

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RHEBOKSFONTEIN WIND ENERGY FACILITY, MALMESBURY MAGISTERIAL DISTRICT, WESTERN CAPE

(Assessment conducted under Section 38 (8) of the
National Heritage Resources Act (No. 25 of 1999) as part of an EIA)

Prepared for

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EXECUTIVE SUMMARY

ACO Associates was appointed by Savannah Environmental to undertake a Heritage Impact Assessment for the proposed Rheboksfontein Wind Energy Facility (WEF) on several farm portions in the Malmesbury Magisterial District (Table 1 & Figure 1). The proposed WEF will include up to 80 turbines along with access roads, underground cables, substations, maintenance facilities and overhead power lines to link into the national electricity grid. The total area under consideration is approximately 38.78 km². No alternative development options have been identified.

The study area comprises rolling hills used predominantly for agriculture or grazing. Patches of indigenous Renosterveld still occur on some of the steeper slopes and in rocky areas unsuited to agriculture.

This study included background research of existing literature, examination of historical aerial photography and a foot survey of selected areas to be impacted. It was not possible to search every turbine location due to the presence of wheat growing in the fields. Ground visibility was thus very low in places but better in grassed fields. Heritage finds were recorded photographically and GPS co-ordinates were taken as appropriate.

The background review revealed a rich agricultural history dating back to the very early days of the Cape Colony. The cultural landscape includes many tree lines which characterise the area. The area saw military action during the Anglo-Boer War in 1901 and during WWII an air force base operated from Darling. The modern heritage relates largely to the wild flowers that proliferate during the Spring months. The archaeology of the area is poorly known with virtually nothing recorded inland of the coast where Middle and Later Stone Age archaeological sites are well known. It is thought, however, that the Darling Hills would have been used for grazing by the local Khoekhoen.

No palaeontological material was located and none is expected to occur. Scattered archaeological stone artefacts of varying age were noted but only one site was discovered. It lies at turbine location 52 and consists of a scatter of stone artefacts accompanied by a few historical items which may or may not be associated. No other sites are known in the area and in heritage terms this one thus is of fairly high significance.

Three farm complexes are located within the study area. One (Rheboksfontein) has a house that may date back to the late 18th century, while all other buildings in the study area are mid-19th to 20th century. No direct impacts to the built environment will occur but indirect impacts through visual intrusion into their landscape setting will occur. Only Rheboksfontein is significant in this regard due to its age and specific placement in the natural landscape. It is noted that one building that is not old enough to receive NHRA protection will be reused for the WEF; this will not impact on heritage.

One grave, dated 1983, was found. It is not old enough to be covered by the NHRA.

The most significant impacts will be to the cultural landscape and sense of place of the area. These impacts are broad and not limited to the WEF footprint. Tree lines characterise the landscape and three are threatened by the proposed WEF. It is noted that they are, in a sense, dynamic resources with some lines having been removed over the years and others planted. However, there is continuity in their presence. The cultural landscape is one of agriculture and livestock grazing, of which the latter component likely stretches back into pre-colonial times. The wind turbines will introduce a significant visual intrusion to this environment that may require some mitigation.

While the proposed WEF is certainly going to impose significant impacts to the landscape, the need for renewable energy sources is recognised and it is suggested here that construction of the WEF may be able to proceed, but with certain conditions.

Subject to the approval of Heritage Western Cape, it is recommended that the proposed project be allowed to proceed but subject to the following conditions:

- Archaeological test excavations and subsequent mitigation must be carried out for site Rhebokfontein 1 alongside Turbine 52, unless this turbine can be shifted or omitted entirely;
- The VIA should determine the extent and significance of visual impacts to both the scenic qualities of the landscape and to specific places of concern, including the view westwards from the Rhebokfontein farm house and the hill over which the power line passes east of Grootberg. Aside from Turbine 52, the omission of other turbines that will result in significant visual impacts should be recommended as appropriate;
- Tree lines should be protected as far as possible, with particular importance being attached to the three highlighted above;
- During construction it should be ensured that no secondary impacts to heritage resources will occur as a result of large trucks and cranes accessing the project area; and
- A plan should be in place to decommission or re-use the WEF at the end of its lifetime. Under no circumstances can the turbines be allowed to fall into disrepair and become abandoned on site.

27 August 2010

Declaration of independence:

I, Jayson Orton, am an independent specialist consultant who is in no way connected with the proponent, other than in terms of the delivery of consulting services.

I hold a Masters degree and have been consulting since 2004 in the Northern, Eastern and Western Cape Provinces. I am an accredited Principal Investigator with the Association of Southern African Professional Archaeologists (ASAPA).



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1. INTRODUCTION

ACO Associates was appointed by Savannah Environmental to undertake a Heritage Impact Assessment for the proposed Rheboksfontein Wind Energy Facility (WEF) on several farm portions in the Malmesbury Magisterial District (Table 1 & Figure 1). The proposed WEF will include up to 80 turbines along with access roads, underground cables, substations, maintenance facilities and an overhead power line to link into the national electricity grid. The total area under consideration is approximately 38.78 km². No alternative development options have been identified.

Table 1: Properties associated with the proposed WEF.

Farm names and portions included in WEF area	Area of property
Remainder of Rheboksfontein 568	1448.31 ha
Groot Berg 1199	845.12 ha
Portion 2 of Slangkop 552	88.25 ha
Remainder of Portion 1 of Platklip 551	816.97 ha
Remainder of Bonteberg 571	177.16 ha
Remainder of Nieuwe Plaats 567	445.08 ha
Portion 1 of Doornfontein 574	56.66 ha

An earlier scoping assessment was conducted by Webley and Hart (2010). They recommended a field survey during the EIA phase to locate any archaeological resources that may be present as well as to document the three farm complexes present within the study area. The current report aims to fulfil these recommendations and assess the significance of impacts to these and all heritage resources located.

Note that the routings of roads and power line were not finalised at the time of the field assessment and only a comment on the proposed route is made in this report based on aerial photography and knowledge gained during the survey. The co-ordinates of all turbine and substations positions were provided and used to guide the fieldwork component.

2. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources including palaeontological, prehistoric and historical material (including ruins) more than 100 years old (Section 35), human remains older than 60 years and situated outside a formal cemetery administered by a local authority (Section 36) and non-ruined structures older than 60 years (Section 34). Landscapes with cultural significance are also protected under the definition of the National Estate (Section 3 (3.2d)).

Since the project is being conducted as part of an Environmental Impact Assessment, Heritage Western Cape (HWC) is required to provide comment on the proposed development in order to facilitate final decision making by the Department of Environmental Affairs.

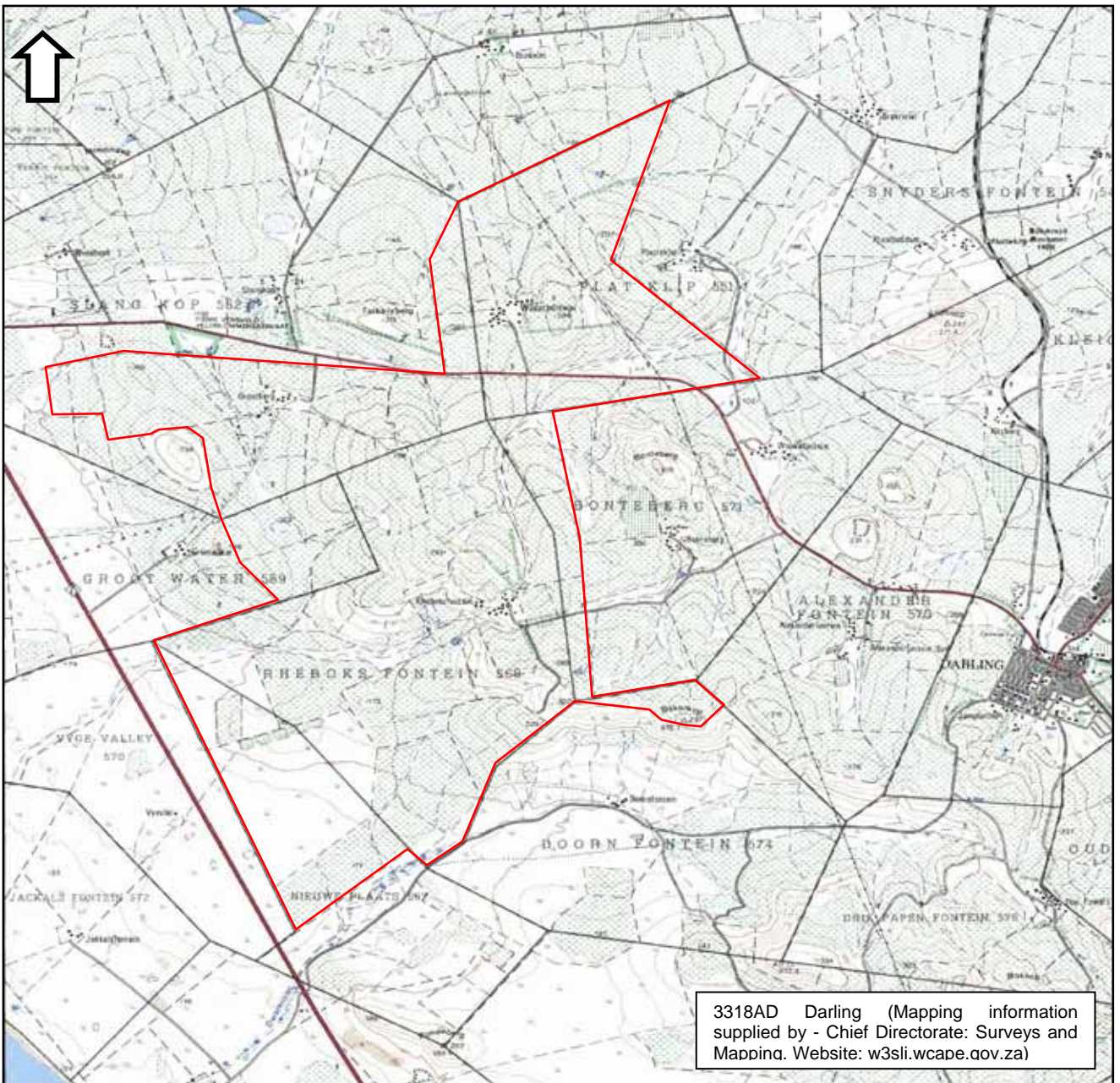


Figure 1: Map showing the location of the study area. The town of Darling lies to the east while the R27 road cuts through the south-western corner of the map.

3. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The site is very large and covers parts of several farms in the Darling Hills to the west of the small town of Darling. The area is underlain by granite which forms many undulating hills – the only significant topography for many kilometres in any direction. Above the granite basement one finds Malmesbury shales, while the surrounding flat lands towards the coast are overlain by recent wind-blown sediments. The site lies between 4 km and 13 km from the coast.

The majority of the land is currently farmed, being used either for agriculture or grazing. Significant patches of indigenous Renosterveld are still present though, most often in areas where ploughing is not feasible. Trees are rare in the landscape and are primarily associated with rocky areas or farm complexes. In the former instance they are indigenous while in the latter all are

exotic and related to the agricultural landscape. Lines of gum trees are particularly evident in the region, although many have been cut down in recent years, particularly alongside fields where vineyards have been introduced. A few small stream channels cross the area and occasional small, natural pans are also to be found. Figures 2 to 12 show a selection of views that characterise the receiving environment.



Figure 2: View towards the northwest across the north-western portion of the study area. The existing turbines at the Darling National Demonstration Wind Farm can be seen on the right, while Langebaan Lagoon and the Churchhaven Peninsula are just visible behind them.



Figure 3: View westwards from the western part of the site showing the proximity to the ocean.



Figure 4: View south from the very centre of the study area with a patch of Renosterveld in the middle ground.

4. METHODS

Background research was conducted in order to establish precisely what heritage was already on record in the vicinity. This included a deeds office search of local farms and extensive reading and research in books and on the internet. We also sourced historical aerial photography.



Figure 5: An example of the intensely transformed landscape in the study area.



Figure 6: View east of Rheboksfontein farm complex with Renosterveld in middle ground.



Figure 7: View towards the north through the centre of the study area showing the general transformation of the landscape and its typical gently rolling topography.



Figure 8: View east in the centre of the study area showing agricultural land with a Renosterveld-clad hilltop in the background.



Figure 9: One of the many granite outcrops in the study area, this one near the western edge of the site.

An initial general ground survey was conducted on the 8th of July 2010 with four archaeologists. This enabled us to become familiar with the landscape and record any heritage that we located on site, regardless of whether it would be impacted or not. When final turbine positions became available these were loaded onto a hand-held GPS receiver and one archaeologist returned to the site on the 28th of July and the 12th of August to establish whether any direct impacts would be experienced at the relevant locations.



Figure 10: View towards the north east from a large granite outcrop in the south-western part of the study area. Planted and grassed fields are visible in the background.



Figure 11: A rare example of an indigenous tree in the study area.



Figure 12: A natural pan in the central part of the study area.



Figure 13: A river floodplain in the western part of the study area.



Figure 14: A natural drainage line runs between the hills.

Not all turbine locations were visited. Due to visibility issues there was little point in visiting those that were located in the middle of planted fields. Instead, the approach taken was one in which targeted searches of particular locations were made with a view towards maximising our understanding of the archaeological landscape and enhancing our chances of correctly assessing the impacts to archaeological resources. The knowledge so gained also aided in the desktop assessment of the power line routes.

Heritage resources are graded following the system established by Winter and Baumann (2005) in the guidelines for involving heritage practitioners in EIAs (Table 2). Their positions were recorded via a hand-held GPS receiver on the WGS84 datum and they were photographed.

Table 2: Grading of heritage resources (Source: Winter & Baumann 2005: Box 5).

Grade	Level of significance	Description
1	National	Of high intrinsic, associational and contextual heritage value within a national context, i.e. formally declared or potential Grade 1 heritage resources.
2	Provincial	Of high intrinsic, associational and contextual heritage value within a provincial context, i.e. formally declared or potential Grade 2 heritage resources.
3A	Local	Of high intrinsic, associational and contextual heritage value within a local context, i.e. formally declared or potential Grade 3A heritage resources.
3B	Local	Of moderate to high intrinsic, associational and contextual value within a local context, i.e. potential Grade 3B heritage resources.
3C	Local	Of medium to low intrinsic, associational or contextual heritage value within a national, provincial and local context, i.e. potential Grade 3C heritage resources.

4.1. Limitations

The archaeological aspect of the survey was hampered considerably by the variable state of the agricultural fields at the time of our visits. Most had been recently planted and were carpeted in young wheat plants that prevented ground visibility (Figures 7, 8 & 10). In such areas it was often not possible to visit the actual turbine location and, where possible, areas of ground near these turbines were looked at. Other areas, however, were grassed grazing lands and there ground visibility was better, but still far from ideal (Figures 5 & 10). Given our expectations with regards to archaeology, it seems unlikely that this lack of visibility will have serious negative implications on the overall conclusions of the impact assessment. Similarly, the failure to examine every turbine location is deemed insignificant.

5. HERITAGE CONTEXT

The site lies within a strongly transformed environment with a well established agricultural landscape (Figure 15). Agriculture is focused very heavily on wheat and dairy farming, but in recent years wheat fields have been replaced by vineyards in some areas. East of the Darling Hills the heavily farmed Swartland region extends towards the Cape Fold Belt Mountains. Since the late 1600s the area was well used as grazing land by the Dutch East India Company (VOC) and referred to as Groenekloof. It was on the original route from Cape Town to Namaqualand (Figure 16).

In 1700 the VOC gave land in Groenekloof to Henning Hiasing and in return he had to supply the company with meat for four years. In 1711 the area was investigated for further letting and soon afterwards many burghers were grazing their stock and planting wheat for their labourers in the area (Burden 2009). By the start of the 18th century some 29 farms were already occupied in the area (Darling Tourism, n.d.). Farmsteads dot the landscape among the hills. Many are likely late 19th century, but far older buildings are certainly present. The nearby town of Darling was only established in 1853 on a part of the farm Langfontein (Fransen, 2006). A more extensive

background to the region has already been compiled by Webley & Hart (2010) during the scoping stage of this project.

Two little-known aspects of Darling's history are that the town saw action during the Anglo-Boer War in 1901 (Ihlenfeldt, 2009) and an air force base operated from the local airfield during World War II (McLean, 2009). Hildebrand, a Boer commander, was killed during conflict with the British on 12th November 1901. His body was initially hidden in a nearby porcupine burrow, then the following day it was wrapped in blankets and buried on the spot. A few months later he was disinterred and given a proper burial in a coffin. A white marble headstone was erected some time later and followed, in 1939/40, by the monument which includes the original headstone (Ihlenfeldt, 2009).

One of Darling's main attractions is now the carpet of Spring flowers that adorns the fields each year. This is an aspect of local heritage that is perhaps most tangible. Mature trees are generally only associated with the farms. Very occasional tree lines are present, but some have been cut down in the recent past.



Figure 15: Aerial photograph of the region showing the site (red polygon) located within the western part of the heavily transformed agricultural land of the Darling Hills and Swartland.

The archaeology of the area is not well known. The Darling Hills would undoubtedly have been used extensively by the Khoekhoen for grazing their stock and their settlements would likely have dotted the open landscape. Smith (1984) hypothesised that the Darling Hills would have formed part of the local Khoekhoe tribe's annual transhumance cycle. The local geology is not conducive to the formation of rock shelters and none are known. One does routinely come across stone artefacts of various ages in the wheat lands of the Cape and such finds would be expected here. The presence of Stone Age people in the general area is well documented by the excavations of both Middle (MSA) and Later Stone Age (LSA) archaeological sites at Yzerfontein, some 9 km to the southwest (Avery et al., 2008; Halkett et al., 2003; Klein et al., 2004; Orton, 2007, 2009).

Two surveys in the vicinity of the study area found no heritage resources (Halkett 2001; Hart 2008) but one by Orton (2010) showed scattered artefacts to be present. These may be more common on the aeolian sands and less so on the Malmesbury shale and granite areas.

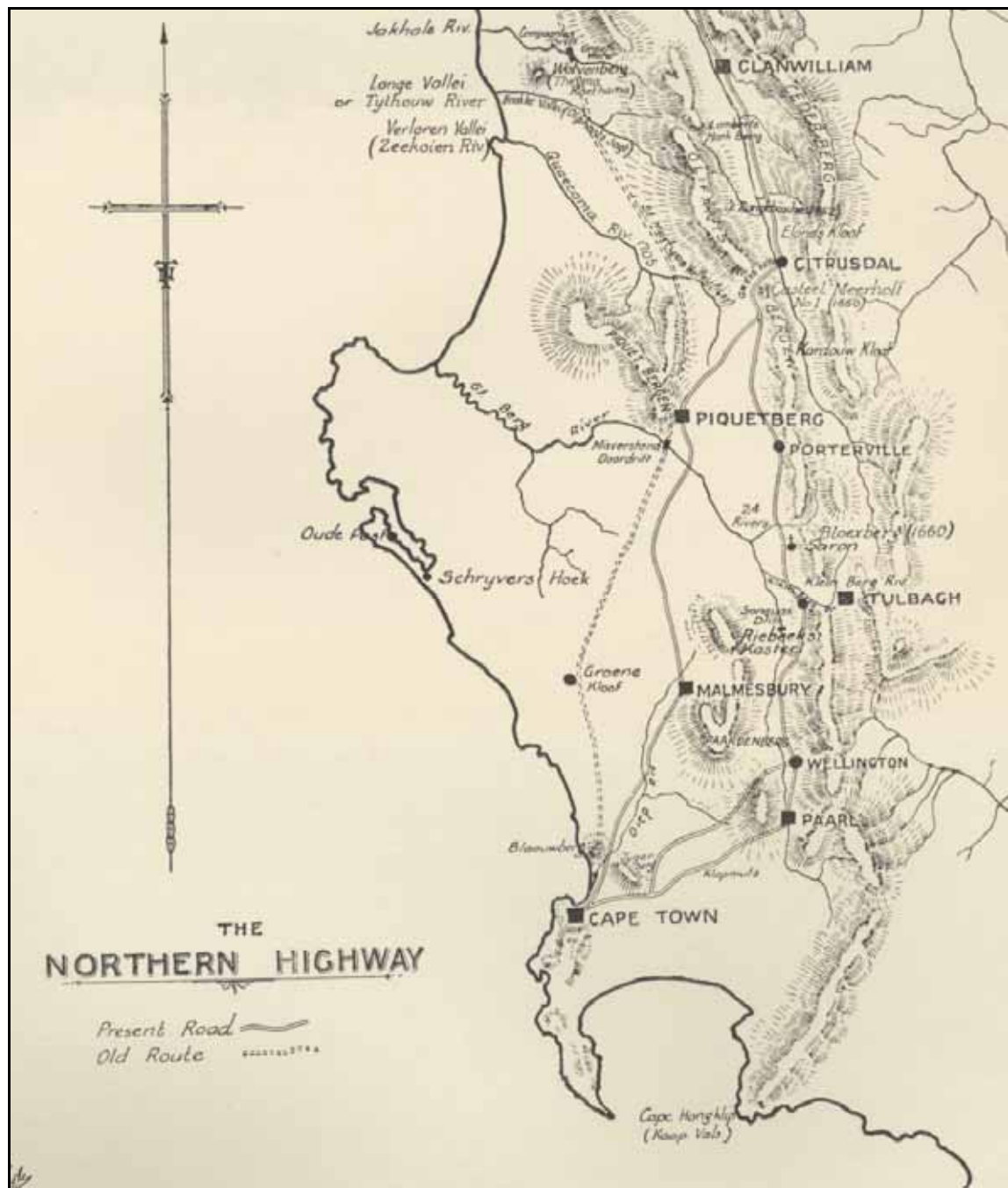


Figure 16: Extract from Mossop's (1927) map showing the main route to the north taken by early travellers. Groene Kloof is the first place marked north of Cape Town.

6. FINDINGS

6.1. Palaeontology

The Malmesbury shale is not known to contain fossils but there is a small potential for them to be present. Fossils are completely unknown from the Cape Granite Suite rocks that cover most of the study area, but in the low-lying areas to the west important fossils are known from the Cenozoic deposits (Almond & Pether, 2008). Most of the sand on the slopes below the granite hills in the study area, however, is windblown Holocene sand and unlikely to contain any significant fossil heritage.

6.2. Archaeology

Archaeological resources were found to be rare and widely scattered in the study area with only one concentration worthy of being called a site. Most surface finds were isolated artefacts relating to the Early (ESA) and Later Stone Ages (LSA) and these are of no significance at all. Beyond indicating the presence of Stone Age people in the landscape, nothing may be learned from these artefacts as they do not occur in informative contexts. The single site discovered, named Rheboksfontein 1, is described more fully below. Figure 17 shows the distribution of Stone Age archaeological resources in the study area, while Figure 18 to 22 show some examples of isolated artefacts. No ruins have been located.



Figure 17: Aerial view of the study area showing the location of all Stone Age artefacts found. The inset shows the vicinity around the Rheboksfontein 1 site. The red circle denotes the site, while all yellow circles are isolated occurrences.



Figure 18: An ESA radial core in silcrete.



Figure 19: A sandstone lower grindstone fragment found close to Rheboksfontein 1.



Figure 20: A quartz porphyry single platform core.



Figure 21: A silcrete retouched flake.



Figure 22: A quartz single platform core

6.2.1. Rheboksfontein 1

This site lies at S 33° 21' 51.8" E 18° 16' 53.4" on the crest of the ridge that overlooks the coastal plain (Figure 23). It is located around the eastern and north-eastern side of a small granite dome, but it is likely that much of the site has been ploughed (Figure 24 & 25). This does not reduce its significance much, however, since excavations can still reveal the full suite of artefacts present on the site, thus allowing a better characterisation of it. It should be noted that on average only some 2% to 5% of artefacts are exposed on the surface of ploughed land (Shott 1995 and references therein) which means that a site appearing insignificant on the surface may not actually be so. It has also been found that the exposed surface assemblage in a ploughed field will change with each successive ploughing episode such that the true character of a site may not be known without several visits (Shott 1995) or perhaps an excavation.

The position of the site allows spectacular views in most directions, perhaps important for game spotting, but it seems that the crucial feature of the site is the presence of a large hollow that catches rain water (Figure 26). At the time of recording, this hollow was more than 20 cm deep and some 4 to 5 m wide representing a considerable volume of water.

Interestingly there were both indigenous and colonial artefacts found on the site (Figure 27). Whether the two are actually related one cannot say. The colonial artefacts consisted of two fragments of Chinese coarse porcelain and part of the base of a wine bottle. Although this type of ceramic arrived in the first half of colonial occupation, one cannot rely on them to date their deposition at the site.



Figure 23: View towards the west showing the position of the Rheboksfontein 1 archaeological site on the ridge overlooking the coastal plain.

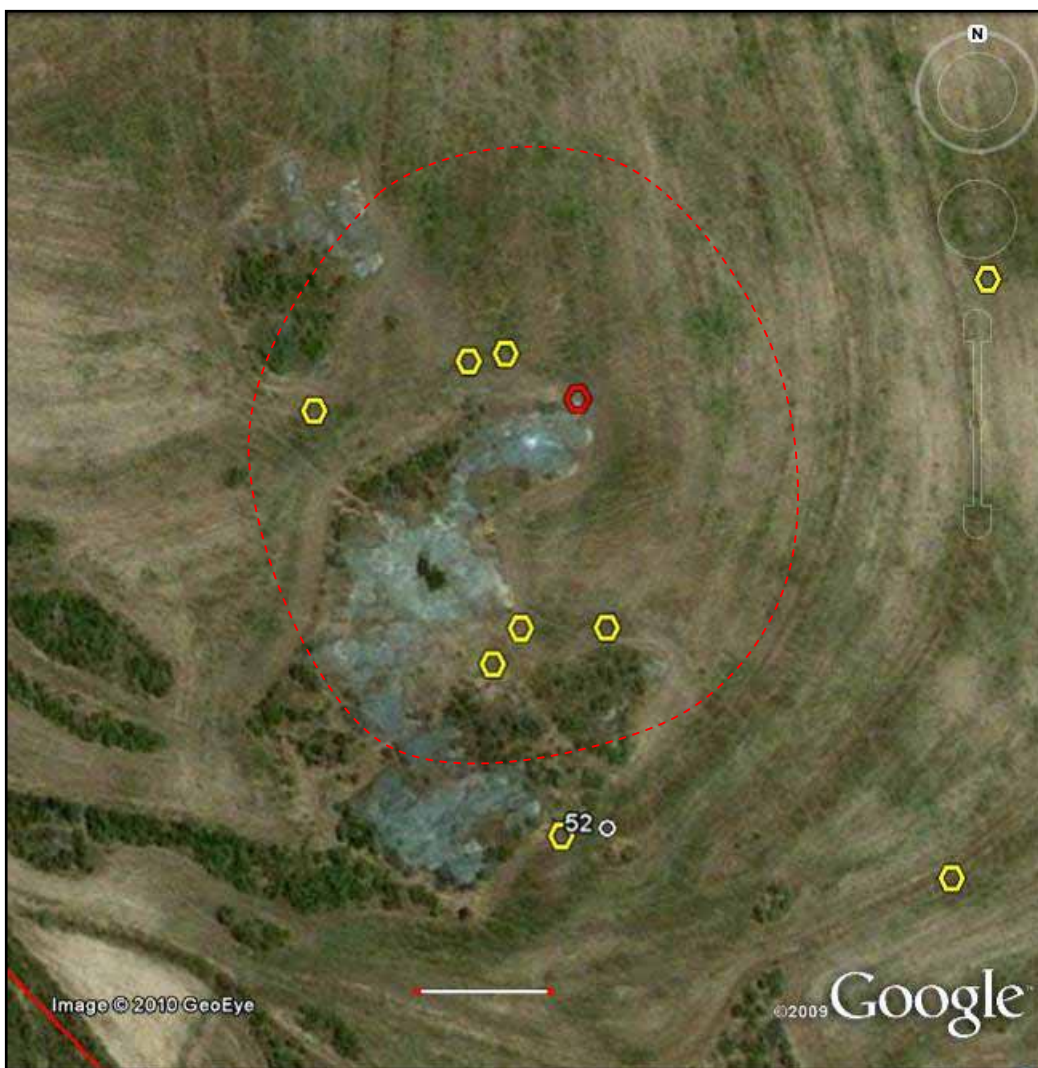


Figure 24: Aerial photograph of Rheboksfontein 1 showing the epicentre of the artefact scatter photographed in Figure 27 (red symbol), outlying artefacts (yellow symbols) and a suggested practical limit for the edges of the archaeological site (red dashed circle). The dark patch on the granite is the area of water. The white bar at the bottom is 25 m long. The white symbol numbered 52 is a proposed turbine position.



Figure 25: View of Rheboksfontein 1 looking towards the southwest. The highest concentration of artefacts was found in the centre of this view, near the bushes.



Figure 26: View towards the south from Rheboksfontein 1 showing the hollow filled with rain water.

Among the pre-colonial artefacts, cobbles and fragments of cobbles, whether utilised or not, were visually dominant. Such artefacts included unused manuports as well as a grooved lower grindstone, a faceted upper grindstone and a few hammer stones (Figure 28). Flaked artefacts were also present with quartz dominant, followed by quartzite and silcrete. Something that must have been collected from elsewhere as a curiosity is half a bifacial point of the sort commonly referred to as a Still Bay point (Figure 29). Such artefacts were generally made during a period of the MSA dating some 74 000 to 69 000 years ago (Jacobs *et al.* 2008). The Still Bay period is best documented at sites along the south coast of South Africa but several isolated occurrences have been recorded on the west coast between Cape Town and Namaqualand and this observation adds to those.

Although the artefacts and context themselves do not inherently warrant a provisional grading above 3C, the site should be graded 3B due its uniqueness. Contact period sites are generally very rare and no other archaeological sites have been recorded in the vicinity.



Figure 27: Artefacts found at Rheboksfontein 1. Scale bar in cm.



Figure 28: Ground artefacts from Rheboksfontein 1 (not to scale). Left: the grooved lower grindstone; Centre: a grindstone fragment displaying traces of red ochre; Right: a faceted upper grindstone.

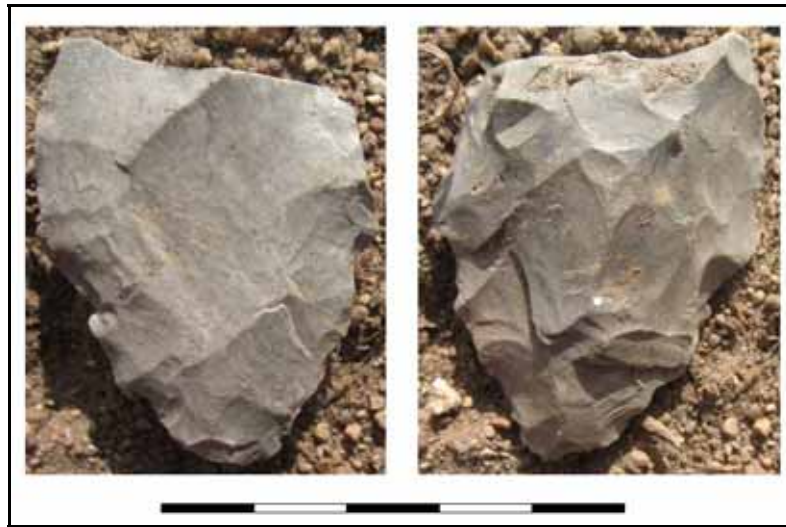


Figure 29: Close up views of both sides of the broken bifacial point from Rheboksfontein 1. Scale in cm.

Historical archaeological material was very sparse. Besides the artefacts found at Rheboksfontein 1, just three other historical ceramic fragments were noted. One lay in a field 1.4 km north of the Wildschutsvlei farm complex (Figure 30), while the other two were at a granite outcrop 1.4 km southwest of the Grootberg farm complex.



Figure 30: The plate fragment from Wildschutsvlei.



Figure 31: The two plate fragments from Grootberg.

6.3. Built environment

Several structures are present within the study area. Most are directly related to the three farm complexes, with few isolated buildings found. These complexes will be discussed in turn from north to south, but only briefly since none will be directly impacted by the proposed WEF. A buffer zone of 400 m between existing structures and the turbines has been established during the planning stage. All impacts would be indirect, relating to the context and sense of place in which the structures find themselves. Although historical aerial photography was consulted to ascertain the minimum ages of some structures, these photographs are only presented and discussed in Section 6.6 below.

6.3.1. Wildschutsvlei farm complex

This complex lies on the remainder of Portion 1 of Platklip 551 (Figure 32). The majority of its buildings are 20th century, with some certainly less than 60 years of age. One building, a large barn probably has its origins in the mid- to late 19th century, while the majority seem to be early 20th century.



Figure 32: View of the Wildschutsvlei farm complex, looking towards the south.

The barn has two adjoining sections and was built from clay bricks and mud. Fenestration varies and there appear to have been changes as shown by the fitting of a rectangular frame into an originally arched opening. It has been modified through the addition or changing of various openings such that its heritage significance is low. Figures 33 to 36 show this structure.



Figure 33: The east side of the barn.



Figure 34: The north end of the barn.



Figure 35: An external opening on the west side of the barn.



Figure 36: An opening inside the western half of the barn in the central wall.

The main farmhouse at Wildschutsvlei is entirely modern from the outside and if there is any old core to it then it would likely be beyond redemption. Various labourers cottages and one larger house dating to the early 20th century are present (Figures 37-41), along with sheds and a livestock dipping facility (Figures 42-45). While one cottage appears to have been built in a typical 1920s farm cottage style (possible grade 3C structure), other structures include decorative breeze blocks that were fashionable during the 1930s and 1940s. None of these other structures carries particular heritage significance and none are worthy of grading. Overall, the Wildschutsvlei farm complex is not seen as a highly significant heritage resource.



Figure 37: A labourers cottage with 1920s characteristics.



Figure 38: An early 20th century cottage.



Figure 39: An early 20th century cottage.



Figure 40: An early 20th century cottage/store.



Figure 41: House east of the main farm house that has had extensive modification.



Figure 42: A shed built with decorative Breeze blocks suggesting 1930s or 1940s.



Figure 43: An early 20th century outbuilding.



Figure 44: A shed built with decorative breeze blocks suggesting 1930s or 1940s. Its roof has been changed more recently.



Figure 45: A livestock dipping facility.

6.3.2. Grootberg farm complex

This complex lies on Grootberg 1199. Again the majority of buildings appear to date to the 20th century but there are some with likely late 19th century roots, particularly a large barn and some components of the dairy. The primary dwellings shows up on the 1938 aerial photograph but has been so extensively modified that its remaining core is probably beyond redemption. The barn may have originally been built to have a thatched roof but now has a corrugated asbestos roof (Figure 46). Spalling plaster inside the core structure revealed soft red clay bricks held together with the usual brown mud (Figure 47). This structure is of low heritage significance and, given the additions, it is probably not worth grading.



Figure 46: The large barn with its additions.

Figure 47: Clay bricks and mud in the core structure.

The dairy complex has a central core that may well date to the late 19th century (Figure 48). It has what seems to be a later addition to the north with far thinner walls (Figure 49). Both components share a gable style which is suggestive of the early 20th century so it seems likely that the core structure was modified at the time of the addition. Quite likely the core was a barn which was later converted into a dairy. Other additions also appear to have some antiquity with stone walls being present (Figure 50). This structure is of moderate heritage interest and might be provisionally graded 3C. One other structure in the main complex that has some antiquity is a large barn-type structure with a palm tree alongside it (Figure 51). With its modifications it retains little significance and does not merit grading.



Figure 48: The western face of the dairy complex.



Figure 49: The core of the dairy with its thick wall revealed in a Doorway and the northern addition with thinner walls.



Figure 50: An addition to the dairy displaying stone walls up to door-height.



Figure 51: Another structure with modern alterations.

Several workers' cottages lie to the southwest of the main complex. Although the styles differ, all appear consistent with an early to mid- 20th century age (Figures 52-54) and none appear on the 1938 aerial photograph. They are fairly typical of Western Cape farm labourers' cottages. Two other still extant cottages to the northwest of the complex (not photographed) are present in 1938. The entire farm complex as a whole is not seen as highly significant and has relatively little heritage value.

One other structure occurs on Grootberg. It lies about 900 m to the northwest of the farm complex, at the south-eastern corner of the Tienie Versveld Wild Flower Reserve. It was apparently a school at some point. The structure has metal windows and air vents and probably dates to somewhere around the 1940s or 1950s (Figure 55). It does not appear on the 1938 aerial photograph of the area. It has been suggested that the school building be used to house facilities associated with the WEF. It is currently in a state of disrepair and can be provisionally graded 3C.



Figure 52: Farm labourer's cottage.



Figure 53: Farm labourer's cottage.



Figure 54: Farm labourer's cottage.



Figure 55: The old school building.

6.3.3. Rheboksfontein farm complex

This complex lies on the remainder of Rheboksfontein 568 and includes several dwellings, a dairy and outbuildings with a labourers' village sited 250 m to the west (Figure 56).



Figure 56: The farm complex at Rheboksfontein as viewed from the northwest. The lowest buildings on the slope are the labourers' village.

The most significant building on the site is the primary residence on Rheboksfontein. The main house here appears to be quite old, originally dating perhaps to the 18th century, but several additions and modifications have occurred over the years. It is a long house with interior passageway and is built across a slope with commanding views over the coastal plain to the west. At least one of the interior walls (that along the west side of the passage) is thicker at the base than it is at the top. The house was undoubtedly thatched originally, but the thatch has been removed and the current corrugated iron roof now overlaps the end gables (Figures 57 - 58). The side walls appear to have been raised at the same time with air vents into the solder having been installed (Figures 59 & 60). A solder door is present in the southern end-gable, but the staircase has been removed, probably when the wood became too rotten to be safe (Figure 59). The front porch has strongly Victorian characteristics (Figure 60), and, along with the ornate Victorian-type cast-iron air vents (Figure 61), this suggests that it was during the late 1800s that the bulk of the older modifications to the house were made. It is not possible to determine whether the original structure may have been lengthened to the current 40 m, but this does seem

a possibility. A provisional grading of 3B may be assigned to this building, although without the more recent and sometimes very insensitive alterations it would have been a potential 3A.

A key feature of the Rheboksfontein house is its placement in the landscape. It lies at the head of a valley that offers commanding views out onto the coastal plain to the west. Its axis runs north-south across the slope and a small river valley bisects the slope to the north and south of it.



Figure 57: The northwest corner of the Rheboksfontein main house.



Figure 58: The eastern side of the Rheboksfontein main house.



Figure 59: The southern end-gable with the solder staircase missing.



Figure 60: The front, west-facing façade and porch with its curved corrugated iron roof.



Figure 61: One of the many identical air vents positioned just below the roof.

Another older structure occurring in the complex is the dairy (Figure 62). This structure lies just to the northeast of the main house. It likely dates to the early 20th century and has experienced substantial additions and modifications. It retains very little heritage value and does not merit grading. The dairy has recently been replaced by new structures to the north and the building now serves other purposes.

Associated with each of the above structures is a water tank. Both are circular with pitched corrugated iron roofs and hold little heritage value. That alongside the dairy can be seen in Figure 62. They are probably both of similar age to the dairy. East of the dairy is a cottage that likely has its roots in the late 19th century but has been heavily altered in recent years (Figure 63).



Figure 62: View of the western side of the dairy showing the extensive alterations.



Figure 63: View of the north side of the dairy complex with the associated cottage on the left.

To the southeast of the main house is a cottage that appears to be of early to mid- 20th century construction and seems in good condition, although its western entrance has been bricked up (Figure 64). It could be assigned a provisional grading of 3C. Just north of the main house is a row of labourers' cottages (Figure 65), while nine more cottages occur to the northwest in the small workers' village (Figure 56). All these cottages are likely more than 60 years old.

An interesting building style is represented by a ruined structure to the north of the farm house. It was originally of corrugated iron fastened to a wooden framework, but has had bricks built into the frame, perhaps for insulation (Figures 66 & 67). Being in ruin, it would need to be older than 100 years to be protected; this seems unlikely.

Another structure of heritage concern at Rheboksfontein is another corrugated iron building that pre-dates 1938. It is unknown whether this cottage is built using the same method as the ruin described above, but this does seem likely. It also has a small stoep and external chimney stack built on to it (Figure 68). Given its reasonable condition, it may be provisionally graded 3C.

Overall, one can consider the Rheboksfontein complex to be the most significant of the three described, since it has more protected buildings and also includes by far the oldest structure within the study area.



Figure 64: The cottage southeast of the main house.



Figure 65: A row of cottages north of the farm house



Figure 66: The corrugated iron structure with bricked in walls.



Figure 67: View of the inside of the ruined corrugated iron structure.



Figure 68: The west face of the corrugated iron cottage.

6.4. Graves

No farm graveyards are known to be present within the proposed WEF site. Just one grave was located during the survey and it lies on a hilltop on Wildschutsvlei at S 33° 19' 20.4" E 18° 19' 27.4". Provision for two graves has been made, but only one of them was used (Figures 69 – 71). Being less than 60 years old (Lionel Basson 24.6.1908 – 22.4.1983), this grave is not covered by the NHRA (see Section 36 (3b)). The grave originally had four trees and a small wire fence around it but one of the trees is no longer present and the fence is represented only by some of its poles.



Figure 69: The site of the Basson grave.

Figures 70 & 71: The grave and headstone.

6.5. Cultural landscapes and sense of place

The region's landscape is strongly dominated by agriculture with the vast majority of the ground area having been transformed into either wheat fields or grazing lands. The fertile granitic soils have long been used for grazing with colonial use of the area for this purpose extending back into the 17th century. In recent times vineyards have also been planted, usually replacing wheat fields. Modifications to the landscape almost exclusively revolve around agriculture and farm complexes. Several tree lines or clusters of large trees are present in the region, but with some having been chopped down in recent years. Some are very prominent on the 1938 aerial photographs of the area. Several significant gum tree lines are still present as described in Table 3. Others that have either already been destroyed or are not very significant are not listed here. One grove of poplar trees was also noted, but is seen as less significant than the lines.



Figure 72: Resprouting gum trees on Wildschutsvlei (No. 1 in Table 3).

Table 3: Treelines and groves.

No.	Location	Farm	Description
1	S 33° 18' 55.8" E 18° 19' 38.1"	Wildschutsvlei	A line of gum trees approximately 900 m long and running west-southwest to east-northeast. The western half of the line has been chopped down but has resprouted to some degree (Figure 72).
2	S 33° 20' 01.1" E 18° 18' 24.4"	Wildschutsvlei	A line of gum trees 570 m long and extending in a west-south-westerly direction from the farm complex (Figure 73). This line is in a visually prominent location on the crest of a hill. The line post-dates 1938.
3	S 33° 21' 44.8" E 18° 18' 50.0"	Rheboksfontein	A 480 m long line of very large gum trees runs north-south along the western side of a river valley some 500 m north of the farm complex (Figure 74). This line post-dates 1938.
4	33° 22' 42.57"S 18° 17' 43.02"E	Rheboksfontein	A grove of poplar trees about 30 m by 110 m in size and lying 1.8 km southwest of the farm complex. The 1938 aerial photograph reveals that a small house was present to the northwest of the grove in past times.



Figure 73: The prominent tree line west of Wildschutsvlei (No. 2 in Table 3).



Figure 74: The line of very large gum trees north of Rheboksfontein (No. 3 in Table 3). The tree line in Figure 73 can be seen in the distance.

Such tree lines define certain parts of the Western Cape Province where they are very prominent. This area is one of them, with the 26 km long avenue along the R304 leading to Mamre being particularly well known. Unfortunately with the advent of vineyards to the Darling Hills, many historic tree lines are being destroyed, thus damaging the character of the region.

Also of significance is the number of farm complexes that occur within relatively close proximity to the study area and proposed WEF (Figure 75). Some of these no doubt include old buildings of heritage significance whose context and sense of place would be degraded to varying degrees by the presence of the WEF, depending on the visibility of the turbines from each. Particularly notable among these is the T-shaped Doornfontein farm house to the south of the proposed WEF site. Fransen (2006) suggests that this house may date from well before 1838, when the farm was officially granted, although some of the external features of its façade date to about 1860. Other homesteads mentioned by Fransen (2006) include Slangkop, (northwest of the study area) dating to 1880 but with more recent modifications and Droevlei (to the north) dating to 1861 and with extensive modification. The house at Bonteberg is reportedly very old but this is subject to confirmation.



Figure 75: Aerial view of the region showing farm complexes (yellow icons) in close proximity to the study area. The town of Darling and the Anglo-Boer War Memorial (both with red icons) are also indicated. The white scale bar at the lower left corner of the study area represents 3 km.

A few other important heritage sites are located in the vicinity. The Hildebrand Monument (1902) lies some 4.2 km from the nearest proposed turbines. The monument was built in 1939 to commemorate the death of Field Cornet C.P. Hildebrand of the Boer Forces at that place. He was killed in action during the 1899 to 1902 Anglo-Boer War and his marble grave stone has been incorporated into the structure of the monument. Darling was the southernmost town reached by the Boer Forces during the war (Darling Tourism, n.d.). Although the WEF would be visible, the monument lies in well transformed agricultural lands far enough to the east that no significant alteration to the sense of place will occur (Figure 75).

Slightly further afield is Maclear's Swartland survey beacon on the farm Klip Valey 457. The beacon is a declared Provincial Heritage Site (1980) for its historical and architectural merits and

is the western terminus of Sir Thomas Maclear's Swartland survey baseline. It is a pyramid-shaped sandstone beacon and lies just more than 6 km northeast of the nearest proposed turbines. The beacon is currently surrounded by well transformed agricultural land and, although one would be able to see the WEF from it, it is far enough away that no significant impacts to its sense of place will be felt.

Owing to its fertile nature, much of the natural landscape has been transformed through agriculture as noted above. One area, however, has been preserved as the Tienie Versveld Wild Flower Reserve. This lies along the R315 (Yzerfontein Road) and abuts the northern edge of the Grootberg section of the study area (Figure 76). The reserve has scenic and tourism value and the transformation of the area through installation of wind turbines would negatively impact on one's experiences there. Two turbines lie within 500 m of the reserve boundary.



Figure 76: View towards the south from the entrance of the Tienie Versveld Wild Flower Reserve along the R315. The left hand building in the background is the old school which might be reused as part of the WEF.

In a more general sense, the Darling Hills area as a whole can be considered a cultural landscape. Its uniqueness among the lowlands of the west coast presents a distinctive physical landscape, and, with its many springs and fertile grazing, one that has attracted farming since the very earliest days of the colony. Before this the Khoekhoe people would have grazed their livestock there too, as suggested by Smith's (1984) likely route of Khoekhoe transhumance (Figure 77). The finding of a possible Khoekhoe archaeological site as described above may lend support to this notion. The uniqueness of the region is also significant from the point of view of scenic routes. Both the R27 (West Coast Road) and the R315 (Yzerfontein Road), running to the west and north of the study area respectively, can be considered scenic routes. While the turbines would be less prominent from the R27 (2 km distant and partly shielded by hills), the R315 runs right through the proposed WEF with the nearest turbine being just 500 m from the road. The cumulative impact of so many wind turbines in this region is significant and will result in a dramatic transformation of the cultural landscape. It is particularly pertinent to note that quite a large proportion of the high-lying Darling Hills is included in the proposed WEF area.

The concept of 'sense of place' as used above can be tricky to understand but it essentially includes all aspects of a place that make it special for any particular reason. Cornell and Malan (2008:2) suggest that "characteristic features, historical context, position in the landscape, tangible remains, associations, smells, views, aesthetic beauty, memories, plants (and) traditional uses" all play their part in creating a sense of place. An intrusion into the landscape of the size of the proposed WEF would greatly alter some of these characteristics for the places mentioned above. This aspect of the overall impact assessment also needs to be considered by the visual impact assessor.

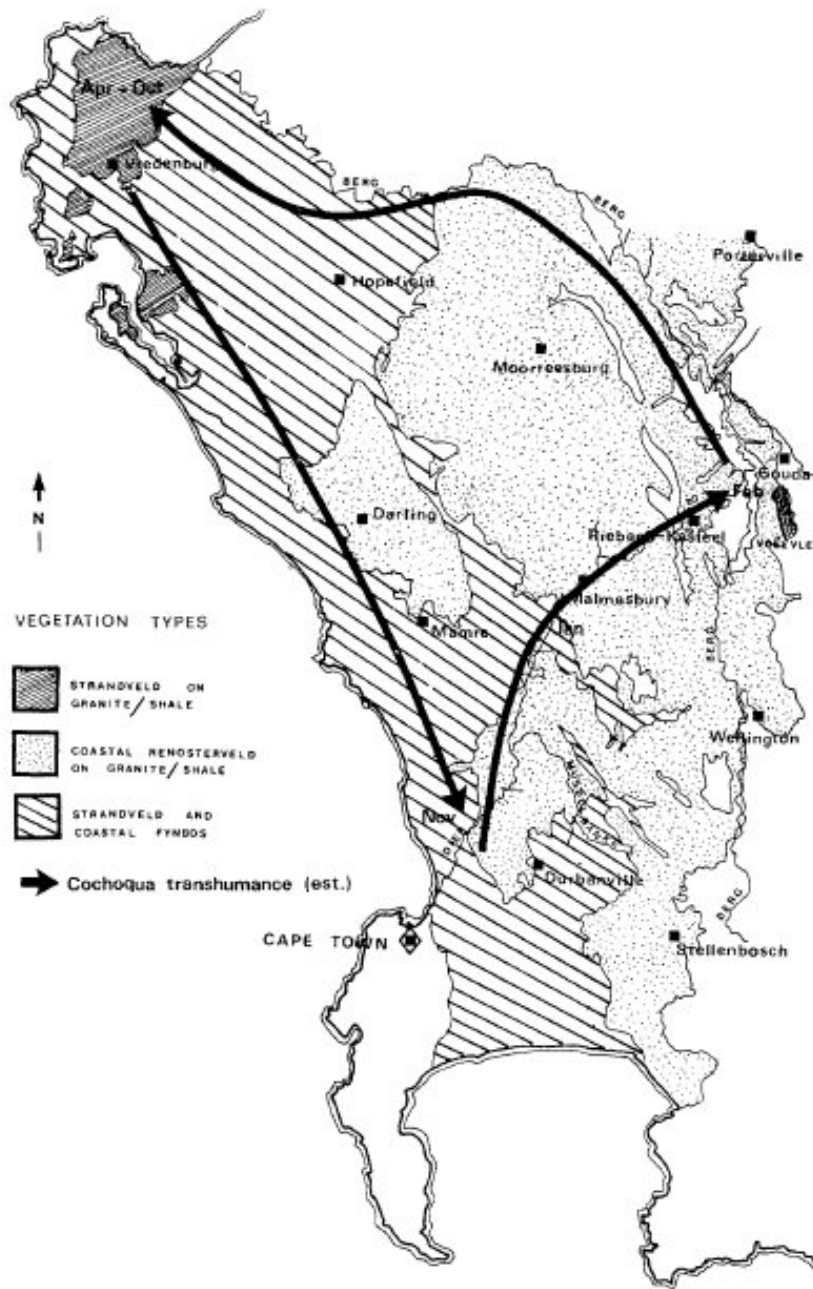


Figure 77: Estimation of the route of seasonal transhumance used by the south-western Cape Khoekhoen. The stippled area denotes Renosterveld on granite and shale substrates which was suggested to have been important for summer grazing (source: Smith 1984: fig. 1).

The only significant modern intrusion into this cultural landscape is the existing Darling National Demonstration Wind Farm which is currently proposed to be extended to a total of 20 turbines (EEU 2010; Orton 2010). A communications tower is also present within the study area but it presents a relatively minor intrusion.

A further factor to consider is that the existing four turbines at the Darling National Demonstration Wind Farm have for some years provided a curiosity for people driving the local roads. To some degree this can be regarded as a positive impact in terms of local scenic value. However, with a combined total of approximately 100 turbines in the vicinity, this value will most likely be eroded.

6.6. History

6.6.1. Survey diagrams and farm grants

While many loan farms were occupied already in the early 1700s, it was only in the early 19th century that they were formally granted to the farmers, primarily as Freehold farms. The farmers likely used the land as loan farms before then, but Quitrent and Freehold grants had to be registered by title deed, hence the need for an official survey. Survey diagrams of the farms in the area show that they were first surveyed in 1816 and granted as freehold land grants during the course of the following 22 years, although the earliest grant, Bonteberg, was made as a quitrent (Table 4). Note that subdivisions and consolidations through the years have altered the farm boundaries as shown on Figure 1 with some new farm numbers having been allocated in the area as a result.

Table 4: Historical information for the properties associated with the proposed WEF. Note that not all information could be readily traced through the survey diagrams. *This date could not be verified on a survey diagram but on the basis of the others it seems a safe assumption. **Names and numbers as recorded on the survey diagrams where available.

Current farm name and portion included in WEF area	Original farm name and number	Date of survey	Date of land grant	Granted to**	Cape Freehold / Quitrent number**
Remainder of Rheboksfontein 568	Rheboksfontein 568	1816	15.11.1837	J.F. Kirsten	C.Fr.4-72
Groot Berg 1199	Grootwater 569	1816*	18.10.1838	F.A. Sadie	
Groot Berg 1199	Slangkop 552	1816	01.03.1838	Henry Crowcher	C.F.5.6
Portion 2 of Slangkop 552	Slangkop 552	1816	01.03.1838	Henry Crowcher	C.F.5.6
Remainder of Portion 1 of Platklip 551	Platklip 551	1816	15.08.1839		C.Fr.6-11
Remainder of Bonteberg 571	Bonteberg 571	1816	06.11.1822		C.Q.3-37
Remainder of Nieuwe Plaats 567	Nieuwe Plaats 567	1816	25.09.1838	Jan Fictor Ehlers	C.F.5.13
Portion 1 of Doornfontein 574	Doornfontein 574	1816	18.10.1838	Jacob van Renen, F. son	C.F.5.14

While the history of the place will obviously remain unchanged, it is significant that this history is integrally tied to grazing and agriculture throughout its development. Although this did change to some degree with the installation of the current turbines at the Darling National Demonstration Wind Farm, the scale of the currently proposed development will result in a change in the trajectory of local history.

6.6.2. Aerial photos

Historical aerial photography from the 1938 run (Job 126) was sourced and consulted to determine the ages of buildings and also to what degree the farm complexes have been altered. Unfortunately the aerial photography dating to 1944 and 1953 did not cover this area. Generally one finds that all buildings extant at that time are still present today, but that many additional buildings have been constructed. The character of the complexes has been altered through the

addition of modern structures and alterations to old buildings have, in some cases, rendered them worthless from a heritage viewpoint. Also clear from the photographs is how extensive the agricultural activity already was at that stage. This is strong testimony to the long tradition of agriculture stretching back to the earliest days of the colony.

At Wildschutsvlei we find that an extensive windbreak was planted around the complex and that these trees are almost non-existent today (Figure 78). The werf was far sparser with the current configuration appearing quite cluttered in comparison. However, it is notable that many of the labourers' cottages were already present in 1938. We also see that the beautiful tree line currently lying to the west of the complex was not present in 1938, but that it replaced another one that lay just to the north. Other tree lines have been removed, while some new ones have been planted.

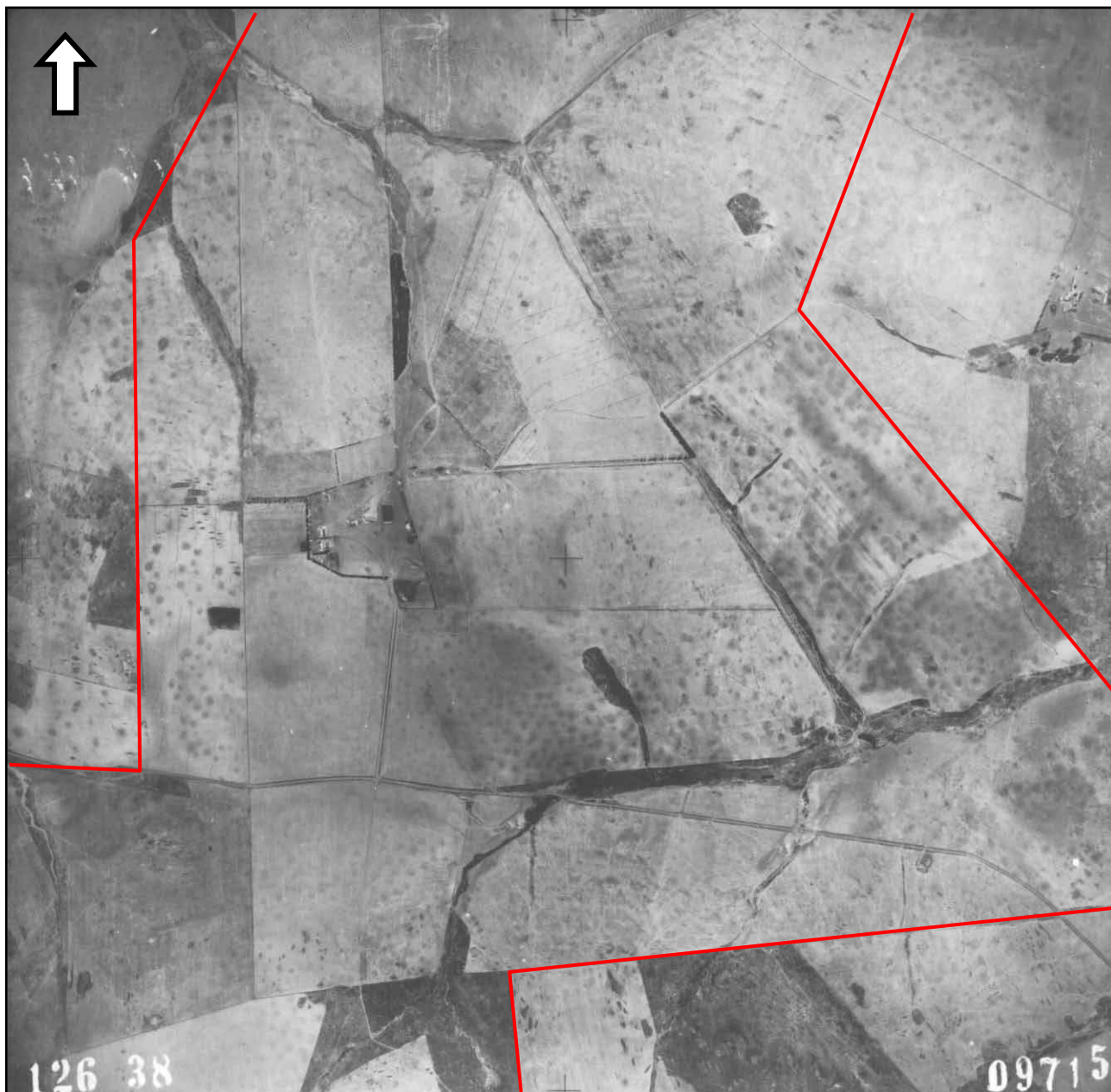


Figure 78: 1938 aerial photograph of the Wildschutsvlei area with the proposed WEF boundaries superimposed in red. The farm complex is visible in the centre. Source: Chief Directorate Surveys and Mapping.

The Grootberg farm complex also had far fewer structures in earlier years and was very open and simply laid out (Figure 79). It seems to have had fewer additional buildings added than Wilschutsvlei. Interestingly, just two workers' cottages are present, with the majority thus having been added post-1938. The complex was practically devoid of trees with much of the current vegetation having been planted in recent years to surround one of the modern houses. Little remains of a prominent rectangular gum tree plantation that was located at the southern edge of the complex.



Figure 79: 1938 aerial photograph of the Grootberg area with the proposed WEF boundaries superimposed in red. The farm complex is visible near the upper right hand corner. Source: Chief Directorate Surveys and Mapping.

The Rhebokfontein farm complex was perhaps the most well established of the three in 1938 (Figure 80-81). Many structures were present back then, but sadly a number of the more significant ones have had extensive modern alteration. Curiously, the very insensitive addition to the northwest corner of the main house had a precedent, since the photograph shows that an

is being undertaken within a separate specialist study), and this will provide key results to inform the decision-making process.



Figure 81: Enlargement of the Rheboksfontein farm complex. Source: Chief Directorate Surveys and Mapping.

Although field assessment of the proposed power line that links into the electricity grid was not undertaken, this line is mapped in Figure 82. It is noted that it does not pass by any homesteads on its 2 km stretch between the edge of the WEF area and the existing power line servitude to the southeast. It does, however, pass within 100 m of the edge of the Wildschutsvlei farm complex which was rated as having low overall heritage significance. One potential concern to be addressed by the VIA is the fact that to the east of the Grootberg complex the power line runs over the crest of a hill and would be visually very prominent. Shifting of this section may be required to soften the visual impacts from the R315 road and the Tienie Versveld Wild Flower Reserve.

The density of archaeological material on the landscape suggests that significant archaeological impacts are highly unlikely to occur. However, when pylon placements are available they should be examined on current aerial photography to identify any potentially sensitive areas that may require field proofing.

Specific concerns over the various categories of heritage discussed by this HIA are addressed below as appropriate and threatened heritage resources pertaining to the WEF project area are mapped in Figure 82. It should be noted, however, that visual impacts to more distant heritage resources are possible through implementation of the proposed project.



Figure 82: Aerial view of the proposed WEF area showing the overhead power line in dark blue. The yellow line running north-south is an existing power line whose course would be followed up to the Dassenburg substation.

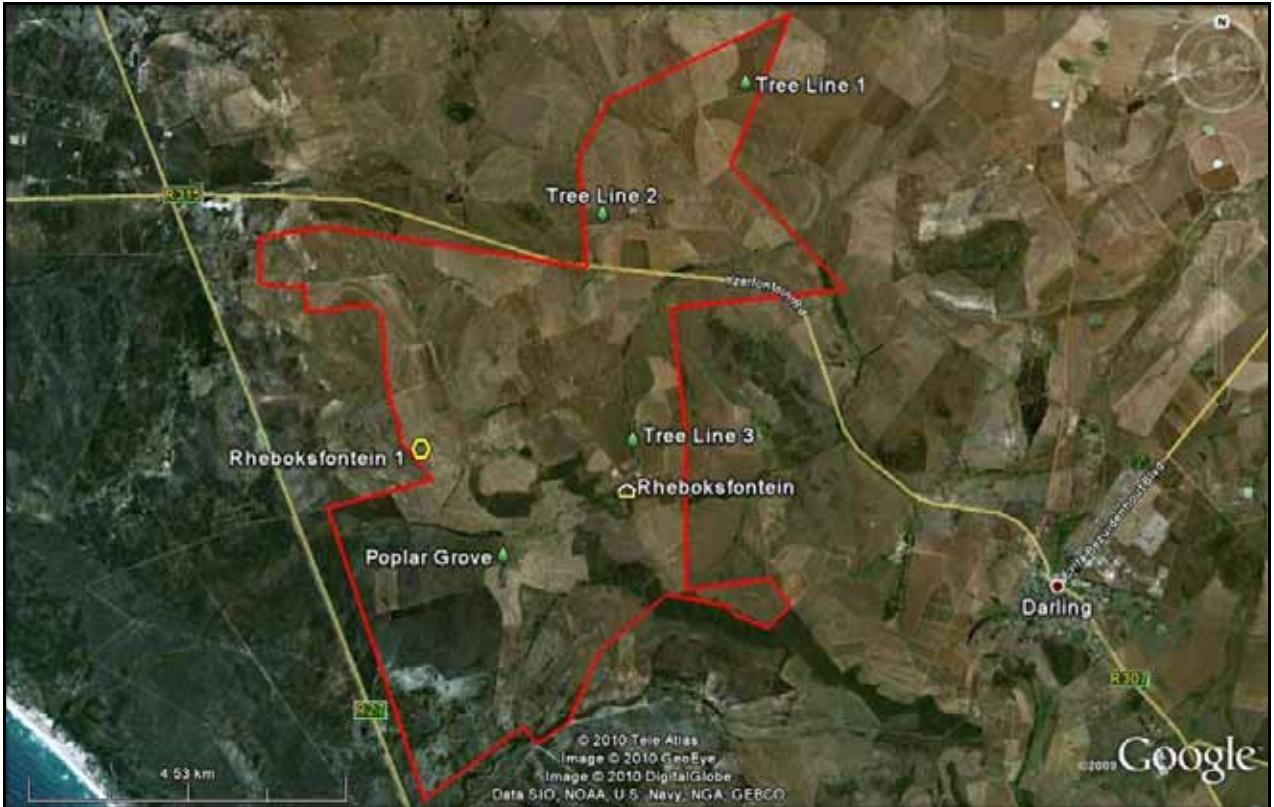


Figure 82: Specific heritage resources potentially under threat from the proposed WEF.

7.1. Palaeontology

No fossils are likely to be intersected by the proposed development and, following Almond and Pether (2008), no palaeontological impact assessment is considered necessary. Palaeontological impacts are summarised in Table 5.

Table 5: Summary of impacts to palaeontological material

NATURE OF IMPACT: Impacts to palaeontological material could involve displacement or destruction of material at turbine locations and in the paths of power lines and access roads.		
	Without mitigation	With mitigation
EXTENT	Local (1)	n/a
DURATION	Long term (4)	n/a
MAGNITUDE	Small (2)	n/a
PROBABILITY	Very improbable (1)	n/a
SIGNIFICANCE	Low (7)	n/a
STATUS	Neutral	n/a
REVERSIBILITY	Non-reversible	n/a
IRREPLACEABLE LOSS OF RESOURCES?	No	n/a
CAN IMPACTS BE MITIGATED?	No	n/a
MITIGATION: No palaeontological resources were located or are known from the vicinity. As such, no mitigation can be suggested or implemented.		
CUMULATIVE IMPACTS: n/a		
RESIDUAL IMPACTS: n/a		

7.2. Archaeology

One significant archaeological site was encountered at turbine location 52, along the western edge of the study area. The site has the potential to provide data that would improve our understanding of the pre-colonial history of the area and, since it is directly threatened, it requires mitigation. This could be easily accomplished through either moving the turbine and associated infrastructure or mapping the site and sampling the soil around the granite outcrop to obtain a suitably representative sample of the kinds of artefacts present on the site. Most artefacts are likely to be buried, hence the need for subsurface excavation. Although the core of the site appears to be just north of the proposed turbine location, the site has become somewhat dispersed by ploughing with the result that artefacts are spread quite widely. The required access road and subsurface power lines would certainly have a detrimental effect on the site. The possibility of intact archaeological deposits occurring beneath the plough zone cannot be excluded and this would need to be established during mitigation. If intact deposits are located then the mitigation may need to be expanded. As such, a test excavation would seem appropriate in order to enable planning of full mitigation. Owing to the dispersed nature of the material, it seems likely that excavation will be more appropriate than moving the turbine position, unless this turbine is omitted entirely. The recommended buffer of 500 m from heritage sites (CNdV Africa 2006) is not necessary here with an activity exclusion buffer of perhaps 100 m from the GPS location being more appropriate. Archaeological impacts are summarised in Table 6.

Table 6: Summary of impacts to archaeological material

NATURE OF IMPACT: Impacts to archaeological material could involve displacement or destruction of material at turbine locations and in the paths of power lines and access roads.		
	Without mitigation	With mitigation
EXTENT	Local (3)	Local (1)
DURATION	Permanent (5)	Permanent (5)
MAGINITUDE	High (8)	Minor (2)
PROBABILITY	Highly probable (4)	Very improbable (1)
SIGNIFICANCE	High (64)	Low (8)
STATUS	Negative	Positive
REVERSIBILITY	Non-reversible	Non-reversible
IRREPLACEABLE LOSS OF RESOURCES?	Yes	No
CAN IMPACTS BE MITIGATED?	No	Yes
MITIGATION: Only one archaeological site was located (at Turbine 52). Mitigation could involve either avoiding the site or conducting archaeological excavations.		
CUMULATIVE IMPACTS: No other archaeological sites are known from the area and if the density is as low as it appears then the loss of one site could be quite a significant proportion of the local archaeological heritage.		
RESIDUAL IMPACTS: n/a		

7.3. Built environment

The Rheboksfontein farm house is the most significant structure within the proposed WEF area, and is the only one to receive a provisional grading higher than 3C. A slightly larger buffer should be considered around this house in order to protect its landscape context and sense of place, and particularly the view westwards from the house itself. The buffer around the actual house should be at least 500 m as recommended by CNdV Africa (2006). An appropriate buffer should be determined through the VIA. For the other complexes which have far less heritage value the proposed buffer of 400 m is suitable.

No built structures will be directly impacted by the proposed wind turbines, but it is proposed that one mid-20th century structure be reused during the development. Impacts to the built environment are summarised in Table 7.

7.4. Graves

Just one grave was found. It is too young to be covered by the NHRA but it is noted that the nearest proposed turbine positions are approximately 120 m and 200 m distant. It would be prudent to cordon off the area so as to protect the grave from any harm during construction of the WEF.

7.5. Cultural landscapes and sense of place

Impacts to the cultural landscape and sense of place will be significant. These impacts are of two main types. The first type is visual impacts which should be assessed as part of the visual impact assessment. Aspects to consider include proximity to and visibility from scenic routes of the turbines, proximity to and visibility from significant homesteads, particularly Rheboksfontein and the degree to which the overall vicinity of the Darling Hills landscape will be altered. The proposed WEF occupies a prominent and quite large part of the Darling Hills. The second aspect to consider here is the loss of tree lines from the area. This will depend on how extensively the proponents would want to clear the landscape of potential obstructions in terms of maximising the consistency of wind flow. Three gum tree lines are of concern, while a poplar grove is less

significant. The analysis of historical aerial photography has shown that these tree lines are dynamic, with some being removed and new ones being planted. As such this report finds that all mature tree lines, even those that are younger than 60 years of age, should be considered an integral part of the cultural landscape. Impacts to the cultural landscape are summarised in Table 9.

Table 7: Summary of impacts to the built environment

NATURE OF IMPACT: Impacts to the built environment are in the form of erosion of context through visual impacts (the latter will be expanded upon in the VIA). No direct impacts to built environment items will occur.		
	Without mitigation	With mitigation
EXTENT	Local (2)	Local (1)
DURATION	Long term (4)	Long term (4)
MAGINITUDE	Low (4)	Minor (2)
PROBABILITY	Definite (5)	Highly probably (4)
SIGNIFICANCE	Medium (50)	Low (28)
STATUS	Negative	Negative
REVERSIBILITY	Reversible	Reversible
IRREPLACEABLE LOSS OF RESOURCES?	No	No
CAN IMPACTS BE MITIGATED?	No	Yes
MITIGATION: Only the Rhebokfontein farmhouse is regarded as having the potential to be impacted significantly. Mitigation could involve shifting turbine positions to avoid obstructing the open space extending westwards from the house.		
CUMULATIVE IMPACTS: An increase in the loss of context would be experienced through additional WEFs in the area.		
RESIDUAL IMPACTS: n/a		

Table 8: Summary of impacts to cultural landscapes and sense of place

NATURE OF IMPACT: Impacts will be through visual intrusion into the landscape which results in erosion of landscape context and decreasing quality of sense of place.		
	Without mitigation	With mitigation
EXTENT	Local (4)	Local (3)
DURATION	Long term (4)	Long term (4)
MAGINITUDE	High (8)	Moderate (6)
PROBABILITY	Definite (5)	Definite (5)
SIGNIFICANCE	High (80)	High (65)
STATUS	Negative	Negative
REVERSIBILITY	Reversible	Reversible
IRREPLACEABLE LOSS OF RESOURCES?	No	No
CAN IMPACTS BE MITIGATED?	No	Yes
MITIGATION: Turbines and power lines can be shifted into visually unobtrusive locations to avoid excessive intrusion into the cultural landscape.		
CUMULATIVE IMPACTS: If other WEFs were constructed in the area then the erosion of context and sense of place would escalate.		
RESIDUAL IMPACTS: Will only occur if turbines and concrete footings are left standing after decommissioning and rehabilitation does not happen.		

7.6. History

The local history is centred on farming, both agriculture and livestock. The addition of wind turbines to the landscape will add a new land use to the traditional one, but this is not seen as a significant impact in heritage terms, since the tradition of farming in the area will continue unhindered.

8. CONCLUSION AND RECOMMENDATIONS

While the proposed WEF is certainly going to impose significant impacts to the landscape, the need for renewable energy sources is recognised and it is suggested here that construction of the WEF may be able to proceed, but with certain conditions.

As such, and subject to the approval and permit of Heritage Western Cape, it is recommended that the proposed project be allowed to proceed but subject to the following conditions:

- Archaeological test excavations and subsequent mitigation must be carried out for site Rheboksfontein 1 alongside Turbine 52, unless this turbine can be shifted or omitted entirely;
- The VIA should determine the extent and significance of visual impacts to both the scenic qualities of the landscape and to specific places of concern, including the view westwards from the Rheboksfontein farm house and the hill over which the power line passes east of Grootberg. Aside from Turbine 52, the omission of other turbines that will result in significant visual impacts should be recommended as appropriate;
- Tree lines should be protected as far as possible, with particular importance being attached to the three highlighted in this report;
- During construction it should be ensured that no secondary impacts to heritage resources will occur as a result of large trucks and cranes accessing the project area; and
- A plan should be in place to decommission or reuse the WEF at the end of its lifetime. Under no circumstances can the turbines be allowed to fall into disrepair and become abandoned on site.

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10. INVESTIGATION TEAM

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