



AFRICAN HERITAGE CONSULTANTS CC

2001/077745/23

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) PHASE I CULTURAL HERITAGE RESOURCES IMPACT ASSESSMENT FOR A TEMPORARY ROAD FOR A LARGE DRAGLINE TO BE MOVED FROM KROMDRAAI COAL MINE TO CLEWER IN THE EMALAHLENI DISTRICT MPUMALANGA PROVINCE

(b) REPORT COMPILED BY

Dr. Udo S. Küsel; African Heritage Consultants CC

P.O. Box 653, Magalieskruin, 0150

Tel: 012 567 6046; Fax: 086 594 9721; Cell: 082 498 0673

E-mail: udo@nconnect.co.za

(c) DEVELOPER AND CONSULTANT INFORMATION

Environmental Consultants:

Aurecon South Africa (Pty) Ltd

P.O. Box 74381, Lynnwood Ridge, 0040,

Contact person: Johan Goosen, Tel: 012 427 2000; Fax: 086 268 0200

E-mail: Johan.Goosen@aurecongroup.com

Developer:

Anglo Operations (Pty) Ltd

Landau Colliery, P.O. Box 78, Kwa Mthunzi Vilakazi 1036

Contact person: Tina Malau; Tel: 013 693 0688 358 5766;

Date of report: 10 March 2016

A. EXECUTIVE SUMMARY

To move the huge dragline from Kromdraai Mine to the Clewer area a temporary road has to be built. The road will mainly run through Highveld grassland with patches of exotic trees and areas disturbed by coal mining. To follow the proposed routes was difficult because of the number of farms the route traverses. The routes were inspected together with the palaeontologist. Two cemeteries were found along the proposed route of the dragline.

The only imported cultural heritage resources recorded along the proposed dragline route are the two neglected cemeteries and the Clewer cemetery. The proposed temporary servitude fence is located approximately 50 m from the closest cemetery.

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

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C. BACKGROUND INFORMATION ON PROJECT

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

The report forms part of a Scoping and EIA process.

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

Mining Activity

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

No re-zoning or subdivision is required

(d) Developer and consultants and owner contact details

Prepared for:

➤ **Environmental Consultants:**

Aurecon South Africa (Pty) Ltd
P.O. Box 74381, Lynnwood Ridge, 0040,
Contact person: Johan Goosen, Tel: 012 427 2000; Fax: 086 268 0200
E-mail: Johan.Goosen@aurecongroup.com

➤ **Developer:**

Anglo Operations (Pty) Ltd
Landau Colliery, P.O. Box 78, Kwa Mthunzi Vilakazi 1036
Contact person: Tina Malau; Tel: 013 693 0688 358 5766;

(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 Resources Act (NHRA):

- 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;
- Geological sites of scientific or cultural importance;
- Sites of significance relating to the history of slavery in South Africa;
- Objects to which oral traditions are attached; and
- Sites of cultural significance or other value to a community or pattern of South African history.

D. BACKGROUND TO THE ARCHAEOLOGY AND HISTORY OF THE AREA

The early history of the region

Pistorius (2009) in a Phase I HIA for Eskom's proposed railway line and associated infrastructure between the existing Pretoria Witbank railway and the Kusile Power Station comments on a cultural landscape that is marked by prehistoric and historical heritage. This used to be a rural area that was settled first by hunting and gathering groups over a very long period of time and, subsequently, African farmers during the more recent past and, lastly, by white settlers.

Nomadic hunting and gathering groups such as the //Xegwi of Lake Chrissie visited diverse biomes on their yearly rounds, until they were displaced to marginal areas subsequent to the intensive settlement of their ancestral territories by African farmers and later on, white settlers. They were ultimately hunted down or lived as servants and labourers with African farmers and colonists. Some of the survivors were incorporated into farmer groups (Potgieter 1955; Ziervogel 1955; Colson 1956, Barnard 1992). The patchy distribution of Stone Age sites can be ascribed to a lack of research and also the likely destruction of archaeological sites by coal exploration and early mining practices, but also other developments. Also refer to Bergh 1999:4-5, Maps 2.1(a) and 2.1(b) for some of the recorded Stone Age and rock art sites within the region.

The movement of African farmers onto the Highveld regions began around 1500, a period referred to as the Late Iron Age (Huffman 2007). For detail on distribution refer to Bergh 1999:10-11, Maps 3.2 and 3.3). The settlements of Sotho-Tswana, Swazi and Ndebele

communities are found mainly as stone-walled enclosures for houses and livestock. Ndzundza-Ndebele in particular utilised the resources of the Highveld (Van Vuuren 1987). The demography reflects concentrated pockets of settlement. The demand for labour on the mines attracted many more people and communities that included groups that provided seasonal and migrant labour from other regions and from as distant as Mozambique (Alexander 2001). Farm labourers also settled around farming centres (Van Vuuren 1987; Murray 1993).

The colonisation of the interior by white settlers began with small-scale migrations from the Cape Colony and a larger event that became known as the Great Trek. These eventually resulted in much unrest and conflict between local black African farmers and the colonists. For detail on the encroachment on land in the Middelburg District and later on the establishment of new borders, locations and reserves, refer to Bergh 1999:219, Map 7.1). This more recent settlement by European farmers during the colonial period occasioned the development of small towns over the past 150 years. A demand for coal from the newly discovered Witwatersrand gold fields intensified the prospecting for coal and the mining of early collieries. The long-term extraction of coal required vast infrastructural developments. Early mining practices before investigations of heritage resources had been legally required, probably destroyed or severely affected most evidence of settlement by hunter-gatherer groups and early African farmers, who would have utilised the resources of this area.

The Anglo Boer Wars, and in particular the second Anglo Boer War, had a major socio-economic impact on the study area during and after the event. By 1860 Europeans were firmly entrenched in the central Transvaal and they legalised their presence through the establishment of the Boer Republics. The discovery of diamonds and gold promoted the expansion of the British into the Boer territories. Political interventions accompanied by the greed for land and the mineral resources eventually culminated in the second Anglo-Boer War, which took place between 1899 and 1902 in South Africa, and which was one of the most turbulent times in South Africa's history. Van der Walt (2014a, 2014b, 2014c, 2014d) provides a synthesis of the events that culminated in the Anglo Boer War.

Industrial development and the Anglo Boer War

Early European visitors to the area found surface exposures of coal and seams in eroded areas, such as streambeds. An out span for transport wagons was established near a large outcrop of white quartz that gave the town Witbank its name (Filitz 2012). Witbank Colliery was founded by Samuel Stanford and the Neumann group. Witbank was established in 1890 on a farm known as Swartbos, which belonged to Jacob Taljaard. Witbank was proclaimed a town in 1903. The town was laid out by the Witbank Colliery. Samuel Stanford erected the first wood and iron building consisting of a shop and hotel (http://www.mpumalanga-happenings.co.za/witbank_homepage.htm). Early attempts to exploit the coal deposits failed, until the railway from Pretoria reached the area in 1894. The extraction of coal sources over a large area would ultimately destroy most evidence for prehistoric and historic settlements or their utilisation of the region.

The establishment of the NZASM railway line between Pretoria and Lourenço Marques (Maputo) in the 1880s was of great importance in the development of Witbank and surrounds. The Pretoria and Lourenço Marques line passed close to where Witbank is located today. This railway line was also central during the Anglo-Boer War.

A concentration camp was established south of the Balmoral station to take the overflow of inmates from the overcrowded Middelburg and Belfast camps. The Balmoral camp was operative from July 1901 to December 1902. The mortality rate was high, with 339 deaths of children under the age of 339, and 88 over the age of 15, with a total of 427 (<http://www.angloboerwar.com/other-information/88-concentration-camps/1833-concentration-camps-locations>). The cemetery of the Boer concentration camp is in the centre of the town.

Various British battalions moved through the Witbank area during 1900, including those of Lieutenant Generals J. French, R. Pole-Carew and F. Roberts (Van der Walt 2014b). Refer to Bergh (1999: 51, Map 8.7.2(a)) for detail on routes taken through the research area. Black concentration camps were also established close to two railway stations in the Witbank region. A white and another black concentration camp were at Middelburg, to the east of Witbank.

The region is also known for several other battles and skirmishes. An Anglo Boer war battle took place on the farm Donkerhoek/Diamond Hill near Bronkhorstspruit on 11 and 12 June 1900 (Bergh 1999:52-53, Maps 8.7.2(b) and 8.7.2(c)). Blockhouses were also erected by the British. Farm buildings, objects and artefacts relating to the Anglo-Boer War should be present within the general region (Van Vollenhoven 2013).

Witbank became a municipality in 1914. On 3 March 2006 the town was officially renamed eMalahleni (which translates in Zulu to 'place of coal'). It is a Local Municipality, and forms part of the Nkangala District Municipality in the Mpumalanga Province (Filitz 2012).

Ogies was an important link in the NZASM railway line between Pretoria and Maputo (Pistorius 2009). The town of Ogies developed around the railway station built on the farm Ogiesfontein in 1928.

Heritage

Coal extraction, serving both as a core domestic energy feedstock and a key commodity that drives regional economic development (Filitz 2012) continues to affect the socioeconomic fabric of the region. The Highveld has been severely changed and compromised by mining developments and the associated rail system over the last two centuries. The land around Witbank, Ogies and Balmoral is generally much disturbed in view of mining and associated infrastructure, agricultural activities and urban development that intensively altered the original landscape.

Several heritage reports mention the very low levels or the complete absence of heritage resources (Murimbika 2008; Digby Wells 2010, 2013; Pistorius 2010, 2013; SRK Consulting 2013c; van der Walt 2014a, 2014b, 2014c, 2014d). Several of the relevant heritage reports on the SAHRIS data base point this out (e.g. Murimbika 2008; Digby Wells 2010, 2013; Van Vollenhoven 2011, 2014a; 2014b; van der Walt 2014c). On account of the disturbed nature of the study area, Digby Wells (2013) recommended exemption from a HIA for a Waste Management Licence for Landau Colliery. Similarly, Van Der Walt (2013) also recommended exemption for a road upgrade at Kusile Power Station.

Burials, formal and informal cemeteries are some of the major social resources that ensued from these developments. Formal (several from as few as <5, others up to 60 or 100 and up to 200 graves) and informal cemeteries and individual graves occur throughout the area as a result of the labourers who work in mining, industrial and agricultural sectors (e.g. van Schalkwyk 2002, 2006, 2009, 2012; Pelsler 2008 Permit No. 080/08/01/009/51; Roodt 2008; Teichert 2008 Phola cemetery Case ID 4391; Golder Associates 2011, 2014; PGS 2012 Case ID 613; Van Wyk-Rowe 2012; SRK Consulting 2013a; Van Vollenhoven 2013; Nemaï Consulting 2014; Van Wyk-Rowe 2014; Kudzala Antiquity 2015).

SRK Consulting 2013b, *inter alia*, recorded 369 individual gravesites, subsequently exhumed and relocated during the heritage investigations for BHP Billiton Energy Coal South Africa (Pty) Ltd (BECSA)'s Vandyksdrift Central (VDDC) Project. Van Vollenhove (2013) documented two grave localities on portions 31 and 44 of the farm Vierfontein 61 IS, near Ogies and Kriel. Only a few of the recorded graves are of Europeans, e.g. the headstone at grave one with the surname of van Eeden shows three dates of death at 1957, 1972 and 1979 (GPS: 26°11.235'S; 29°07.317'E). The other is an informal cemetery with 15 burials, several exhibit names on the headstones (GPS: 26°11.208'S; 29°07.393'E). African people value their graves as it represents their ancestors who control the lives of their family members.

Van Schalkwyk (2012) noted several localities with Stone Age lithics on the farm Honingkranz 536 JR in his updated survey for the New Largo Mining development. Two archaeological sites on the 1:50,000 map sheet 2529 CC2 are on record at the Wits Archaeological database. These are MSA open-air sites and are not located in close proximity to the study area (Van der Walt 2014c). In an HIA for the proposed mining development on Portion 30 of the farm Doornrug 302 JS, Balmoral District, Mpumalanga Province (1:50 000 2529CC Witbank) a lack of heritage features was found (van der Walt 2015b). The author points out that he has conducted previous studies within the study area and on those occasions also found very few heritage sites.

Van Vollenhoven (2009) recorded two sites on the farm Dorstfontein; an old homestead with little historical value and a cemetery with high social value. Pistorius (2009) remarks on a vernacular stone architectural heritage that developed in the eastern Highveld around the second half of the 19th century. Timber is a scarce resource on the Highveld and stone was used as the main building material in the region. Local sandstones, ferricrete ('oukclip'), dolerite ('bloukclip'), granite, shale and slate were used to build houses and outbuildings on the farms of the early settlers. Pistorius (2009) recorded several farmstead complexes and historical graveyards dating from the late 19th and early 20th centuries in a HIA. He also noted that most farmsteads contain a core of historical buildings older than 60 years that has been extensively altered or are beyond repair or renovation.

Van Schalkwyk (2012) noted that there are a few farmsteads dating to the late 19th century, with the majority of houses and labourer dwellings dating to the middle of the 20th century. The remains of several more recent dwellings recorded by Pistorius (2013) in an updated HIA for the proposed Valleyview residential development on Portion 22 of the farm Naauwpoort 335 JS are of no cultural significance. A previous review reported the only significant find at Valleyview being a bucket-pump standing in the valley near the central part of the development site (SSI Environmental 2012). This could not be relocated and has probably been removed (Pistorius 2013). Van Vollenhoven (2014b) also noted that the

remains of a labourer house (GPS: 25°49'34.6"S; 29°29'03.5"E) at Vaalbank closer to Middelburg were probably less than 60 years old. Van Wyk-Rowe (2012) in an HIA for the Doornpoort (eMalahleni) - Rockdale (Middelburg) power line recorded one square stone enclosure at S25° 52' 39.8"; E29° 19' 04.0).

Van Schalkwyk (2009, 2012) also notes that some of the industrial heritage sites, such as the railway line that served the New Largo mine, were decommissioned, while other such as the Wilge Power Station and substation are still being used. Cultmatrix (2010) recorded recent features associated with quarrying and farming. Van der Walt (2012), in an AIA for the realignment of a water pipeline close to Kendal and Ogies, noted that the proposed servitude traverses an extant historical railway line that is still in use. He also documented two stone cairns just outside the servitude. Kudzala Antiquity (2015) recorded two historic houses near Ogies and also the remains of buildings and farmsteads. The historic building on the eastern side of the R545 road to Bethal is currently used as a car repair centre and amenities shop. In a heritage report by de Jongh dated 2007; this building was described as doctor's consulting rooms and house. There is also a local mosque built in the 1990s that is of religious significance. It was formerly associated with the adjacent Madrassa Village that has been demolished.

E. DESCRIPTION OF THE PROPERTY OR AFFECTED ENVIRONMENT

(a) Detail of area surveyed:

- Full location data for Province, Magisterial District/Local Authority and property (e.g. Farm erf) name and number etc.;
- *Nkangala District Municipality, P.O. Box 437, Middelburg, 1050
Tel: 013 249 2000; Fax: 013 249 2087*
- *eMalahleni District Municipality, P.O. Box 3, eMalahleni, 1035
Tel: 013 690 691; Fax: 013 690 6207*
- *Mpumalanga Province, Private Bag X11285, Nelspruit, 1200
Tel: 013 766 3098; Fax: 013 766 3475*

Farm Name	Farm No.	Portion	Registration Division	SG Code
Nooitgedacht	300	94	JS	T0JS00000000030000094
Nooitgedacht	300	21	JS	T0JS00000000030000021
Nooitgedacht	300	13	JS	T0JS00000000030000013
Kleinwater	301	2	JS	T0JS00000000030100002
Kleinwater	301	8	JS	T0JS00000000030100008
Doornrug	302	11	JS	T0JS00000000030200011

Rondebult	303	0	JS	T0JS00000000030300000
Rondebult	303	0	JS	T0JS00000000030300000
Doornrug	302	13	JS	T0JS 00000000030200013
Doornrug	302	30	JS	T0JS00000000030200042
Doornrug	302	42	JS	T0JS00000000030200042
Doornrug	302	18	JS	T0JS00000000030200018
Doornrug	302	19	JS	T0JS00000000030200019
Doornrug	302	22	JS	T0JS00000000030200022
Doornrug	302	20	JS	T0JS00000000030200020

- 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: Emalahleni 2529 CC

- 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 29 - 36

(b) Description of the Methodology

The proposed routes of the dragline mainly run through Highveld grassland, maize fields, and exotic tree plantations and depleted coal mining areas.

Visibility was good, but to follow the route was difficult because of the many farms the road will cross. To follow the route took two days. The route was inspected on foot and by vehicle and was photographed.

F. DESCRIPTION OF SITES MAPPED

Originally two alternative routes were given and both routes were inspected (see yellow and green line in Figure 1).

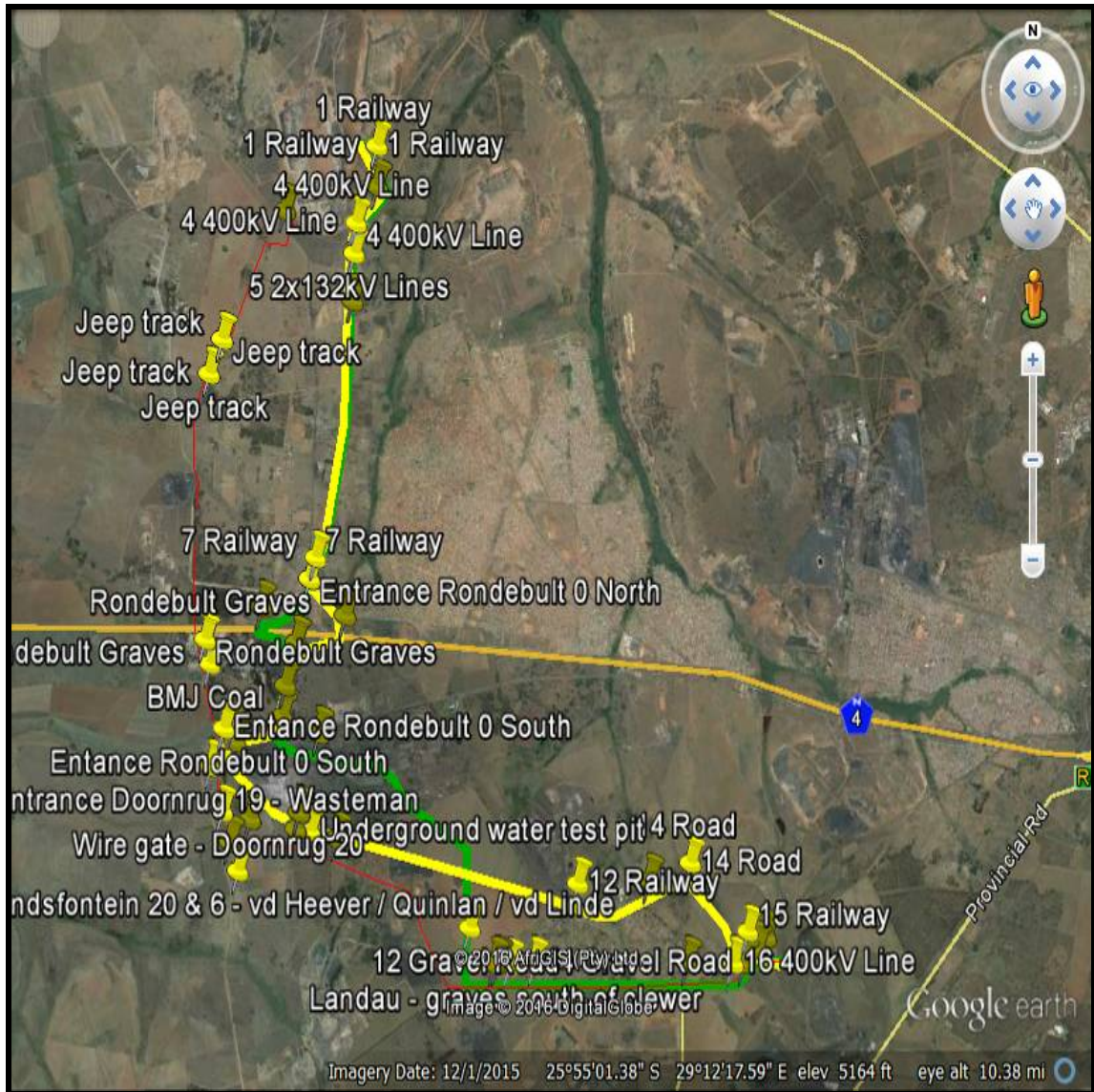


Figure 1: Alignment of alternative routes

The finalised route is shown in Figure 2, along with the grave sites located close to the route.

Detailed locations inspected are shown in the following maps:
 2 (a), (b), (c), (d), (e) & (f)

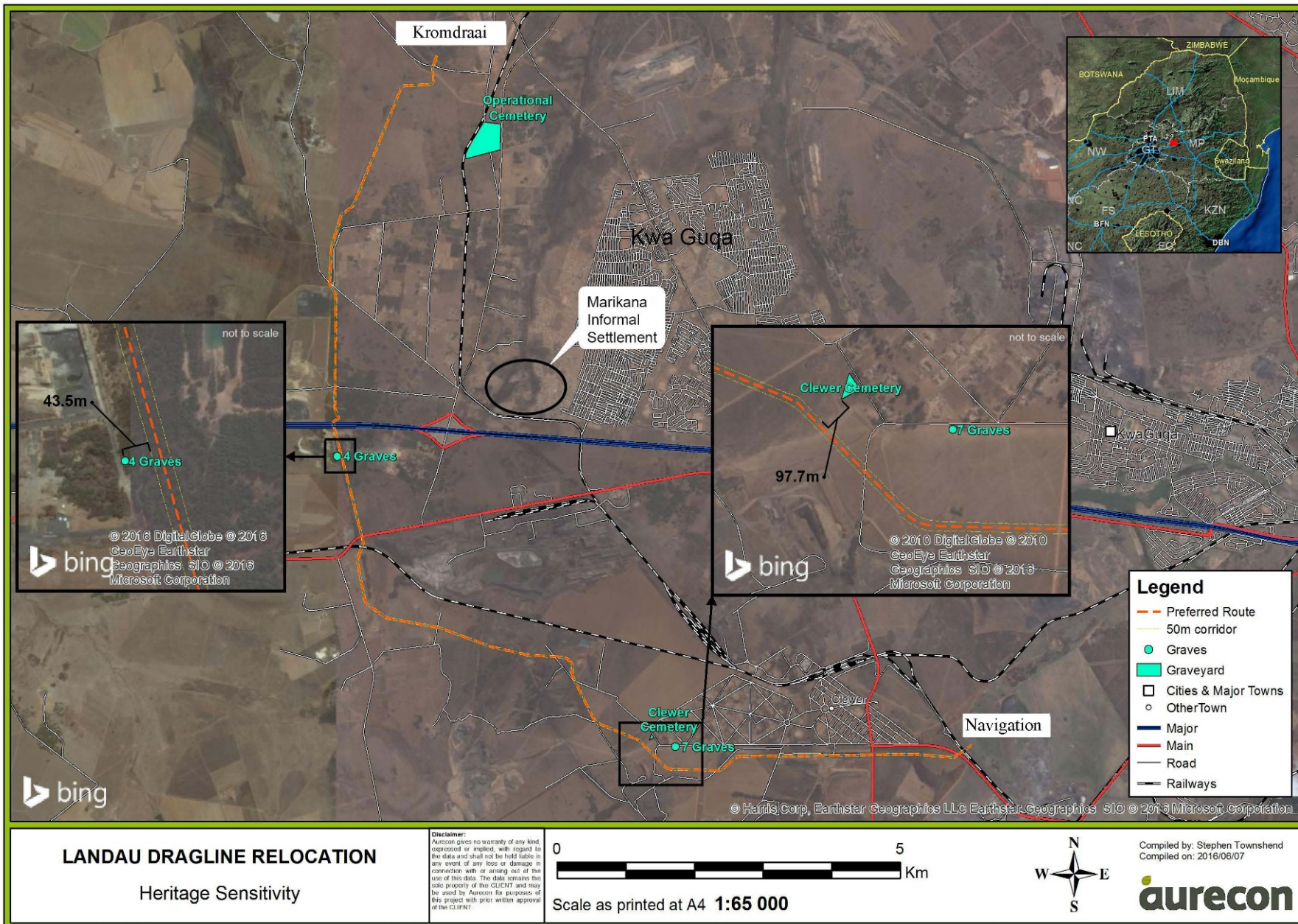


Figure 2: Location of cemeteries and graves along the dragline route.

The site inspection was started at the Kromdraai Mine. Next to the road towards Kromdraai a very large cemetery was noticed at S25° 54' 42.50" & E29° 06' 37.98. This cemetery will not be affected by the proposed development and is still in use (see Figure 3).



Figure 3: Cemetery close to the proposed route near Kromdraai

The proposed dragline was then followed from Kromdraai Mine in a southerly direction, mainly through Highveld grassland and some wattle plantations towards the N4 highway (see map 2 (a) & (b) from LDTP 1 to 19 on pages 30 & 31; see Figure 4 and Figure 5).



Figure 4: Scenery close to Kromdraai



Figure 5: Route through Highveld grassland

Near LDTP20 on Map No 2 (b) & (c) see pages 31 & 32 the dragline will cross the N4 highway. At this point there are large quarries (see Figure 6 and Figure 7).



Figure 6: Site of N4 highway crossing.



Figure 7: Route where it will be crossing the quarry.

Near LDTP21 a small cemetery was recorded at $S25^{\circ} 52' 25.4''$ & $E29^{\circ} 03' 41.0''$ (see Figure 8). The cemetery is totally neglected and part of the graves damaged by dumping. Four graves are visible and another grave is totally covered by dumping. Only one grave had an inscription. It is the grave of Abraham Khoza from 1938 (see Figure 9). This area has to be properly fenced off before construction and the site cleared and restored. The dragline should pass to the east of this cemetery. An alternative is to apply to SAHRA to relocate the graves.



Figure 8: Neglected cemetery at $S25^{\circ} 52' 25.4''$ & $E29^{\circ} 03' 41.0''$.



Figure 9: Tombstone of Abraham Khosa.

From here the line runs south to cross the railway line and tar road near LDTP 26 & 27 and then turns South-east through farming land and the farms Doornrug and Elandsfontein (see **Figure 10** to **Figure 12** and map 2 (c), (d) & (e) LDTP 29 to 35).



Figure 10: Route through grassland.



Figure 11: Route next to agricultural fields.



Figure 12: Route through agricultural fields.

From LDTP 35 to LDTP 44 the dragline runs through the Elandsfontein coal mine area. This area has been largely disturbed through coal mining (see **Figure 13** to **Figure 15**).



Figure 13: Route through disturbed mining area.



Figure 14: Route through disturbed mining area.



Figure 15: Route through disturbed mining area.

From LDTP 45 to 58 the line runs next to a dirt and tar road on the outskirts of the town Clewer (see map 2 (e) & (f) pages 34 & 35 and **Figure 16** to **Figure 20**).



Figure 16: Route next to road.



Figure 17: Route next to road.



Figure 18: Route next to road.



Figure 19: Route next to tar road.



Figure 20: Route next to tar road.

The Clewer Cemetery is located near LDTP 45, at $S25^{\circ} 54' 37.56''$ & $E29^{\circ} 06' 25.52''$. The cemetery is located approximately 100 m north-west of the proposed route.



Figure 21: Clewer Cemetery.

Near LDTP48 at $S25^{\circ} 54' 42.50''$ & $E29^{\circ} 06' 37.98''$ a destroyed cemetery was found. The graves have been damaged by vandals and the tombstones broken. Seven graves are present. The cemetery is younger than 60 years, and is located approximately 300 m from the proposed route (see **Figure 22** and **Figure 23**).



Figure 22: Cemetery south of Clewer.



Figure 23: Cemetery with broken headstone.

The cemetery should be fenced off during construction. As alternative an application can be made to relocate the graves.

From LDTP58 to LDTP61 see map 2 (f) see page 35, which is the end destination the road and will run through open highveld grassland (see **Figure 24**).



Figure 24: Route through Highveld grassland.

G. DESCRIPTION OF THE ARTEFACTS, FAUNA, BOTANICAL OR OTHER FINDS AND FEATURES

None

H. CLEAR DESCRIPTION OF BURIAL GROUNDS AND GRAVES

Along the proposed route of the dragline road two cemeteries have been recorded. The first cemetery is very small and has also four graves. The graves have been neglected and partially damaged by road building and dumping. There may be another grave under the rubble at S25° 52' 25.4" & E29° 03' 41.0". The only grave with an inscription is that of Abraham Khosa 1938 (see **Figure 8**).

The second cemetery is located at S25° 54' 42.50" & E29° 06' 37.98" and is just south of the town of Clewer. The cemetery has seven graves of which the grave stones have been vandalized. The graves date to the 1960/1980 (see **Figure 25**).



Figure 25: Cemetery located south of Clewer.

I. EVALUATION AND RATING (FIELD RATING)

The only important Cultural Heritage Resources located in the study area are the two cemeteries. The site is given a field rating of grade III B. The sites could be retained as heritage register sites or can be relocated with permission from PHRA.

J. STATEMENT OF SIGNIFICANCE (HERITAGE VALUE)

The sites are given a rating of medium heritage value.

K. RECOMMENDATIONS AND CONCLUSIONS

The only important cultural heritage resources recorded along the proposed dragline route are the two neglected cemeteries. Both cemeteries should be fenced in before construction can commence and the road should pass at least five meters from the graves. Alternatively, an application can be made to relocate the graves.

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

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M. APPENDICES

- Google Maps pages: 29 – 35
- Map 1:50,000 Emalahleni 2529 CC page: 36

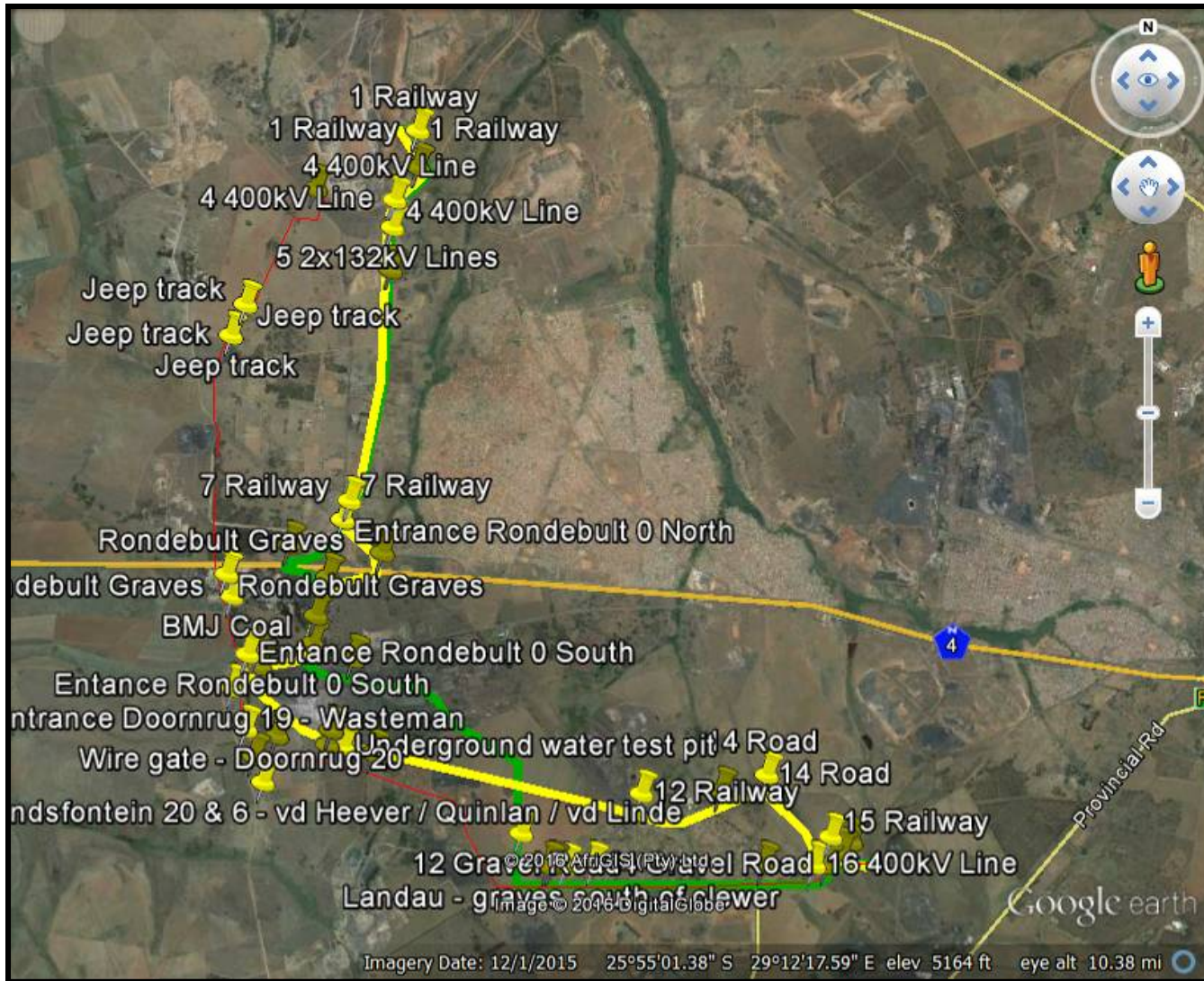


Figure 26: Map 1 Alignment of initial alternative routes.



Figure 27: Map 2 (a).



Figure 28: Map 2 (b).



Figure 29: Map 2 (c).

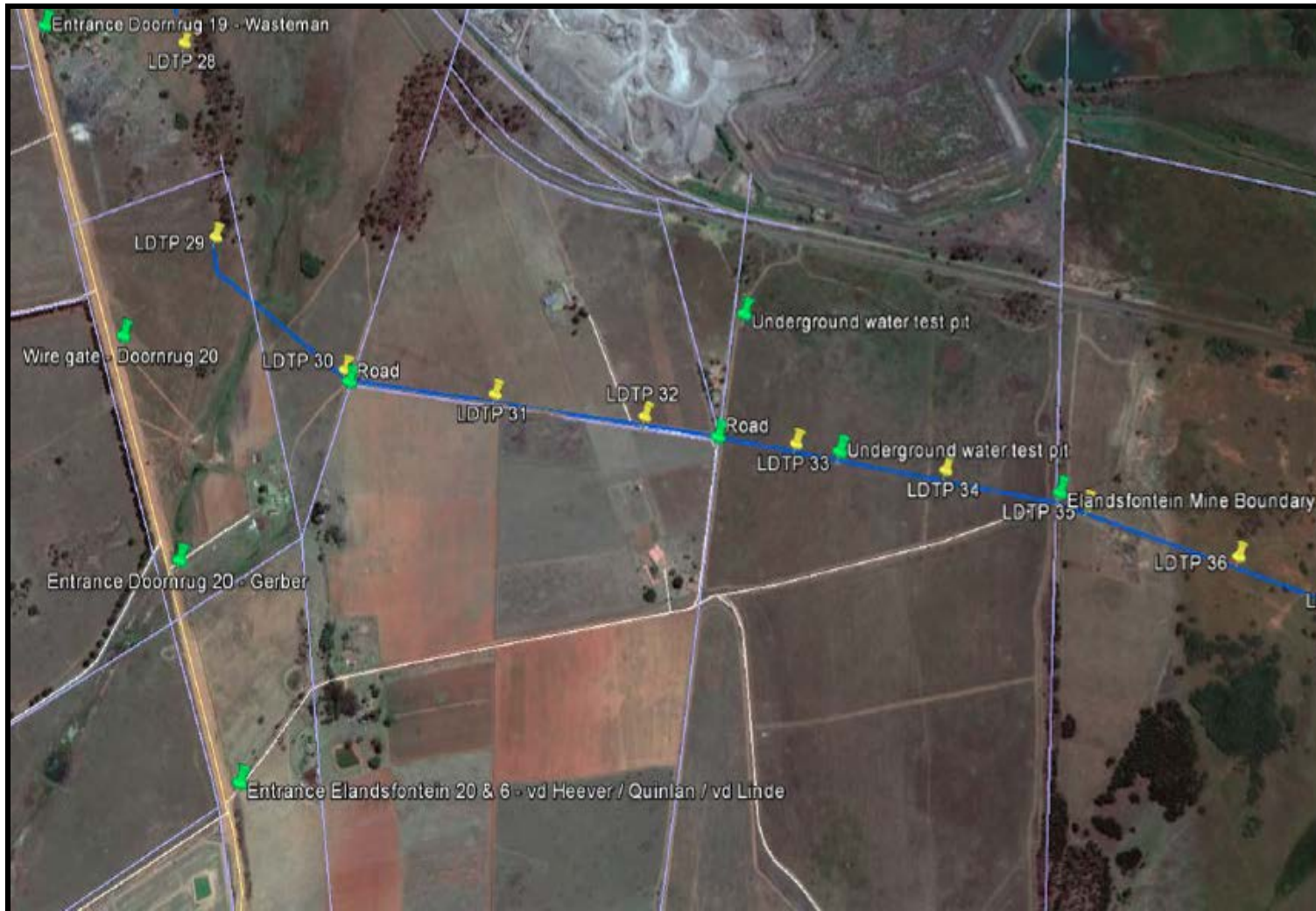


Figure 30: Map 2 (d).



Figure 31: Map 2 (e).

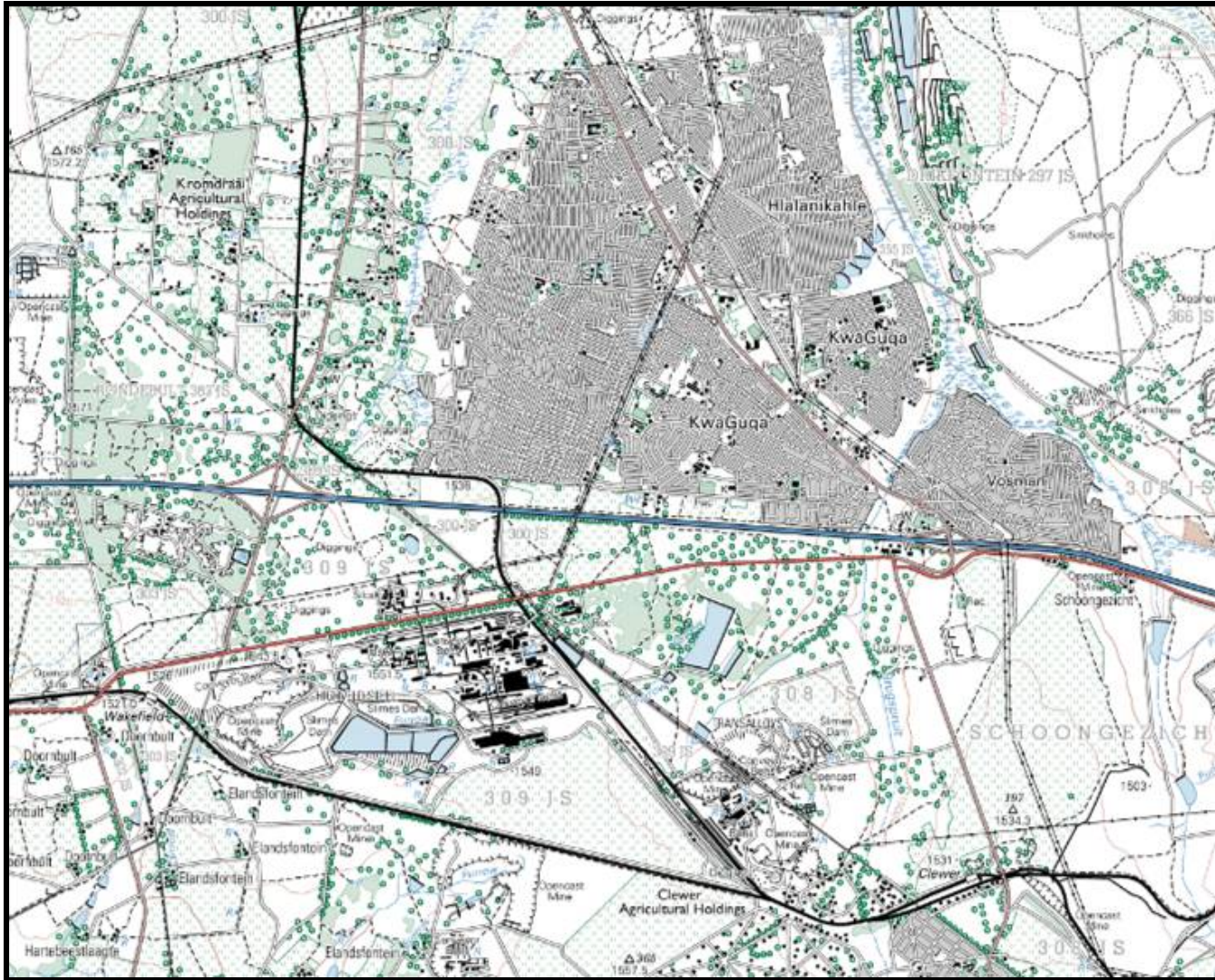


Figure 33: Map 1/50 000 Emalahleni 2529 CC.