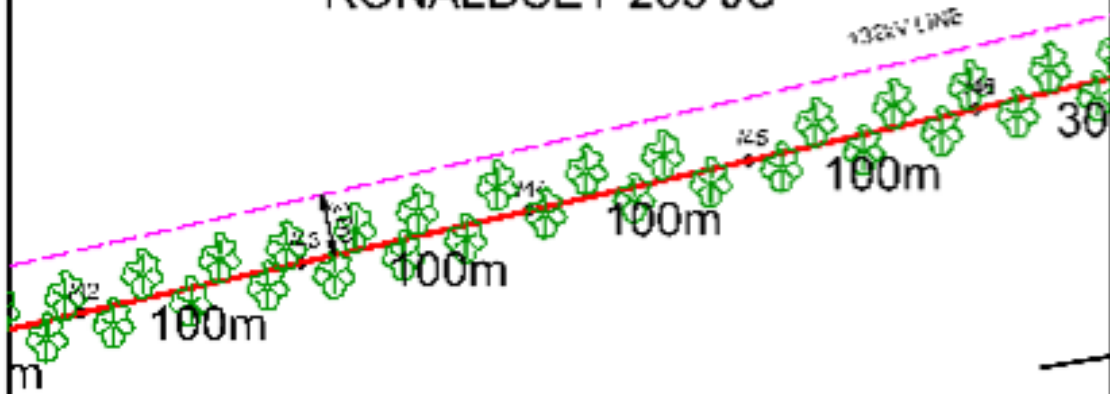


NOTE: FOR PORTION 0
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PLEASE NOTE:
No proposed trees/plants may be cut/trimmed/removed
unless the applicable tree permit is issued and handed
to the construction contractor.



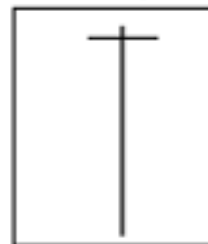
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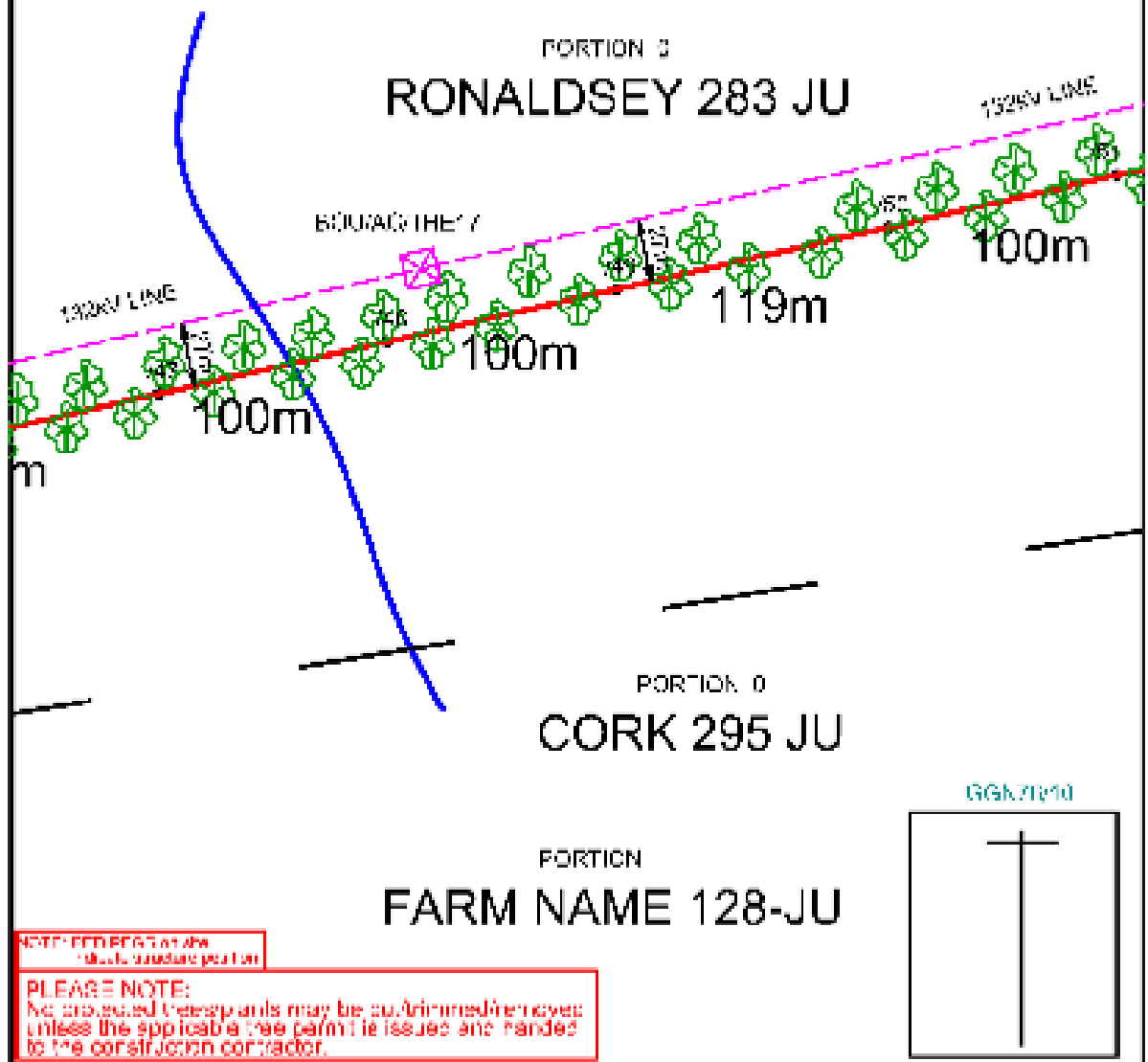
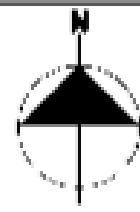
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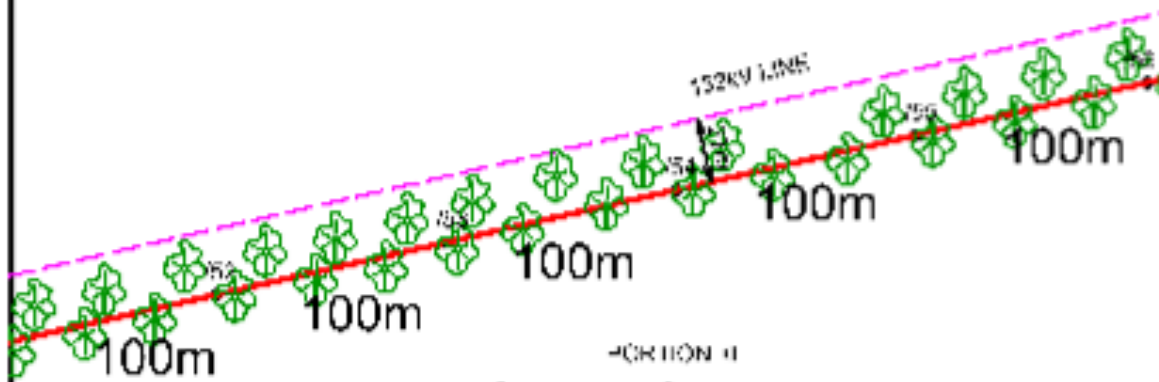
NOTE: FOR RIGHTS IN THE
FIELD, CONSULT THE LOCAL AUTHORITY

PLEASE NOTE:
No protected trees/pods may be cut, trimmed or removed
unless the applicable tree permit is issued and handed
to the construction contractor.





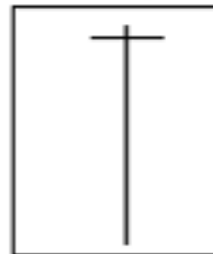
PORTION 0
RONALDSEY 283 JU



PORTION 1
RONALDSEY 283 JU

PORTION 2
CORK 295 JU

GGK/12/10



NOTE: FOR FIGS 01-04
indicate transformer position

PLEASE NOTE:
No protected trees/plants may be cut/trimmed/removed
unless the applicable tree permit is issued and handed
to the construction contractor.

1:2500



106m

PORTION 2
RONALDSEY 283 JU

106m

75m

75m

54m

132kV LINE

30.1kV T 223

75m

132kV LINE

100m

100m

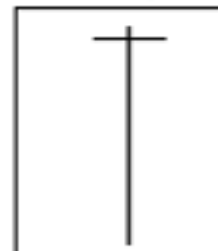
PORTION 0
RONALDSEY 283 JU

408 no.
Tee of angle XX'XXXX"
32.2'

AT: DD° MM' SS.S" LONG: DD° MM' SS.S"

25kVA SE
Project no:
NAME
Total Length of Line: 0.620km

GGK.212-10

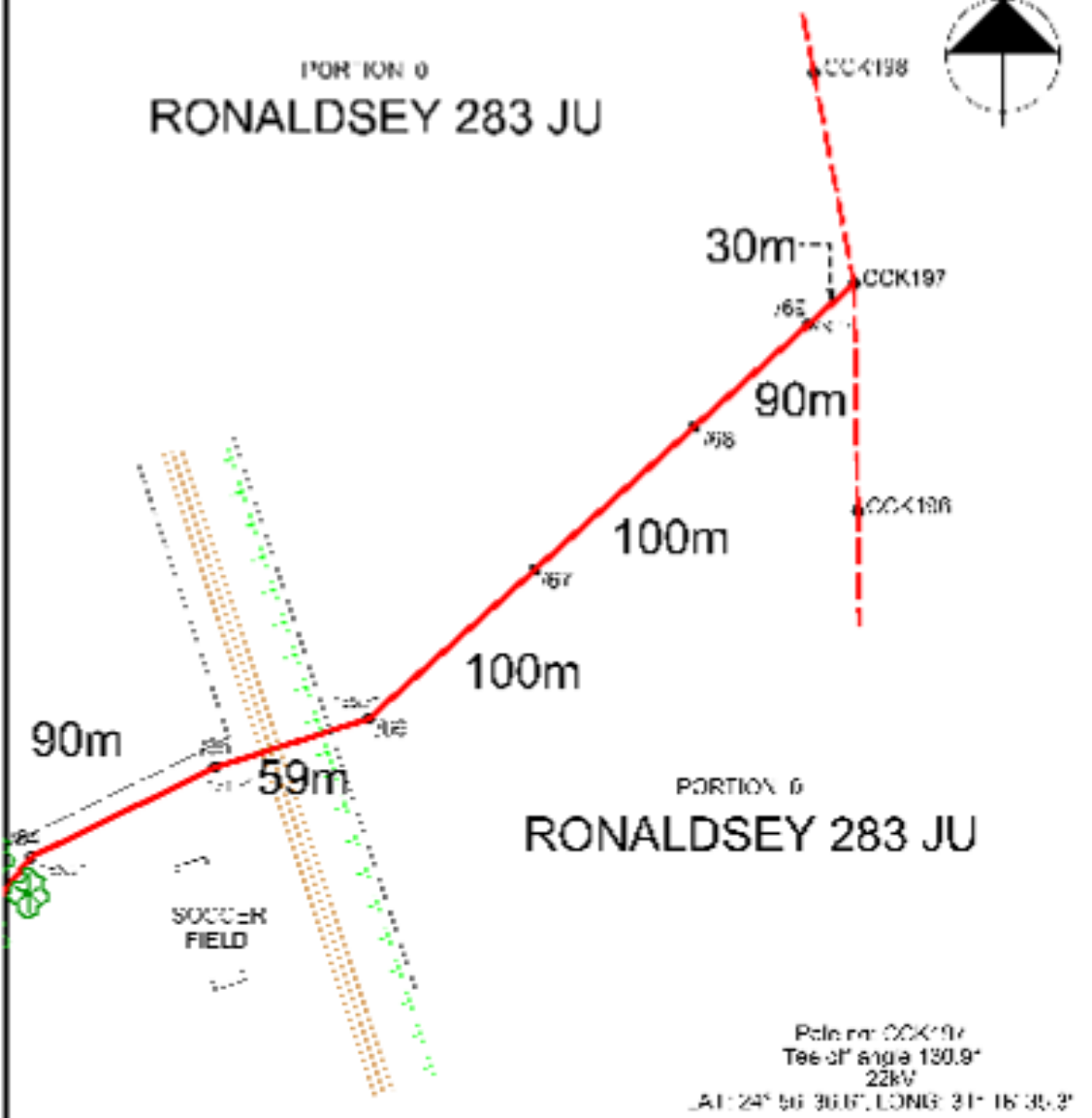


1:2500
1:2500

EASE NOTE:
Proposed tree spans may be cut, trimmed, or removed
less the applicable tree permit is issued and handed
to the construction contractor.



PORTION 0
RONALDSEY 283 JU

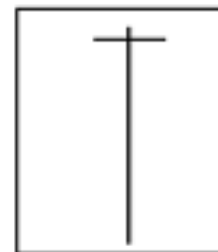


PORTION 0
RONALDSEY 283 JU

Pole no: CCK197
Tee off angle 130.9°
22kV
LAT: 24° 56' 36.6", LONG: 31° 16' 35.2"

PORTION
FARM NAME 128-JU

CCK197

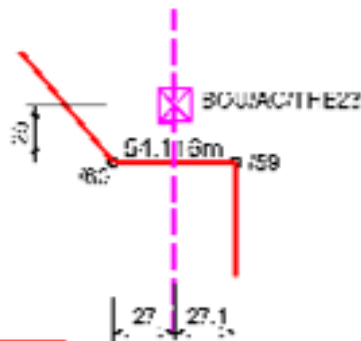
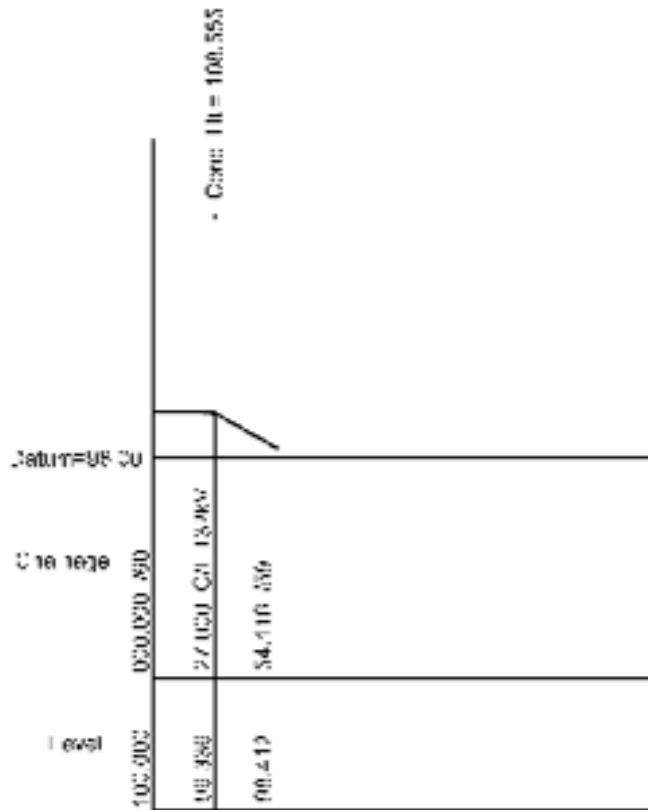


NOTE: ETSKOP'S are to be placed at the indicated position

PLEASE NOTE:
No proposed trees/poles may be cut/removed/over-
run unless the applicable tree permit is issued and handed
to the construction contractor.

Crossing of 132kV line

Project No: 11-207
 Date: 11/20/2011
 Prepared by: J.G. [unclear]
 Checked by:



NOTE: RED PEGS on site
 to be used for structure location

PLEASE NOTE:
 No proposed trees/plants may be cut/removed/trimmed
 unless the applicable tree permit is issued and handed
 to the construction contractor.

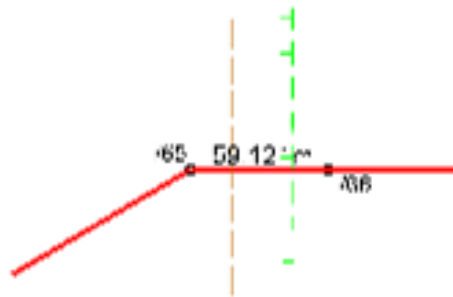
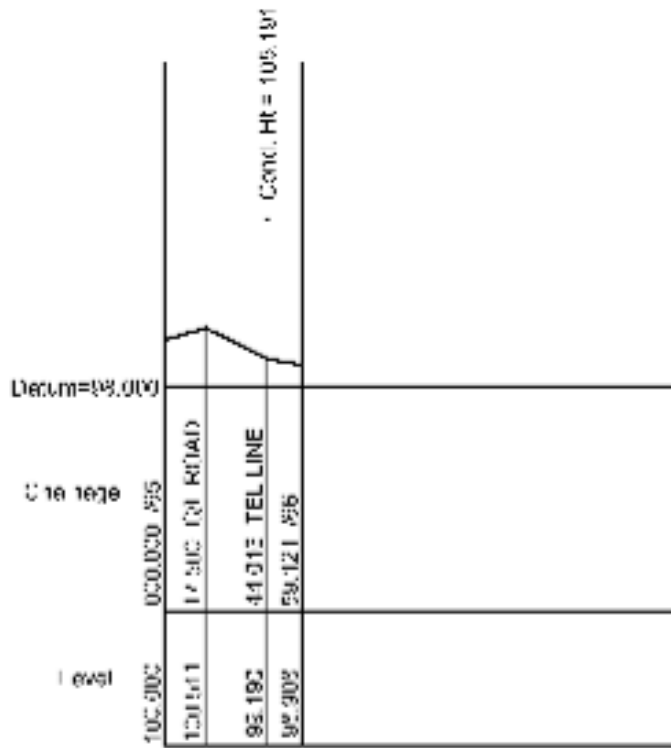
Crossing of Road & Tel

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~~PAGE 6 of 6~~

SCALE: 1:25:00

P. No. 1010
 Date: 11/01/2011
 Drawn by: J.C. [unclear]
 Checked by:



Note: This is an unnumbered road in the village - no statutory approval is required

Tel. Crossing
 No. of poles = 1
 Nearest pole = 66

NOTE RED PEGS on site
 (17.512, 44.012, 59.121)

PLEASE NOTE:
 No protected trees/plants may be cut/trimmed/removed unless the applicable tree permit is issued and handed to the construction contractor.

