children often occur in the floors of such houses and for this reason it is recommended that impacts on these structures be avoided where possible, or alternatively that a suitably accredited archaeologist monitor the construction activities at these sites to ensure that such graves be treated according to legislative requirements should they be discovered.

vi. Sites ORW 9, 13, 16, 17, 21, 23 and 25 are graves and cemeteries. All graves are legally protected. In all cases it should be possible to ovoid impacts by slight changes in alignment or by managing construction activities in the direct vicinity of the graves. Although grave relocation exists as a possible mitigation measure it is not advised due to previous social, cultural and political problems with grave relocation in this area.

ORW Site no.	GPS Location (Deg, min, sec)	Proposed Alignment	Site Type	Significance	Rating	Recommendations	Secondary Recommendations	Actions required
1	S24 54 47.2 E29 59 03.1	Phase 2C	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
2	S24 54 47.2 E29 59 07.3	Phase 2C	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
3	S24 53 19.1 E29 59 55.8	Not on current alignment	Not applicable	n/a	Not applicable	Not applicable		None
4	S24 53 19.1 E30 01 31.0	Phase 2C	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None

5	S24 51 06.5 E30 04 32.5	Phase 2C	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
6	S24 50 21.8 E30 05 26.6	Phase 2C	Not applicable	n/a	Not applicable	Not applicable		None
7	S24 50 14.4 E30 05 33.1	Phase 2C	Not applicable	n/a	Not applicable	Not applicable		None
8	S24 50 04.2 E30 05 41.8	Phase 2C	Not applicable	n/a	Not applicable	Not applicable		None
9	S24 45 08.1 E30 10 21.2	Phase 2C	3 Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
10	S24 44 38.6 E30 11 02.6	Phase 2C	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
11	S24 38 58.6 E30 10 56.9	Phase 2D	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
12	S24 38 49.5 E30 10 53.3	Phase 2D	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
13	S24 37 59.7 E30 10 39.2	Phase 2D	5 Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
14	S24 37 32.6 E30 10 15.4	Phase 2D	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction	If impact is unavoidable contract an accredited	Commence construction under supervision of an

						activities on site.	archaeologist on a watching brief	archaeologist
15	S24 37 29.1 E30 10 12.4	Phase 2D	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
16	S24 33 59.9 E30 09 25.0	Phase 2D	100+ Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
17	S24 32 17.3 E30 08 59.4	Phase 2D	250+ Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
18	S24 32 08.6 E30 08 56.0	Phase 2D	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
19	S24 31 59.8 E30 08 49.7	Phase 2D	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
20	S24 31 53.0 E30 08 53.8	Phase 2D	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
21	S24 29 30.5 E30 07 08.5	Phase 2E	12 Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
22	S24 28 52.9 E30 07 15.7	Not on current alignment	Graves	High/ Medium	Generally Protected A (Field Rating IV A)			Consider in conjunction with choosing alternatives to the proposed alignments

23	S24 25 56.8 E30 04 57.1	Phase 2F	200+ Graves	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
24	S24 25 24.2 E30 03 58.3	Phase 2F	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
25	S24 18 05.2 E29 49 29.2	Phase 2F	1 Grave	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site. Mitigation decision in conjunction with Site ORW 26	If impact is unavoidable: Grave Relocation in compliance with NHRA Sec 36.	Demarcation/fencing of grave site
26	S24 18 06.1 E29 49 28.8	Phase 2F	Late Iron Age - Potshard scatter	Low	Generally Protected C (Field Rating IVC)	Requires no further recording before destruction		None
27	S24 18 07.3 E29 49 26.3	Phase 2F	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
28	S24 18 29.7 E29 48 35.6	Phase 2F	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
29	S24 19 51.5 E29 46 20.5	Phase 2F	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist
30	S24 19 53.2 E29 46 17.8	Phase 2F	Possible graves under floors of Recent Modern homestead	High/ Medium	Generally Protected A (Field Rating IV A)	Avoid impact by changing alignment or managing construction activities on site.	If impact is unavoidable contract an accredited archaeologist on a watching brief	Commence construction under supervision of an archaeologist

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1. INTRODUCTION

Background Information on the Project:

- This study is included in the Baseline Report is part of a re-assessment of the final alignments of infrastructure. An existing Record of Decision exists for phase's 2B-F for the water augmentation project.
- Phase 2 of the ORWRDP is a multi-purpose project incorporating both economic and social development objectives to cater for the water demands of commercial and social users. The project comprises a number of sub-phases and entails additional water resource infrastructure, pump stations and reservoirs, consisting of the De Hoop storage dam as Phase 2A which is presently under construction by DWA, and bulk transfer pipelines and pump stations as Phases 2B to 2H.
- Most of the pipeline is within the road reserve, but wherever infrastructure is outside existing servitudes on privately or state owned land, sub-divisions and servitude registrations would be necessary.
- The baseline HIA re-assesses the final alignments of the ORWRDP-2 infrastructure, which differs from the previously done Heritage Impact Assessment study during the Environmental Impact Assessment process. The activities will provide detailed and accurate information as a baseline for planning mitigation activities and in order to avoid damages to any heritage aspects.
- Legislative requirements: Baseline studies are required to re-assesses the final alignments of infrastructure and to secure baseline information for planning mitigation activities.

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2. BACKGROUND TO THE ARCHAEOLOGICAL HISTORY OF THE AREA

2.1. Literature review

Stone Age

The earliest evidence of habitation in this area can be found on the farm Rietkloof, specifically on the site, Maleoskop. Stone tool assemblages include choppers (Oldowan), hand axes and cleavers (Acheulean) dating to the Early Stone Age (Boshoff, 2005). Middle Stone Age assemblages can be found on the farm Klipfonteinhoek in the Ohrigstad district. This site, called Bushman Rock Shelter, was first excavated in the 1960s by Eloff (1969) and Louw (1969). This site also yielded evidence of Later Stone Age tools as well as Early Iron Age ceramics (Klein, 1984; Plug, 1981; Plug, 1982). Late Stone Age assemblages in the area can mainly be attributed to the San hunter-gatherer communities. The San were nomadic by nature and did not have any permanent settlements, yet rock shelters are often associated with their seasonal occupation of an area. Evidence of these shelters can be found in areas such as Witbank, Ermelo, Baberton, Nelspruit, White River, Lydenburg and Ohrigstad, as well as along the Olifants River and the foothills of the Mpumalanga Drakensberg (Delius, 2007; Klein, 1984; Korsman, 1994; Mitchell, 2002; Plug, 1981; Plug, 1982; Schoonraad and Beaumont, 1971). These shelters often also contain rock art produced by the San as well as the later farming communities. Rock art sites are distributed throughout the larger area specifically in the Witbank, Lydenburg, White River, Nelspruit and Nsikazi districts (Delius, 2007).

Iron Age

Early Iron Age settlements from the Kwale branch of the Urewe tradition can be found in and around the affected area. Mzonjani is the earliest facies found in the area and dates to AD 450 to AD 750 (Huffman,

2007). The Mzonjani facies can be regarded as the first representation of Early Iron Age communities in the area (Mitchell, 2002). Huffman (1998) identifies two sites at Riverside in the Steelpoort area which yielded evidence of dung-lined storage pits indicating an early variant of the Central Cattle Pattern amongst the Mzonjani communities. These communities can also be linked to the early Sotho-Tswana (Huffman, 2007).

More Early to Middle Iron Age sites from the Kalundu tradition and the Happy Rest sub-branch can also be identified in the affected area (Huffman, 2007). These sites include the Doornkop facies dating from AD 750 to AD 1000 and the later Klingbeil facies dating to AD 1000 to AD 1200 (Huffman, 2007; Mitchell, 2002). Research on Middle Iron Age sites in this area is limited and only a few sites have been excavated (Huffman, 2007), one of the most famous sites being the Lydenburg head site (Whitelaw, 1996). Aerial surveying done by Mason in 1968, however, showed the presence of 1792 possible settlements in the Steelpoort, Sabi, Crocodile and Komati rivers drainage areas (Evers, 1975). Another aerial survey done by Evers in 1975 increased this estimate to around 5000 possible settlements (Evers, 1975).

Late Iron Age sites include sites from both the Kalundu and Urewe traditions. Only one facies from the Kalundu tradition is present in the area. This is the Letaba facies dating to AD 1650 - AD 1840 and forms part of the Happy Rest sub-branch (Huffman, 2007). The Olifants River marks the southern boundary for this facies, and it is only present in the most northern parts of the affected area.

From the Urewe tradition sites representing two facies of the Moloko branch can be identified in the affected area. The first is the Icon facies dating to AD 1300 to AD 1500 and the second is the Marateng facies dating to AD 1650 to AD 1840 (Huffman, 2007). The Marateng facies also covers the era of

Sotho-Tswana settlement, specifically the Pedi, in the area. Later Iron Age settlements dating to the historical period are ethnographically known to have been built on hilltops and were always enclosed by stone walling (Delius, 1983; Mönning, 1967). The southern most affected areas were inhabited not only by Sotho-Tswana, but also by the Nguni, specifically the Ndzundza Ndebele (Schoeman, 1997). The Ndzundza originally moved into the Steelpoort River source area and first settled at the site called KwaSimkulu in the 1630s (Nell, 2009). There are also three more sites associated with the northern expansion of the Ndzundzu known as Kwamaza, Esikhunjini, and KoNomtjarhelo dating to around the AD 1700 to AD 1900 (Nell, 2009; Schoeman, 1998a, Schoeman, 1998b).

Ethnography

The first semi-permanent inhabitants of the area were the predecessors of the group known today as the Pedi (Delius, 1983; Theal, 1964). The Pedi forms part of the larger group known as the Northern-Sotho, which incorporates a number of different tribes, each with their own chief (Mönning, 1967). Some of the larger groups were the Roka, Kwena, Tau, Pai, Kutswe, Pulana and the Maroteng (the latter of which was lead by Sekhukhune) (Delius, 1983; Mönning, 1967). The area on which the affected farms are located was originally inhabited by a group known as the Bakoni (Massie, 1905). The Bakoni was already settled in the area by the 1600s and large agricultural settlements were widely dispersed across the area (Wright, 2010). The Bakoni was therefore already settled into the area before the Pedi arrived. Subsequently, though, the Bakoni submitted to Pedi rule and was eventually incorporated into the Pedi Kingdom (Massie, 1905).

Oral tradition holds that the Maroteng entered the affected area (the area between the Olifants River and the Steelpoort River) after they broke away from the Kagatla who lived in and around what would

become Pretoria (Delius, 1983). Dates obtained from material remains suggest that this migration took place around 1650 (Delius, 1983, Massie, 1905). When the Maroteng entered the area it was already dominated by the Kwena/Morgatana (Mönning, 1967). Originally the Maroteng were subjugated by the Kwena/Morgatana (Mönning, 1967), however, by the start of the 19th century the Maroteng had risen to dominate the area between the Olifants and the Steelpoort Rivers as well all the tribes within it (Massie, 1905).

By the 1820s, the Pedi lost dominance over the area, following a dramatic population decline as a direct result of the Difiqane/Mfeqane (Delius, 1983; Mönning, 1967). The Pedi were almost completely destroyed by the Ndebele forces, who acted under the command of either Mzilikazi or Zwide (Delius, 1983; Mönning, 1967; Theal, 1964). Sekwati, the only surviving Pedi royal heir, fled north after the attacks, but after a few years he again returned to the area to reclaim and rebuild it (Massie, 1905, Mönning, 1967).

It was at this point, while the Pedi were still recovering from the Difiqane/Mfeqane, that the Voortrekkers arrived in the area and formed the ZAR. Due to the weakened state of the Pedi, Sekwati singed over land to the ZAR in return for protection against the Swazi, the most powerful group in the area at the time (Delius, 1983). However, the Pedi did not see this as handing over ownership of the land, but only the right to use it (Delius, 1983; Theal, 1964). The throne of the Pedi moved to Sekhukhune after the death of Sekwati in 1861 (Massie, 1905; Mönning, 1967; Theal, 1964), and it was under Sekhukhune's leadership that the Pedi would become one of the most powerful groups in the area. Relations between the Pedi and the ZAR was strained since the 1850s, with the ZAR claiming raids were being ordered by the Pedi paramount Chief, whereas the Pedi, on the other hand, claimed that their land

was being stolen by the ZAR (Delius, 1983). This strained relationship finally erupted into war (1875) (Delius, 1983; Theal, 1964). Despite having initial success against the ZAR force, under President Burgers, the Pedi were finally defeated by the British in 1879 and Sekhukhune was captured. This saw the end of the Pedi as an independent kingdom (Delius, 1983; Theal, 1964; Massie, 1905). After the war, Mampuru and Nkopodi (also known as Ramoroko) assumed joint leadership of the Pedi, however, after Sekhukhune was released Mampuru refused to give up his role and had Sekhukhune murdered. Mampuru fled to the Ndebele chief, Nyabele, and was eventually captured by the ZAR and hanged (Delius, 1983; Massie, 1905, Mönning, 1967). This resulted in a long period of arguing about leadership between the different Pedi houses, until it was finally decided, by order of the ZAR, that the territory would be split and shared by the two ruling houses. Sekhukhune's son, Sekhukhune II, became the paramount Chief of the northern portions whereas Kgolane (who was awarded the seat of the paramount Chief by the ZAR) became Chief of the southern portions (Mönning, 1967). Sekhukhune II tried to reclaim the whole of the old Pedi territory during the confusion of the Anglo-Boer War, however, after the war the British enforced the ZAR division and ever since the Pedi have been divided between several factions (Massie, 1905) The Pedi became subjects of the British crown and they became subject to taxation and also to the administration of the Governor of the Transvaal, who was appointed paramount Chief of all the black communities in Transvaal (Mönning, 1967). With the incorporation of the *Land Act of 1913* and the *Bantu Land and Trust Act of 1936* provision was made for separate land reservations for, amongst others, the Pedi (Mönning, 1967). The *Bantu Administration Act of 1927* further enabled the Pedi to once again appoint chiefs and headmen, giving them control over administrative and civil/criminal matters (Mönning, 1967).

Historical period

The first Europeans entered the area in the 1830s during a period known as the Great Trek. These Voortrekkers were lead by Louis Trichart and moved through the area to Delagoa Bay, modern day Maputo (Berg, 1999; Bosman, 1977; Muller, 1985; Van Jaarsveld, 1985). After Trichart had left the area, another group lead by Andries Potgieter also arrived and founded the towns of Ohrigstad (1845) and later Lydenburg (1850) (Bosman, 1977). These were the first European settlements in the area; however, they were situated east of the Steelpoort River. As previously mentioned the area between the Olifants and Steelpoort Rivers were inhabited by the Pedi, and it would only be after the Sekhukhune Wars of 1875-1879 that the Pedi would be subjugated and their territory incorporated into the ZAR, which was already under British rule by 1879 (Bosman, 1977; Delius, 1983; Van Jaarsveld, 1985). The Sekhukhune Wars also saw the construction of Fort Burgers (today Burgesfort), Fort Weber, Fort Olifants, Fort Mamelube, Fort Faugh-A-Ballach, Fort Albert and with Fort Albert Ewdards and Seven Miles Post located just south of the affected area (Berg, 1999; Bosman, 1977; Delius, 1983; Van Jaarsveld, 1985) The invasion route used by the British in 1879 to attack Sekhukhune's capital was also just south of the affected area, with a small skirmish between the British and the Pedi soldiers occurring there (Berg, 1999). Despite the area being under Pedi control, there were a number of mission stations in the area belonging to the Berlin Missionary Society. The first mission station was build at Kchalatlolu (1861), followed by Bothsabelo (1865), Lobethal (1877), Arkonh (1877), Patametsane (1877) (Van der Merwe, 1975). After the fall of Sekhukhune's capital a missionary station at Thaba Mossegu (1880) was also built (Van der Merwe, 1975). This station is just south of the affected farms and may hold some historical value.

As for the First or Second Anglo-Boer Wars this area saw no major battles. In 1902, following the Second Anglo-Boer War, a conference was held at Schoonoord (on one of the affected farms) between

the African communities and the British Colonial Administration to discuss land redistribution (Delius, 2007). Nothing came of this conference and in 1950 the area was transformed into the Lebowa Homeland and was given self governing status in 1973 (Delius, 2007). In the late 1960s the Lebowa/Bokoni mine was built by Anglo-Gold in the area and is still operating today (Ntrama, 2006). Several small settlements or mining villages are also associated with the mine.

2.2. Archival research

Archival research seems to suggest that most of the affected farms were owned by black communities some of which were already set out for prospecting and mining by the government.

The first reference to the farm Schoonoord 462 can be found in 1885 when the supposed owner, Mr. William Fraser, enquires about compensation since he was unaware of the fact that most of the farm Schoonoord was already occupied by a black community (SS 1139 R6199/85). Following the Schoonoord conference, mentioned above, the farm was expropriated in 1902 (CS 181 15494/02) and finally in 1903 the title deed was transferred from Mr. Fraser to the government (CS 366 8533/03; LD 159 AG54144/02). This area was then handed over to the Native Commission (SNA 49 NA1722/02) and in 1906 Mr. Rathagane was appointed as Native Chief (SNA 310 NA595/06) after which Mr. D.R. Hunt was appointed Native Commissioner at Schoonoord in 1907 (LD 746 AG2610/04). In 1909 the first application for a prospecting permit was sent to the secretary of mines by Mr. T. Liversage to prospect on several farms in the area, one of which was Schoonoord (SNA 450 NA3983/09). It is uncertain whether a prospecting permit was in fact issued.

The only information available for Koppieskraal 475 was that it was first registered to a Mr. G.C. Meyer in 1891 (SS 3043 R12313/91) whereas the only information for the farm Diamand 422 indicates that it was reclaimed for settlement purposes in 1945 (HKN 1/1/146 28N2/11/3(3)).

The first entry found for the farm Middelpunt 420 dates to 1886 when a Mr. Steenkamp sent in a request to the government regarding two of his farms (SS 1169 R629/86). He requested that he keep his farm Maandagshoek in exchange for his other farm Middelpunt which at this time seems to have been set out by the government for possible mineral prospecting purposes. Prospecting on the farm Middelpunt 420 as well as the farms Brakfontein 464 and Klipfontein 465 commenced from 1937 (NTS 6849 46/319) until 1957 (NTS 6902 345/319(5)). Reference is also given to the housing of black communities on the farms Middelpunt and Klipfontein with the construction of boreholes and 'Native' Mission schools from the 1930s onwards (NTS 2823 247/302; NTS 7119 438/323; NTS 7107 241/323; NTS 1963 T20583). In 1964, however, the farm Middelpunt was opened for mining and in 1965 the Atok mines opened its doors also building family quarters on the farm for all its black employees (BAO 10155 D52/1608/68; BAO 2829 C32/3/2697).

The farm Maandagshoek then again appear in the records in 1896 when the superintendent of "*naturellezaken*", Mr. D. W. Hoffmans requested the housing of ten black households on his farm Maandagshoek (SS 0 R2801/96). It also seems, however, that the Maandagshoek farm had some mineral value since Mr. Andries Lombaard found evidence of platinum for the first time in 1924 (Jacobs, 2006). This discovery initiated the explorations of the geologist, Hans Merensky, and it also saw the construction of the first smelter on the farm Klipfontein (Jacobs, 2006). In 1944/45 Maandagshoek farm

was, however, reclaimed for settlement purposes (HKN 1/1/94 26N2/11/3(5) and in 1965 a missionary hospital was built on the farm grounds (THD 4 10/2/99).

The farm Paschaskraal 466 also seems to have been set out for mining purposes from 1964 to 1970, although no other information is available for the earlier history of this farm (BAO 10157 D52/1608/143).

The farms Surbiton 115 and Twickenham 114 both also seem to have been occupied by black communities already since the early 20th century. The first reference given to the farm Surbiton dates to 1927 when ownership of the farm was transferred from the Transvaal Estate and Development Company Ltd. to the Minister of Native Affairs in trust for the Bapedi tribe who already stayed on the farm (URU 947 3545). The farm Twickenham also seems to have belonged to the Native Trust under which boreholes and schools were constructed in the 1940s to 1960s (BAO 1/2034 D48/1608/97/1; NTS 10963 T220563)

There is, unfortunately, no records for the farms Blauwbloemetjeskloof 428 and Umkoanestad 419, however these two farms are very closely situated to the above mentioned farms and therefore may also have been used for mining purposes or settlement for local black communities.

2.3. HIA reports on the directly affected area:

Huffman, T.N. & Schoeman, M.H. 2001. *Scoping Study for the Proposed Water Supply Pipeline to the Planned Twickenham Hackney Pachaskraal Platinum Mine.* An unpublished report by Archaeological Resources Management on file at SAHRA as: 2001-SAHRA-0097.

Küsel, U. 2003. *Cultural Resources Assessment of 14.7 km 132 kV Line for Twickenham Substation Steelpoort District.* An unpublished report by African Heritage Consultants CC on file at SAHRA as: 2003-SAHRA-0111.

Pistorius, J.C.C. 2004. *A Heritage Impact Assessment Study for the Proposed New Optimum Colliery on the Farm Schoonoord 164 IS.* An unpublished report on file at SAHRA as: 2004-SAHRA-0037.

Roodt, F. 2002. *Lebowa Platinum Mines: Atok Lepelle Open Cast Mine Merensky and Ug2 Reefs Limpopo Province.* An unpublished report by R & R Cultural Resource Consultants on file at SAHRA as: 2002-SAHRA-0107.

Roodt, F. 2002. *Lebowa Platinum Mines Ltd - Atok Section (LPM-A) New Tailings Dam Amendment to the Environmental Management Programme Report (EMPR-A).* An unpublished report by R & R Cultural Resource Consultants on file at SAHRA as: 2002-SAHRA-0178.

Schoeman, M.H. & van Doornum, B. 2001. *Archaeological Assessment for the Twickenham Hackney Pachaskraal Platinum Mine, Northern Province.* An unpublished report by Archaeological Resources Management on file at SAHRA as: 2001-SAHRA-0089.

Van Schalkwyk, J.A. 2002. *A Survey of Cultural Resources for the Proposed New Twickenham-Paschaskraal-Hackney Mining Development, Sekhukhune District, Northern Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2002-SAHRA-0024.

Van Schalkwyk, J.A. 2002. *A Survey of Cultural Resource in the Construction Camp Site, Twickenham-Paschaskraal-Hackney Mining Development, Sekhukhune District, Limpopo Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2002-SAHRA-0046.

Van Schalkwyk, J.A. 2002. *A Survey of Cultural Resources for the Senior Construction Camp, Twickham-Paschaskraal-Hackney Mining Development, Sekhukhune District, Limpopo Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2002-SAHRA-0099.

Van Schalkwyk, J.A. 2002. *A Survey of Cultural Resources in the Proposed Host Areas of the Twickenham-Hackney-Paschaskraal-Mining Development Report.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2002-SAHRA-0010.

Van Schalkwyk, J.A. 2003. *Documentation of Historical Sites in the Twickenham-Hackney Mine Development, Sekhukhune District, Limpopo Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2003-SAHRA-0014.

Van Schalkwyk, J.A. 2003. *Documentation of Historical Sites in the Twickenham Platinum Mine Development, Sekhukhune District, Limpopo Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2003-SAHRA-0088.

Van Schalkwyk, J.A. & Moifatswane, S. 2002. *Documentation of a Historical Site on the Farm Surbiton, in the Twickenham-Paschaskraal-Hackney Mining Area, Sekhukhune District, Limpopo Province.* An unpublished report by the National Cultural History Museum on file at SAHRA as: 2002-SAHRA-0170.

2.4. HIA reports on the larger area:

Calabrese, J.A. & Quinney, P.S. 1998. *Archaeological Survey of Steelpoort Pumped Storage Scheme, Upper and Lower Reservoir Areas.* An unpublished report by Archaeological Resources Management on file at SAHRA as: 1998-SAHRA-0066.

Murimbika, M. 2005. *Olifants River Water Resources Development Project (ORWRDP) Environmental Impact Assessment (12/12/20/553) Infrastructure Components: Cultural Heritage Assessment, Specialist Study.* An unpublished report by Nzumbululo Heritage Solutions on file at SAHRA as: 2005-SAHRA-0094.

Roodt, F. 2006. *Mining Development on the Farm Maandagshoek 254 KT, Tubatse Municipal Area, Sekhukhune District.* An unpublished report by R & R Cultural Resource Consultants on file at SAHRA as: 2006-SAHRA-0083.

Van der Ryst, M. & Kruger, N. 2007. *Specialist Archaeological Report: Maandagshoek 254 KT.* An unpublished report by the University of South Africa on file at SAHRA as: 2007-SAHRA-0401.

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3. DESCRIPTION OF THE PROPERTY OR AFFECTED ENVIRONMENT

3.1. ORWRDP Phase 2B

3.1 Details of the area surveyed

3.1.1.1.1 Location Data

The proposed ORWRDP Phase 2B alignment starts on the Farm Pruissen and continues southwards next to the R518 road through a shallow poort to the west of Immelpan and Pruissen Hills. On the Farm Doornfontein the alignment veers south away from the R518 and follows a (undesignated) gravel road across the plain to Roodesloot Hill at the south-east from where it crosses the Rooisloot Stream following the D2858 secondary road. It passes south of Kromdraai Hill towards Immelpan railway siding still adjacent to the D2858 road. From there it follows the D885 road through the Or Quarry mining area and passes to the south of Leo and Springbok mines as indicated on the map. On the Farm Singapore it veers due south of the D885 road following the D2015 road from the junction. From here the alignment passes between the Grasvallei mine on the west and Ga-Mampuru Village on the east and continues through Hinlopen Village along the D2015 road to the junction with the extension of the D3600 road. From this junction it follows the D4356 road to the turn-off at the Flag Bosheilo Dam where it joins at the pump station.

The proposed alignment crosses the following farms:

ROUTE DESCRIPTION	FARM NAME	PORTION	ROUTE DESCRIPTION	FARM NAME	PORTION
2B	Arabie 685 KS	RE	2B	Malgas 154 KS	RE/2
2B	Hindostan 680 KS	RE/1	2B	Malgas 154 KS	1
2B	Tambootieboom 686 KS	2	2B	Brakfontein 152 KS	5
2B	Roodewal 678 KS	1	2B	Brakfontein 152 KS	RE/3
2B	Roodewal 678 KS	RE	2B	Brakfontein 152 KS	9
2B	Gaasterland 677 KS	1	2B	Brakfontein 152 KS	2

2B	Gaasterland 677 KS	RE	2B	Brakfontein 152 KS	RE
2B/BP1	Hinloopen 647 KS	RE	2B	Brakfontein 152 KS	13
2B	Elandskraal 936 KS		2B	Brakfontein 152 KS	12
2B	Mutue Fides 648 KS		2B/BP2	Brakfontein 152 KS	RE/4
2B	Weltevreden 646 KS	1	2B	Brakfontein 152 KS	10
2B	Weltevreden 646 KS	3	2B	Brakfontein 152 KS	11
2B	Weltevreden 646 KS	RE/2	2B	Eenzaam 148 KS	RE
2B	Tygerpad 633 KS	1	2B	Eenzaam 148 KS	1
2B/BP4	Vooruitgang 634 KS	1	2B	Rietlaagte 149 KS	RE
2B	Vooruitgang 634 KS	RE	2B	Rietlaagte 149 KS	RE/2
2B	Restaurant 588 KS	RE/1	2B	Rietlaagte 149 KS	RE/1
2B	Restaurant 588 KS	RE	2B	Kalkvalley 151 KS	1
2B	Restaurant 588 KS	3	2B	Kalkvalley 153 KS	RE
2B	Foleys Rust 583 KS	RE	2B	Kromdraai 129 KS	1
2B/BP5	Klipfontein 587 KS	RE	2B	Kromdraai 129 KS	2
2B	Mokkafontein 584 KS	1	2B	Kromdraai 129 KS	RE
2B	Mokkafontein 584 KS	RE	2B	Roodebult 128 KS	RE
2B	Singapore 585 KS	RE/1	2B	Roodesloot 130 KS	RE
2B/BP3	Singapore 585 KS	RE	2B	Roodesloot 130 KS	2
2B	Singapore 585 KS	2	2B	Groothoek 99 KS	3
2B	Singapore 585 KS	3	2B	Doornfontein 98 KS	3
2B	Doornboom 586 KS	RE	2B	Doornfontein 98 KS	9
2B	Calais 563 KS	RE	2B	Doornfontein 98 KS	8
2B	Calais 563 KS	1	2B	Doornfontein 98 KS	1
2B	Hoogte 155 KS	4	2B	Pruissen 48 KS	RE
2B	Malgas 154 KS	RE	2B	Pruissen 48 KS	2
BP9	Mooihoek 225	1	BP10	Surbiton 115	RE
BP6	Doornbosh 294	5	BP7 & BP8	Derde Gelid 278	RE
BP11	Twyfelaar 119	RE			

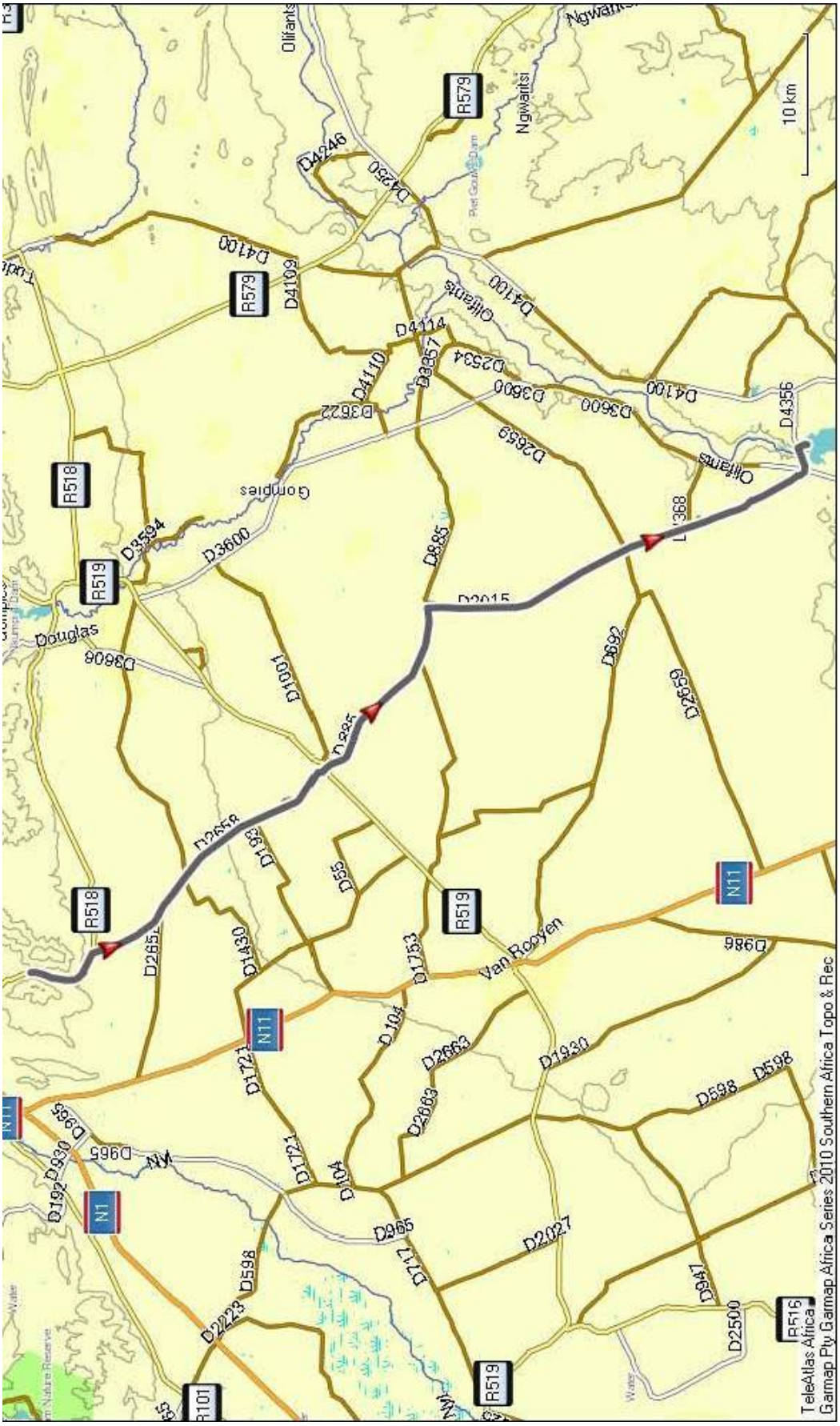
3.1.1.2 Location Map

Figure 1 shows the proposed ORWRDP Phase 2B alignment.

3.1.1.3 Area surveyed

The area surveyed corresponds with the indicated alignment and encompasses a linear area 40m wide which is also indicated as the construction footprint of the proposed pipe line development.

Figure 1. ORWRDP Phase 2B alignment.



3.2. ORWRDP Phase 2C

3.2.1 Details of the area surveyed

3.2.1.1 Location Data

The proposed Phase 2C alignment of the ORWRDP II starts at the De Hoop Dam (currently under construction) and from there follows the R555 road in a generally northerly direction. At the southern boundary of the Farm Aapjesboom at the R555, the alignment leaves the road and follows the Steelpoort River, somewhat to the west of the R555, to the portion boundary of Portions 366/1 and 366/2 at the R555 road, south east of Ga-Malekana Village. From here it again follows the R555. It passes between Mooimeisiesfontein Hill and Tweekop Hill as well as between Kennedy's Vale Hill and Ga-Mampuru Village. Still along the R555 road, it passes between Mokome Hill and Lavino Chrome Mine. Approximately 1,5km (along the R555 road) from Steelpoort Town it veers north west along an undesignated gravel road and bypasses the town to the north west thereof where it joins the Phase 2D alignment at a gravel road north of Steelpoort at the boundary between the Farm Vredelus and Portion 337/10 of the Farm Goudmyn.

The proposed alignment passes over the following farms:

ROUTE DESCRIPTION	FARM NAME	PORTION	ROUTE DESCRIPTION	FARM NAME	PORTION
2C	De Hoop 886 KS	RE	2C	Kennedy's Vale 361 KT	19
2C	De Hoop 886 KS	1	2C	Kennedy's Vale 361 KT	22
2C	Aapjesboom 884 KS	RE	2C	Kennedy's Vale 361 KT	29
2C	Aapjesboom 884 KS	1	2C	Kennedy's Vale 361 KT	27
2C	Steelpoort Park 366 KT	2	2C	Kennedy's Vale 361 KT	8
2C	Steelpoort Park 366 KT	11	2C	Spitskop 333 KT	30
2C	Steelpoort Park 366 KT	1	2C	Spitskop 333 KT	11
2C	Belvedere 362 KT	33	2C	Spitskop 333 KT	3
2C	Belvedere 362 KT	34	2C	Spitskop 333 KT	2
2C	Belvedere 362 KT	21	2C	Spitskop 333 KT	1
2C	Belvedere 362 KT	17	2C	Annex Grootboom 335 KT	1
2C	Belvedere 362 KT	16	2C	Annex Grootboom 335 KT	RE

2C	Belvedere 362 KT	15	2C	Grootboom 336 KT	3
2C	Belvedere 362 KT	3	2C	Grootboom 336 KT	RE
2C	Belvedere 362 KT	14	2C	Grootboom 336 KT	2
2C	Belvedere 362 KT	2	2C	Grootboom 336 KT	1
2C	Belvedere 362 KT	25	2C	Grootboom 336 KT	4
2C	Belvedere 362 KT	22	2C	Goudmyn 337 KT	RE
2C	Belvedere 362 KT	6	2C	Goudmyn 337 KT	25
2C	Kennedy's Vale 361 KT	25	2C	Goudmyn 337 KT	10
2C	Kennedy's Vale 361 KT	28	2C	Goudmyn 337 KT	22
2C	Kennedy's Vale 361 KT	9	2C	Goudmyn 337 KT	28

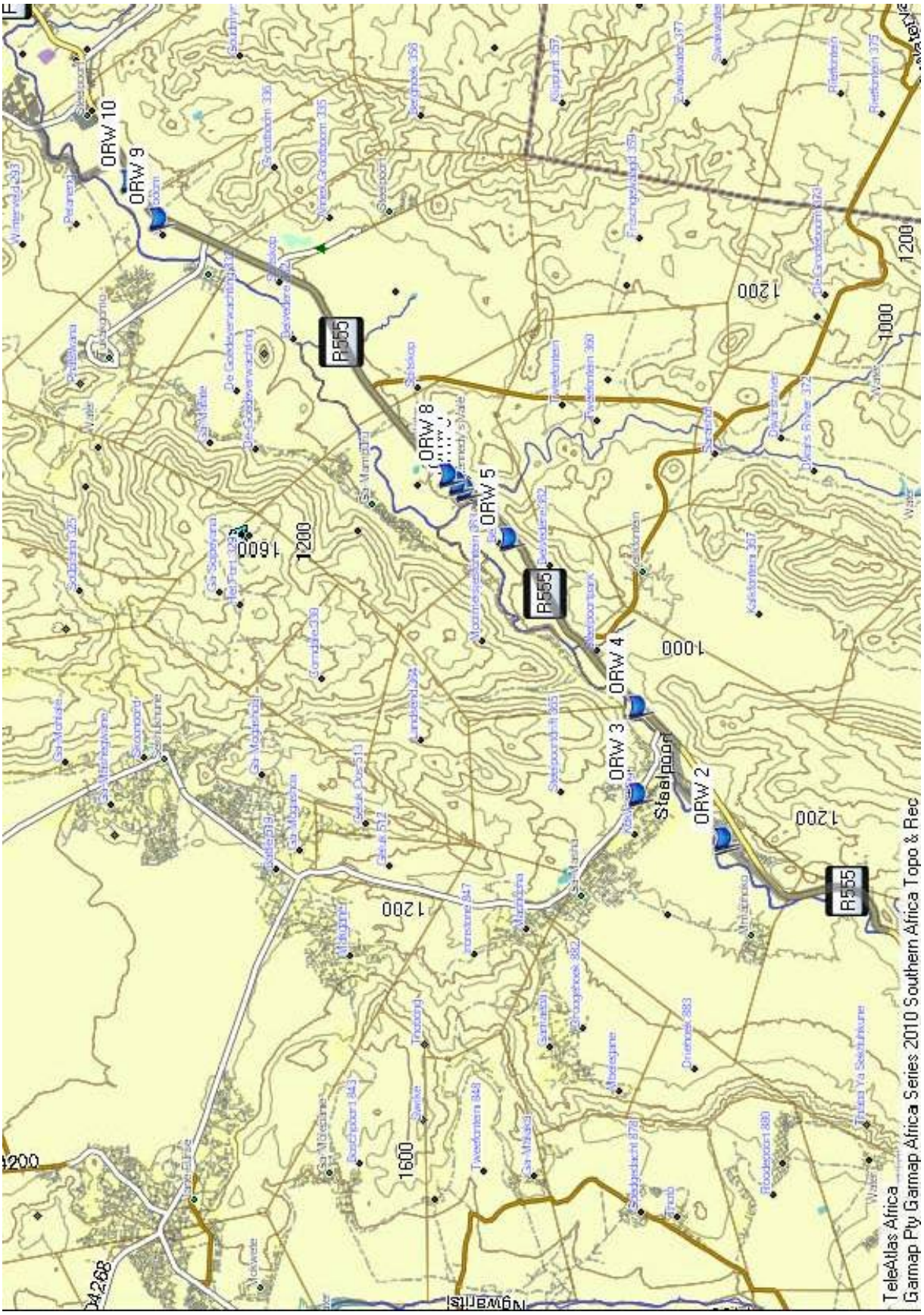
3.2.1.2 Location Map

Figure 2 shows the proposed ORWRDP Phase 2C alignment.

3.2.1.3 Area surveyed

The area surveyed corresponds with the indicated alignment and encompasses a linear area 40m wide which is also indicated as the construction footprint of the proposed pipe line development.

Figure 2. ORWRDP Phase 2C alignment.



3.3. ORWRDP Phase 2D

3.3.1 Details of the area surveyed

3.3.1.1 Location Data

From where it starts at the join with the Phase 2C alignment just north of Steelpoort Town, the ORWRDP Phase 2D proposed alignment proceeds northwards along an undesignated gravel road running at the foot of Doornbosh and Lekgobo Hills on the escarpment. It passes between Winterveld Mine and Doornbosh Village along this road and then veers north west at the northern boundary of the Farm Doornbosh to cross the Seduku and Moopetsi Streams on the Farm Hendriksplaats before passing to the west of the part of Driekop Village situated west of the R37 road. It passes through Mooihoek Poort parallel, but to the west of, the R37 road and crosses the D4169 road at Dilokong Chrome Mine before turning abruptly east to cross the R37 road and end just south of Motlolo Village.

The proposed alignment passes over the following farms:

ROUTE DESCRIPTION	FARM NAME	PORTION	ROUTE DESCRIPTION	FARM NAME	PORTION
2D	Winterveld 293 KT		2D	Hendriksplaats 281 KT	RE
2D	Doornbosch 294 KT	2	2D	Derde Gelid 278 KT	RE
2D	Doornbosch 294 KT	4	2D	Derde Gelid 278 KT	2
2D	Doornbosch 294 KT	RE	2D	Derde Gelid 278 KT	1
2D	Doornbosch 294 KT	5	2D	Mooihoek 255 KT	2
2D	Doornbosch 294 KT	1	2D	Mooihoek 255 KT	RE
2D	Doornbosch 294 KT	6	2D	Mooihoek 255 KT	RE/1
2D	Apiesboomen 295 KT	RE			

3.3.1.2 Location Map

Figure 3 shows the proposed ORWRDP Phase 2D alignment.

3.3.1.3 Area surveyed

The area surveyed corresponds with the indicated alignment and encompasses a linear area 40m wide which is also indicated as the construction footprint of the proposed pipe line development.

Figure 3. ORWRDP Phase 2D alignment.

3.4. ORWRDP Phase 2E

3.4.1 Details of the area surveyed

3.4.1.1 Location Data

The proposed alignment of the ORWRDP Phase 2E repeats the alignment of ORWRDP Phase 2D from just south of Motlolo Village and from there it follows the R37 road north westwards, after the road had been crossed. Approximately 850m south east of the boundary between the Farms Groothoek and Twyfelaar at the R37 road the proposed alignment veers west-north-westwards from the R37 to pass to the south of the prominent hill on the Farm Twyfelaar. At the boundary of the Farm Clapham, the alignment turns due north following the farm boundary, to pass around the base of Matadi Hill on the north and east thereof. From the hill it follows an undesignated gravel road to intersect with the R37 road, after crossing the Tlopeng Stream, where it ends.

The proposed alignment passes over the following farms:

ROUTE DESCRIPTION	FARM NAME	PORTION	ROUTE DESCRIPTION	FARM NAME	PORTION
2E	Groothoek 256 KT	RE	2E	Clapham 118 KT	RE
2E	Twyfelaar 119 KT	RE	2E	Forest Hill 117 KT	RE

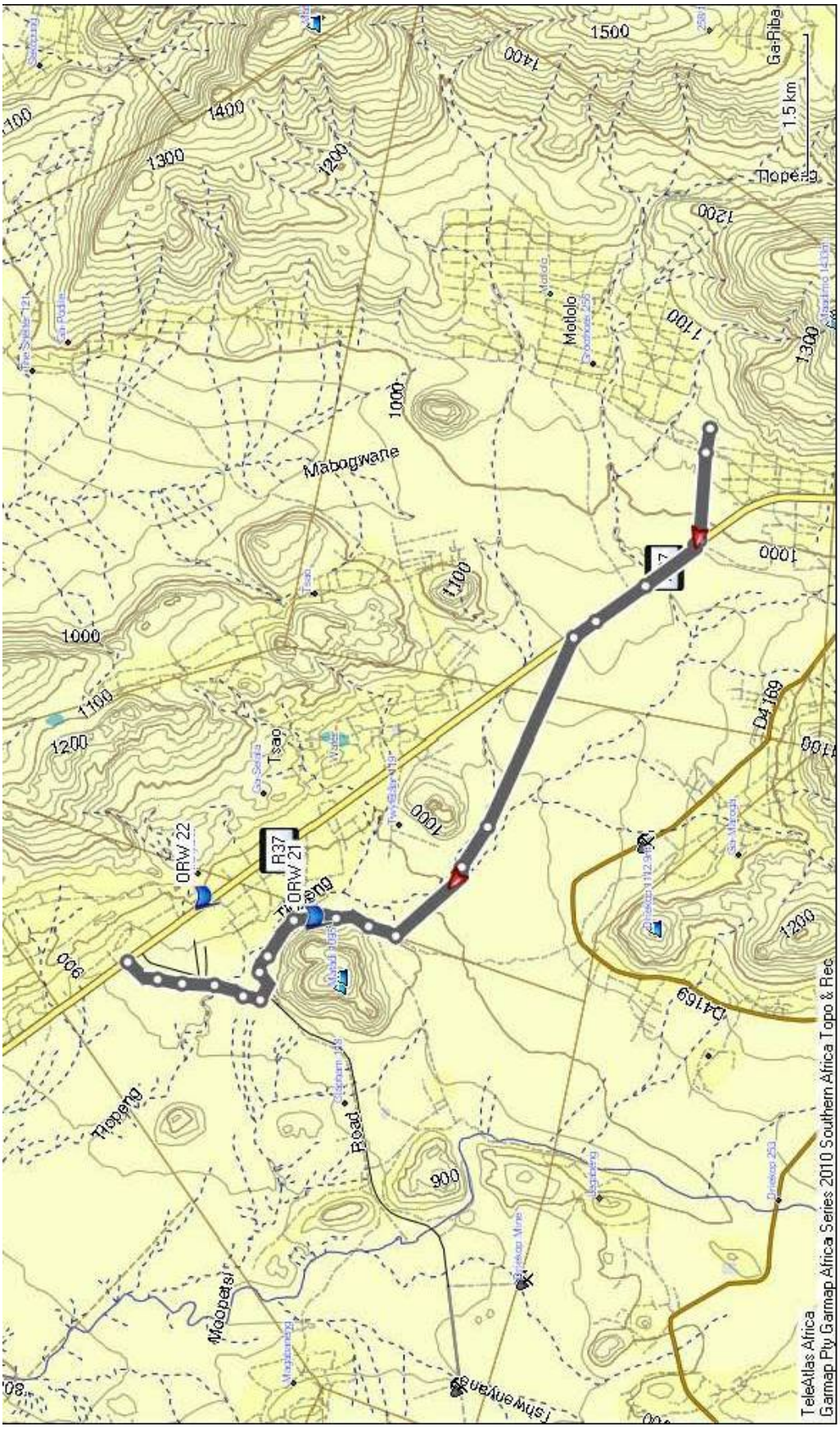
3.4.1.2 Location Map

Figure 4 shows the proposed ORWRDP Phase 2E alignment.

3.4.1.3 Area surveyed

The area surveyed corresponds with the indicated alignment and encompasses a linear area 40m wide which is also indicated as the construction footprint of the proposed pipe line development.

Figure 4. ORWRDP Phase 2E alignment.



3.5. ORWRDP Phase 2F

3.5.1 Details of the area surveyed

3.5.1.1 Location Data

The proposed ORWRDP Phase 2F alignment starts on the R37 road directly west of the Makopi High School in Ga-Kgwete Village and follows the road in a north westerly direction. South west of Forest Hill it follows an undesignated gravel road in a westerly direction from the junction with the R37 to cross the Moopetsi River at the junction with the extension of the D4220 road and from there across the Motse River to the west and past the northern foot of Morapeng Hill still following the gravel road. On the Farm Twickenham it turns north west at a road junction with another undesignated gravel road. From here it follows this road past Gangadza Senior Primary School after which it veers away from the road to proceed parallel, but to the east thereof. This parallel alignment turns west north west on the Farm Klipfontein and proceeds to again join up at the boundary of the Farm Umkoanestad. From here the alignment follows the road for a short distance before veering due west at the northern boundary of the Farm Middelpunt from where it approximately follows this boundary to the Zeekoegat road where it turns south to cross the Olifants River and end on Portion 475/1 of the Farm Koppieskraal.

The proposed alignment passes over the following farms:

ROUTE DESCRIPTION	FARM NAME	PORTION	ROUTE DESCRIPTION	FARM NAME	PORTION
2F	Surbiton 115 KT	RE	2F	Middelpunt 420 KS	RE
2F	Twickenham 114 KT	RE	2F	Diamand 422 KS	RE
2F	Paschaskraal 466 KS	1	2F	Schoonoord 462 KS	RE
2F	Klipfontein 465 KS	RE	2F	Blauwbloemetjieskloof 428 KS	RE
2F	Brakfontein 464 KS	RE	2F	Dal Josaphat 461 KS	RE
2F	Umkoanesstad 419 KS	RE	2F	Locatie van M'Phatlele 457 KS / Koppieskraal 475 KS	RE

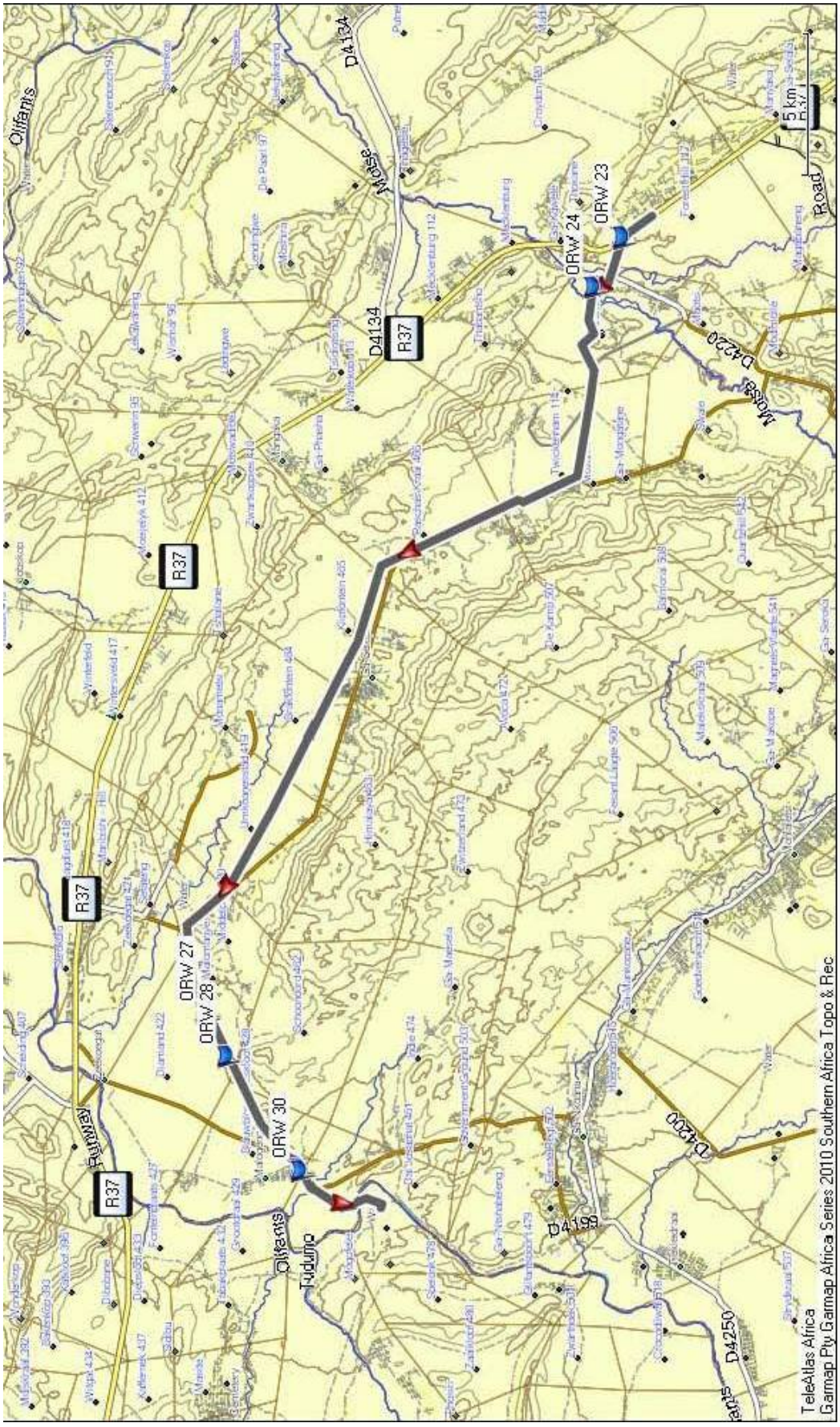
3.5.1.2 Location Map

Figure 5 shows the proposed ORWRDP Phase 2F alignment.

3.5.1.3 Area surveyed

The area surveyed corresponds with the indicated alignment and encompasses a linear area 40m wide which is also indicated as the construction footprint of the proposed pipe line development.

Figure 5. ORWRDP Phase 2F alignment.



3.6. ORWRDP Phase 2B-F associated borrow pits

3.6.1. ORWRDP II Proposed Borrow Pit 1

4.6.1.1 Details of the area surveyed

The proposed ORWRDP II Borrow Pit 1 is associated with the proposed Phase 2B alignment and is located just north west of Hindlopen Village on the D2015 road close to the northern border of the Farm Elandskraal.

4.6.1.2 Location Data

Farm Elandskraal 936.

4.6.1.3 Location Map

Refer Figure 6 for locality map of Borrow Pit 1.

4.6.1.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 7 for a transect log plot indicating the survey.

Figure 6. Locality map of Borrow Pit 1.

Figure 7. Transcript log plot indicating the survey.

3.6.2. ORWRDP II Proposed Borrow Pit 2

4.6.2.1 Details of the area surveyed

The proposed Borrow Pit 2 forms part of the Phase 2B alignment on the ORWRDP and is located north west of Immelpan siding on the D2658 road on Portion 152/4 of the Farm Brakfontein.

4.6.2.2 Location Data

Farm Brakfontein 152.

4.6.2.3 Location Map

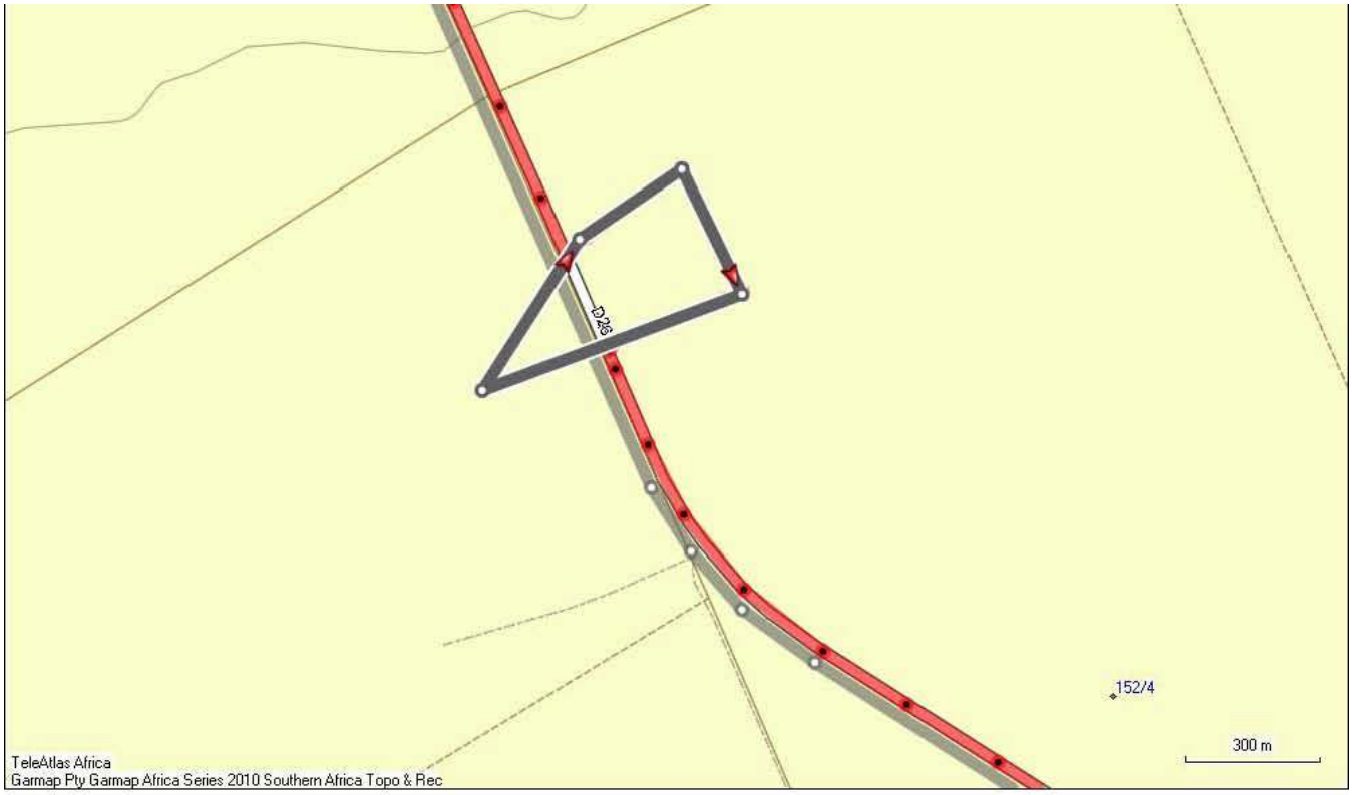
Refer Figure 8 for locality map of Borrow Pit 2.

4.6.2.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 9 for a transect log plot indicating the survey.

Figure 8. Locality map of Borrow Pit 2.

Figure 9. Transcript log plot indicating the survey.



3.6.3. ORWRDP II Proposed Borrow Pit 3

4.6.3.1 Details of the area surveyed

The proposed Borrow Pit 3 form part of the ORWRDP Phase 2B alignment and is located in the south east corner of the junction between the D885 and D2015 roads.

4.6.3.2 Location Data

Farm Singapore 585.

4.6.3.3 Location Map

Refer Figure 10 for locality map of Borrow Pit 3.

4.6.3.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 11 for a transect log plot indicating the survey.

Figure 10. Locality map of Borrow Pit 3.

Figure 11. Transcript log plot indicating the survey.

3.6.4. ORWRDP II Proposed Borrow Pit 4

4.6.4.1 Details of the area surveyed

The proposed ORWRDP Borrow Pit 4 is not directly adjacent to any of the Phase alignments and is located on the D2659 road on the Farm Vooruitgaan 634 approximately 2.8 km north east of the junction between the D2659 and D2-15 roads.

4.6.4.2 Location Data

Farm Vooruitgaan 634.

4.6.4.3 Location Map

Refer Figure 12 for locality map of Borrow Pit 4.

4.6.4.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 13 for a transect log plot indicating the survey.

Figure 12. Locality map of Borrow Pit 4.

Figure 13. Transcript log plot indicating the survey.

3.6.5. ORWRDP II Proposed Borrow Pit 5

4.6.5.1 Details of the area surveyed

The proposed Borrow Pit 5 is associated directly with the ORWRDP Phase 2B alignment and is located on the D2015 road just north of the farm boundary between the farms Klipfontein 587 and Restourant 588.

4.6.5.2 Location Data

Farm Klipfontein 587.

4.6.5.3 Location Map

Refer Figure 14 for locality map of Borrow Pit 5.

4.6.5.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 15 for a transect log plot indicating the survey.

Figure 14. Locality map of Borrow Pit 5.

Figure 15. Transect log plot indicating the survey.

3.6.6. ORWRDP II Proposed Borrow Pit 6

4.6.6.1 Details of the area surveyed

Proposed Borrow Pit 6 is part of the ORWRDP Phase 2D alignment and is located on an undesignated road where it crosses Portion 294/5 of the Farm Doornbosh north-north east of Lekgobo Hill.

4.6.6.2 Location Data

Farm Doornbosh 294.

4.6.6.3 Location Map

Refer Figure 16 for locality map of Borrow Pit 6.

4.6.6.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 17 for a transect log plot indicating the survey.

Figure 16. Locality map of Borrow Pit 6.

Figure 17. Transcript log plot indicating the survey.

3.6.7. ORWRDP II Proposed Borrow Pit 7

4.6.7.1 Details of the area surveyed

The proposed ORWRDP Borrow Pit 7 is not directly adjacent to any of the proposed Phase alignments and is located in the south western corner of the Farm Derde Gelid 278 at the south western foot Derde Gelid Hill on the southern bank of the Mokgowane River.

4.6.7.2 Location Data

Farm Derde Gelid 278.

4.6.7.3 Location Map

Refer Figure 18 for locality map of Borrow Pit 7.

4.6.7.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 19 for a transect log plot indicating the survey.

Figure 18. Locality map of Borrow Pit 7.

Figure 19. Transect log plot indicating the survey.

3.6.8. ORWRDP II Proposed Borrow Pit 8

4.6.8.1 Details of the area surveyed

The proposed Borrow Pit 8 is not directly adjacent to any of the proposed ORWRDP Phase alignments and is located a short distance east south east of Borrow Pit 7 next to the R37 road.

4.6.8.2 Location Data

Farm Derde Gelid 278.

4.6.8.3 Location Map

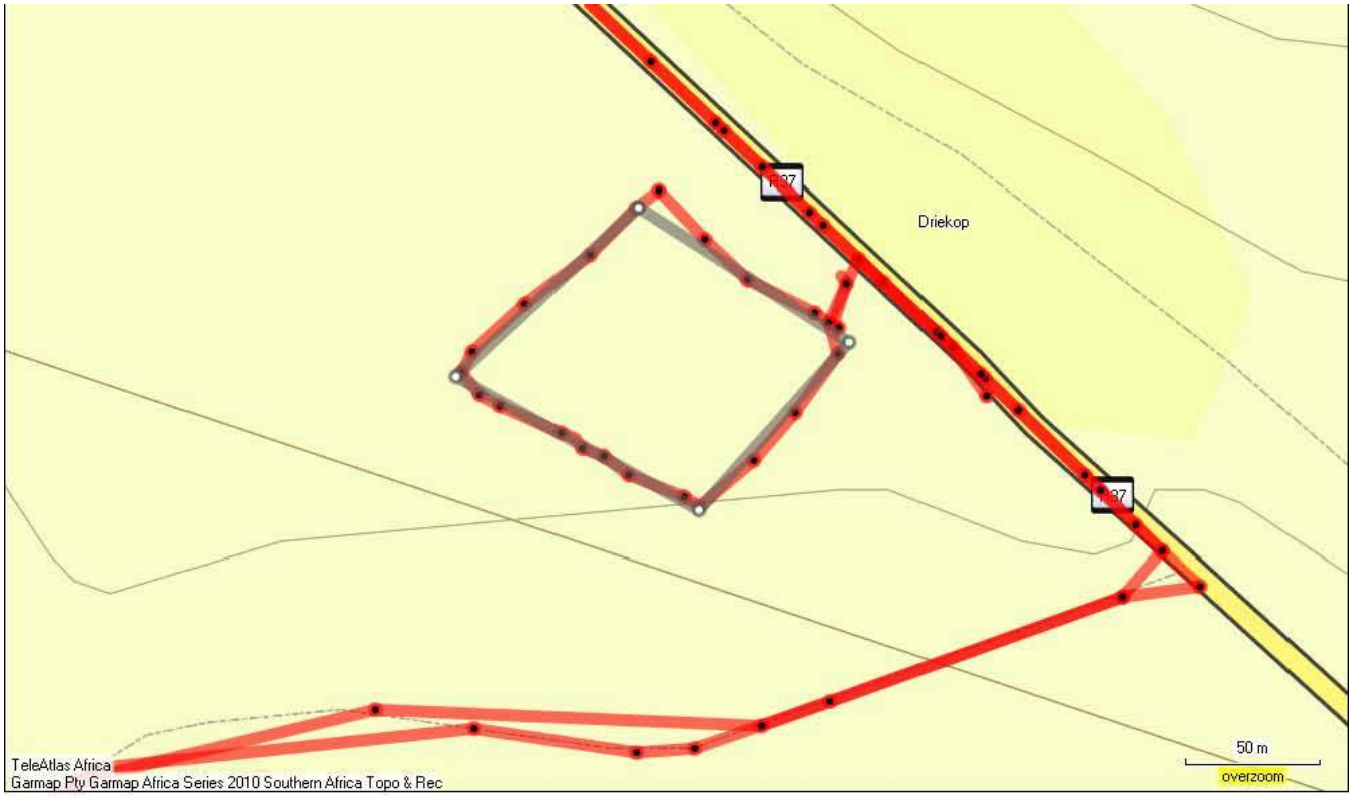
Refer Figure 20 for locality map of Borrow Pit 8.

4.6.8.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 21 for a transect log plot indicating the survey.

Figure 20. Locality map of Borrow Pit 8.

Figure 21. Transect log plot indicating the survey.



3.6.9. ORWRDP II Proposed Borrow Pit 9

4.6.9.1 Details of the area surveyed

The proposed Borrow Pit 9 is associated with the ORWRDP Phase 2D alignment and is located just west of the R37 where the portion boundary between the Farm Mooihoek 225 and Portion 225/1 crosses the road in the Mooihoek Poort.

4.6.9.2 Location Data

Farm Mooihoek 225/1.

4.6.9.3 Location Map

Refer Figure 22 for locality map of Borrow Pit 9.

4.6.9.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 23 for a transect log plot indicating the survey.

Figure 22. Locality map of Borrow Pit 9.

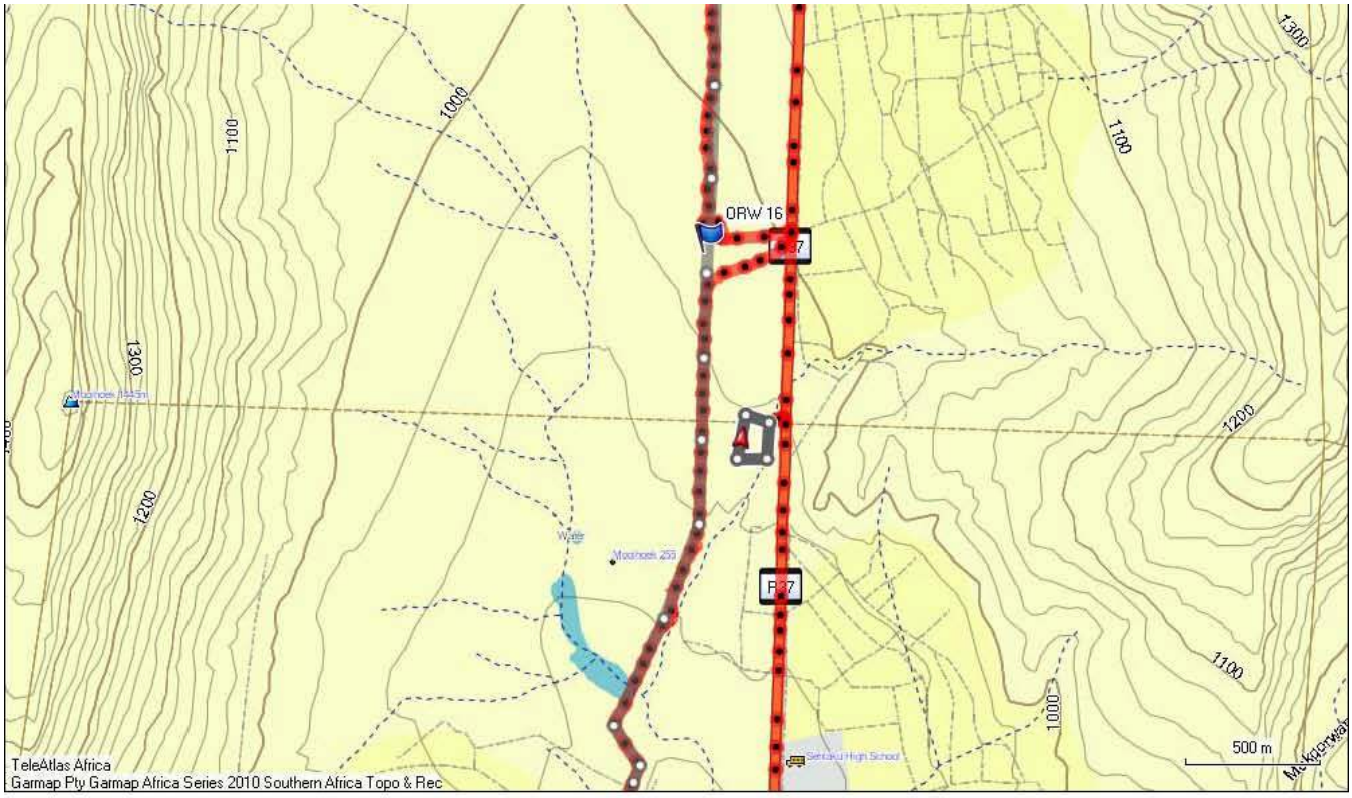


Figure 23. Transect log plot indicating the survey.

3.6.10. ORWRDP II Proposed Borrow Pit 10

4.6.10.1 Details of the area surveyed

The proposed Borrow Pit 10 is associated with the ORWRDP Phase 2F alignment and is located at the Moopetsi River just before the confluence with the Motse River.

4.6.10.2 Location Data

Farm Surbiton 115.

4.6.10.3 Location Map

Refer Figure 24 for locality map of Borrow Pit 10.

4.6.10.4 Area surveyed

The area surveyed corresponds directly with the indicated proposed borrow pit area. Refer Figure 25 for a transect log plot indicating the survey.

Figure 24. Locality map of Borrow Pit 10.

Figure 25. Transect log plot indicating the survey.