

# PROPOSED ABERDEEN WIND ENERGY FACILITY

ABERDEEN, EASTERN CAPE PROVINCE

DESKTOP CULTURAL LANDSCAPE SCOPING STUDY  
10 AUGUST 2022



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Prepared for CTS Heritage

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*COVER IMAGE: Wolwekop from the R61 with Sleeping Giant behind, Winter 2022*

## A. INTRODUCTION

This cultural landscape study of the Aberdeen Wind Energy Facility (WEF) is specialist input into a Heritage Impact Assessment (HIA) undertaken in terms of Section 38 (8) of the National Heritage Resources Act (Act 25 of 1999; NHRA).

The area proposed for the Renewable Energy Facility (REF) is located approximately 16 km west of Aberdeen in the Eastern Cape. The area is located within the identified Beaufort West Renewable Energy Development Zone (REDZ) and the grid connection corridor falls within the Central and Eastern Corridors of the Strategic Transmission Corridors. The town of Aberdeen is some 55 Km south-west of Graaff-Reinet, 155 km south-east of Beaufort West and 32 Km south of the Camdeboo Mountains.

It is located in the Sarah Baartman District Municipality of the Eastern Cape Province.

### A.1 Study Brief and Scope of Work

The purpose of this specialist study is to assess the project from a cultural landscape perspective as a component of an integrated HIA that satisfies Section 38 (3) of the NHRA. The assessment has included the following scope of work:

- A historical overview of the site and its broader context.
- The identification, mapping and assessment of heritage resources and sensitive heritage receptors from a cultural landscape perspective at various scales, involving an initial desktop study and subsequent field-work undertaken between the 17<sup>th</sup> and 18<sup>th</sup> July 2022.
- The identification of cultural landscape heritage indicators relating to the overall principle of the development and buffer areas for sensitive heritage resources/receptors.
- An assessment of the impact of the proposals on the cultural landscape including cumulative impacts and formulation of recommended mitigation measures.

## A.2 Project Description

Atlantic Energy Partners (Pty) Ltd is proposing to develop a cluster of 4 x 170MW wind farms plus grid connection infrastructure comprising a 132/400kV collector switching station and a 132/400kV overhead power line (within a 100km long and 300m wide corridor) on a site near Aberdeen in the Eastern Cape Province.

The layout of the proposed WEF is indicated in Figure 2 incorporating up to 120 wind turbines spread across 4 project areas.

## B. SITE DESCRIPTION

The proposed development site lies within the central plateau basin of the Great Karoo.

- **Geology:** The Adelaide subgroup, mainly compact tillite, shale and sandstone (Dwyka Formation and Ecca Group), with very low ground water yield.
- **Mountains:** This portion of the vast plains area is contained in the south by the Witberg mountain (peak 1427m), and bound to the north by the Great Escarpment. This includes the Sneeuwberg mountain range, which lies north of Graaff-Reinet between Beaufort West and Cradock running roughly east west for 48 km. It curves slightly south at both eastern and western end, with the latter including the “Sleeping Giant” (1777m) section of the Camdeboo Mountain. Wolwekop is topographical landmark lying just north of the R61 and the proposed WEF.
- **Plains:** Colloquially, the plains area has several names, which describe loosely identified geographic areas such as the Camdeboo south of Graaff-Reinet and the Koup (Die Vlakte), west of Aberdeen towards Beaufort West.
- **Water:** This is an arid, semi-desert region with a low annual rainfall of 100-200mm. This has dictated low growing karroid shrub vegetation and sparse habitation. The occasional heavy water flow resulting from early summer storms is collected in dams; supply it is augmented by ground water extraction. The Kariega River lying west of the site feeds the Biervlei Dam north of Willowmore, used for flood water retention.
- **The Fonteinbos Nature Reserve (1500ha):** West of Aberdeen on the seasonal Kraai River, which extends west through the proposed development site. A perennial spring in the reserve, “Die Oog”, supplies drinking water and irrigation for Aberdeen agriculture, and is managed through spring-fed water furrows.
- **Agriculture:** Predominantly small livestock farming including Merino and Dorper sheep and Angora goat farming, and some game farming activities. The recent 7 year-long drought has impacted farming activities heavily in this area and a number of ruined farms are being man-

aged centrally as they have no longer been viable to farm as separate businesses.

- **Routes:** The development site lies between the R61 and N9. It extends south from the R61, occasionally straddling the route. This route connects Beaufort West and Aberdeen, loosely following an early wagon route to Graaff-Reinet. The N9 follows an almost straight line across the plains where it connects Willowmore to Aberdeen. A secondary route to Murraysburg connect to the R61 just west of the topographical landmark of Wolwekop.
- **Settlement patterns:** A limited settlement footprint with a dispersed pattern of farmsteads and stone kraals, and the historical town of Aberdeen being the only major urban settlement within the local area situated at the intersection of the R61 and N9, and approximately 16km to the east of the proposed WEF. A number of the farmsteads investigated within the site of the proposed WEF and in close proximity thereof are abandoned and in a ruinous state, probably due to the recent 7 year drought severely impacting the agricultural economy of the area.
- **Aberdeen:** Situated approximately 16km from the proposed WEF. It is a textbook example of a Karoo grid kerkdorp dating to the mid-19<sup>th</sup> century. It lies on the Kraay Rivier with the primary source of water supplied from the nearby perennial spring. The town has a noteworthy collection of flat roofed Karoo-type houses and turn of the 20<sup>th</sup> century villas associated the merino-sheep boom. In addition to numerous distinctive streetscapes and townscape qualities, the street plan accommodates an octagonal block occupied by the Dutch Reformed Church and situated on axis with Church, Market and Andries Pretorius Streets. The church steeple is visible from a 25 km distance. The setting of the town within the vast open plains of the Camdeboo is in contrast to the dramatic mountain backdrop of the Camdeboo Mountains to the north. Local topographical conditions shield views from the town towards the proposed WEF.



Figure 1. Site location in regional context  
 (Source: Base map Google EarthPro)



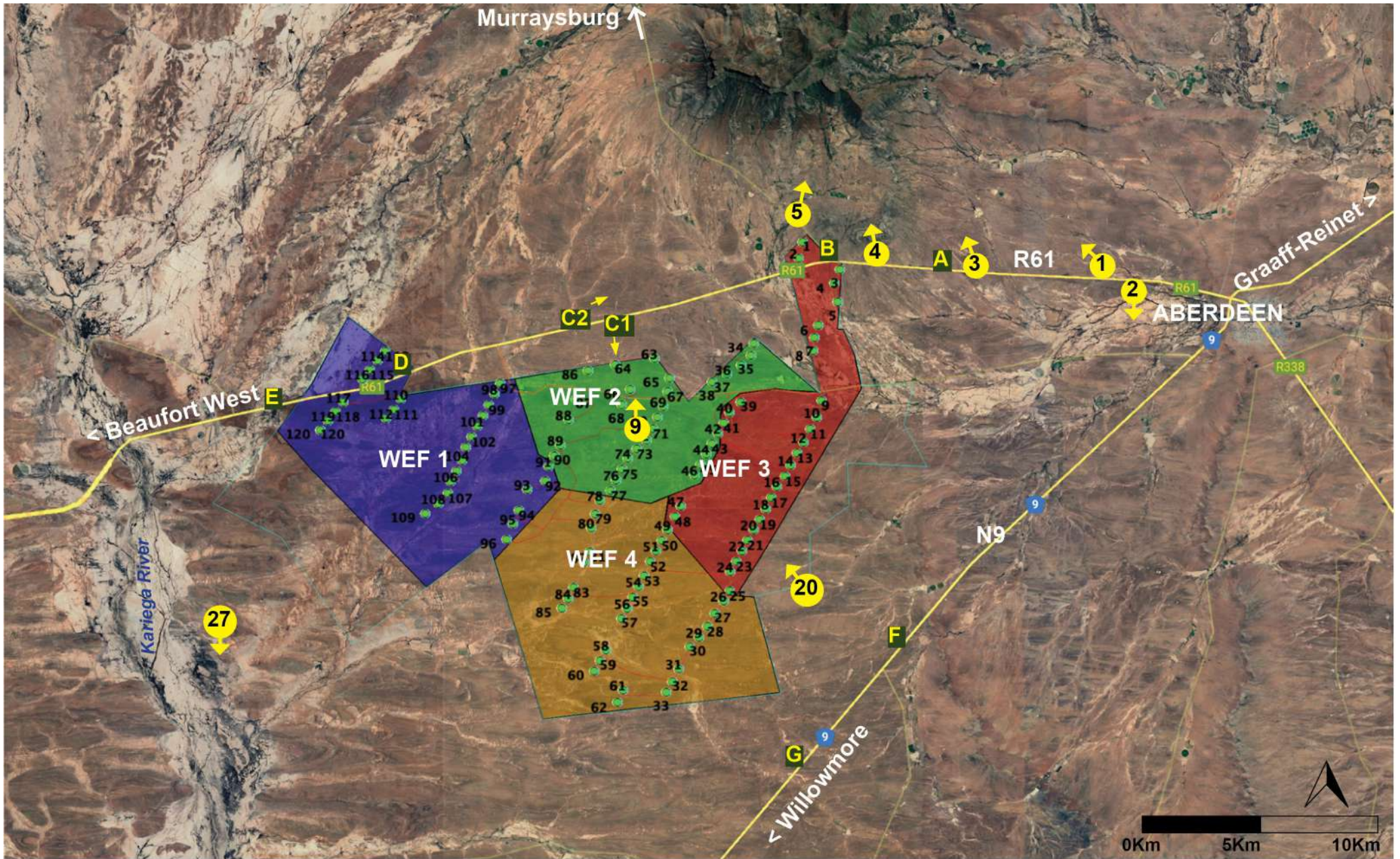


Figure 2. Site location in local context with reference to photographs (Source: Base map Google Earth).



Views of significant mountain formations

1. View from R61 looking north-west towards the towards Sleeping Giant mountain range.
2. View south from R61 into Fonteinbos Nature Reserve
3. View from R61 looking north-west towards the towards Sleeping Giant mountain range.
4. View from R61 near Murraysburg Road intersection towards Wolwekop and Sleeping Giant behind.
5. View north from Murraysburg Road toward Sleeping Giant.



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9. View from farm road looking south across vast open plains with Windemere farmstead in the distance



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20. View from farm road near Skoongesig farmstead looking north-west towards the proposed WEF



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27. View from farm road looking south across vast open plains characteristic of the local landscape with Teerputs farmstead in the distance





A. Streetview: R61 heading west out of Aberdeen



D. Streetview: R61 west from Aberdeen, dam and wind pump feature



B. Streetview: R61 intersection with secondary, gravel road to Murraysburg



E. Streetview: R61 east towards Aberdeen, with Camdeboo Mountains



C1. Streetview: View south across plains



F. Streetview: N9 Aberdeen to Willowmore



C2. Streetview: R61 east towards Aberdeen, with Camdeboo Mountains



G. Streetview: N9 view north towards proposed WEF location

### C. BRIEF HISTORICAL OVERVIEW

The name Karoo has its roots in the Khoe word meaning “place of great dryness”. The archaeology shows the area as well-used on a seasonal and nomadic basis with water sources providing sites suited to the needs of hunter-gather San people and pastoralist-herder Khoe people (Anderson 1985: 8). The name Camdeboo (Qamdobowa in isiXhosa) is thought to have evolved from a phonetically similar Khoe word possibly meaning “green hollow” to describe the plains after seasonal rain storms.

The late 18<sup>th</sup> century frontier of the colony was edged by two vast administrative regions, the District of Stellenbosch (1679) and the District of Graaff-Reinet (1786). European settlement came slowly to the central Karoo, with the push north by trekboere taking place in the mid-to late-1700s. Like the Khoe, their lifestyle was semi-nomadic, following transhumance routes and taking temporary ownership of land through a system of renewable permits for loan farms. This was a period of uneasy cohabitation between the trekboere, and the San, Khoe and Xhosa alienated from their preferred grazing to the south and east. Further expansion was fiercely opposed by the San, who resisted alienation from water sources, until they were forcibly suppressed in the 1790s.

British colonial rule from 1806 brought a new landownership policy of perpetual quitrent, imposing “settled agriculture”. This dispossessed Khoe, Xhosa and many of the poorer trekboere who were unable to fit the legal system and were pushed beyond the Great Escarpment or subjugated to a life of labour. Wealthy farming burghers, merchants and government officials took over land suitable to sheep farming (Anderson 1985, Guelke Shell 1992). The 1820s to 1860s shows a steady pattern of Karoo land grants, with the later ones in more remote areas often formalising the rights of a pre-existing land user.

Aberdeen town was established on the farm Brakkefontein, which had been a fairly early grant for the area, signed over in 1817 by the British Governor Lord Charles Somerset. In 1855 the farm was bought by the Graaff-Reinet Dutch Reform church to provide for its congregation, growing as result of the Marino wool export boom which began in the 1840s.

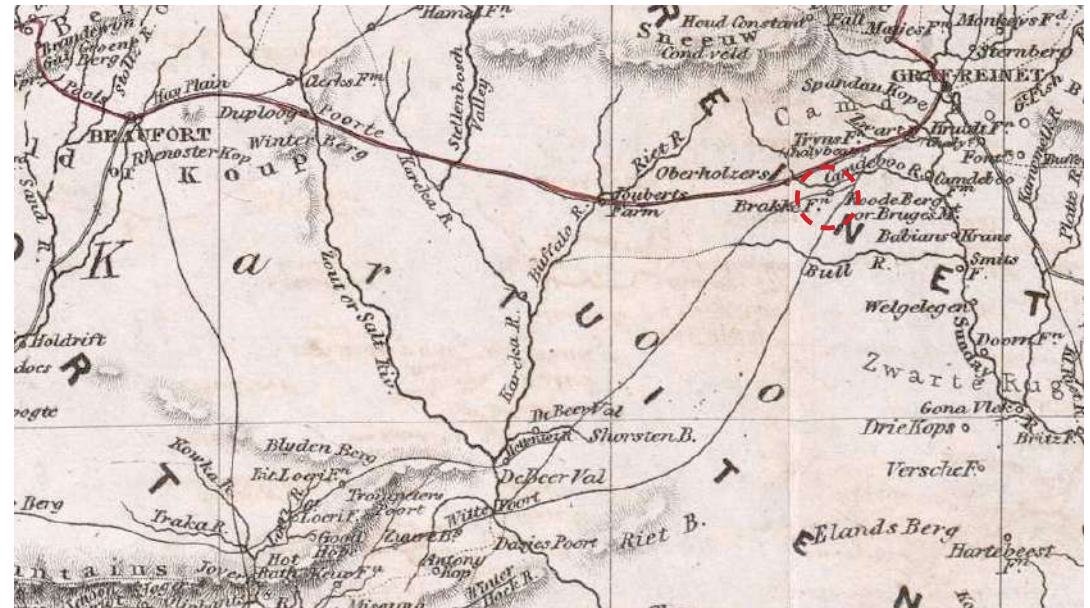


Figure 3. 1844 map. Route connecting Beaufort and Graaff-Reinet. Brakkefontein, farm (Aberdeen) circled. (Source: Jas Wylde, UCT Digital Collections, islandora19573).

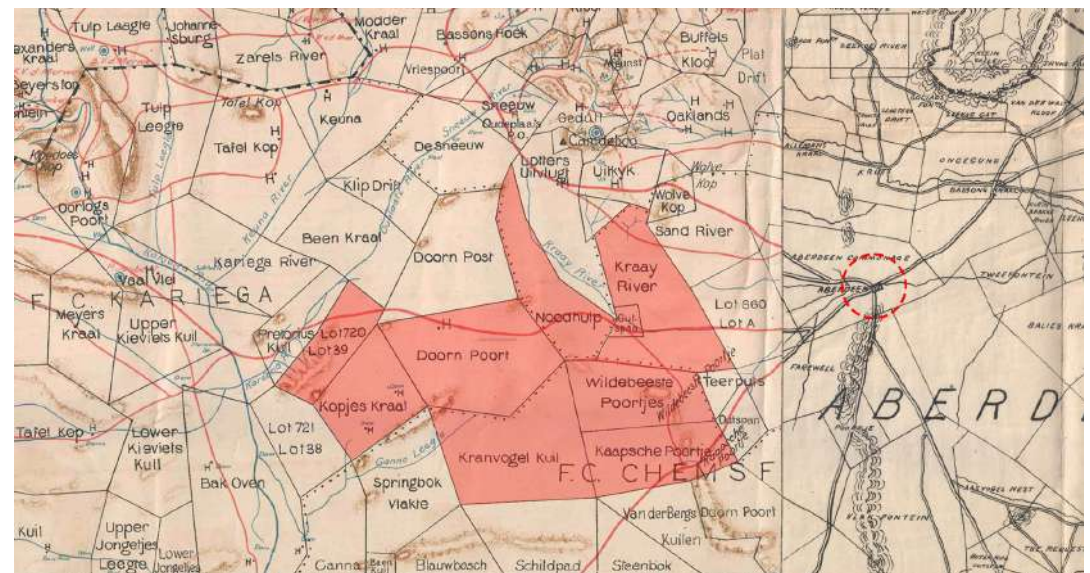


Figure 4. 1901 map. Historic route connects Beaufort West and Aberdeen running south of N61. (Source: UCT Digital Collections islandora:24827 and islandora:24848).

Work began on the Cape Gothic-style Dutch Reform church in 1855 (completed in 1907). Built to seat 2000, it is notable for the unusual height of its steeple, over 50m, which acts as a landmark in the mostly flat landscape. The Methodist church was completed in 1883 and is a simple stone rectangular building, with buttresses and arch top windows. The bell tower is topped with a belfry of cast iron lace-work.

The invention of the ground water pump, the “wind mill” (late 1880s) allowed year-round access to water for irrigation and stock, and becoming an identifying feature of the Karoo landscape. By the 1900s the area was well established for wool, mohair and tobacco production.

The South African War (1899-1902) had a negative social impact on Aberdeen area, pitting families aligned with the Colonial government against those with Boer Republic sympathies, with 139 “Cape Rebels” recorded. However, it was not a significant military base nor the site of major battles and little tangible evidence remains.

### C.1 Farms Affected by Proposed Development

Provisional research suggests that the farms affected by the proposed development fall into the mid-19th century period of quitrent grants. In all cases, it is possible that the farm was in use prior to the grant, and may have had early structures for shelter/habitation and animal management. However, it is probable that permanent habitation followed later once water management systems, such as the ground water wind pumps, were readily available.

Surveyor annotations on the early survey diagrams for the affected farms indicate roads, water features, houses and dams. Cadastral meeting points are occasionally identified by “bush”, indicating the rarity of taller vegetation clusters and their capacity to serve as landmark features.

- Doornpoort 93, a very large tract of land granted in 1865 to James Roberts who subsequently purchased it. It was subdivided in the mid-20thC. An 1861 survey shows the historic route running parallel and south of the R61 from Aberdeen towards Beaufort West.

- Kraanvogelkuil surveyed 1869 was granted to JP Pienaar in 1874. The survey diagram notes that it is crossed by the “road to Aberdeen”.
- Neighbouring Koppieskraal 157 was also surveyed in 1869 and granted to JS Pienaar in 1876. The diagram shows a house and dam.
- The Kraayrivier Outspan 150, noted in early surveys as a public outspan on the periodical Kraay River and shown as having a bushy patch, moved into the private ownership of Jacob Johannes Weideman and sons in 1893. This reflects the late 19thC improved road systems and means of transport, reducing the need for outspan places.
- Kraairivier 149 was granted at the same time to Weideman and sons.
- The settlement of Pretoriuskuil on Farm 91 adjacent to the N61 may include early settlement fabric.

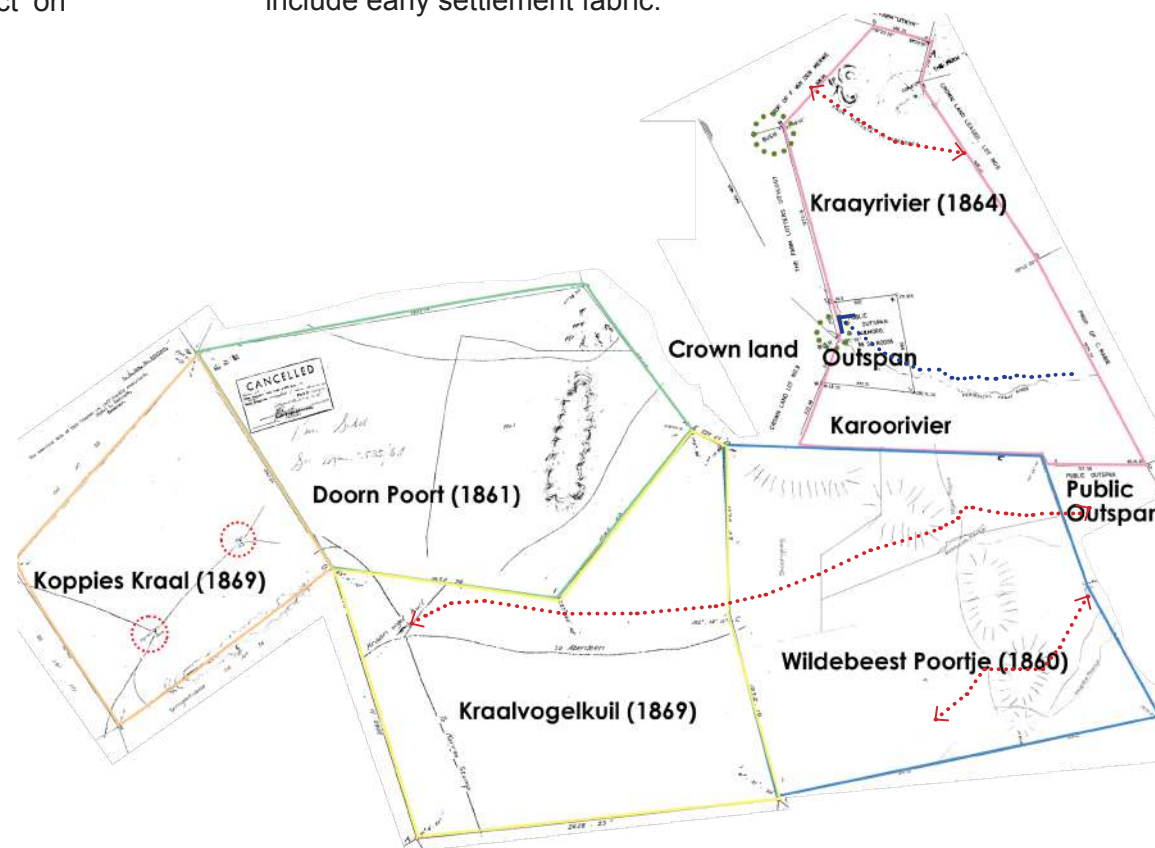


Figure 5. Partial composite of survey diagrams.

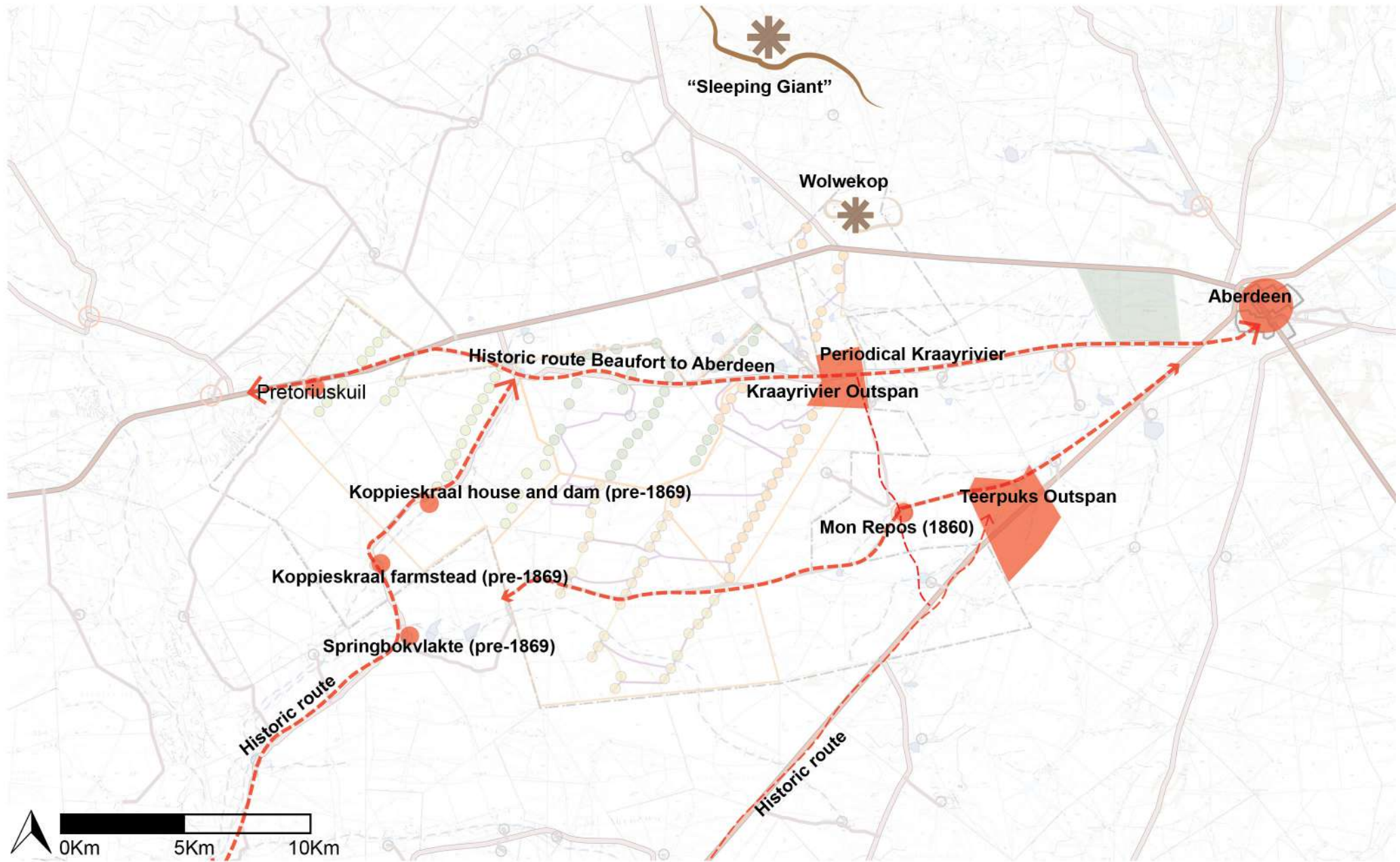


Figure 6. Historic routes, settlements, farmsteads.

## D. STATEMENT OF SIGNIFICANCE (CULTURAL LANDSCAPE)

### D.1 Overall Landscape

The overall landscape of the study area is a vast, open, barren, largely featureless plain. It lies to the west of an area of high scenic value framed to the north by the south-west sector of the Camdeboo Mountains, notably the Sleeping Giant.

The R61 and N9 are regional linkage routes traversing a representative Karoo landscape and having some scenic heritage value in terms of its sense of remoteness.

The Camdeboo Plains and mountain backdrop, with its core lying east of the proposed development area, is of high local historical, aesthetic architectural and social significance. Of particular heritage significance is the town of Aberdeen, which is worthy of Grade IIIA heritage status in terms of the following:

- Historical value dating to the mid-19<sup>th</sup> century and including its local role in the South African War.
- Architectural and aesthetic value in terms of its street pattern, streetscape and townscape, concentration of conservation worthy buildings, and its relationship with its setting, notably its mountain backdrop to the north.
- Cultural landscape value as providing a focal and destination point within a vast open flat landscape and at the intersection of two regional routes.

The cultural landscape to the west of Aberdeen and forming part of the landscape affected by the proposed WEF has historical value in terms of forming part of a pattern of land grants dating to the mid-19<sup>th</sup> century. Natural features and patterns of use over time contribute to its landscape character (watercourses, topographical features, routes, farmsteads, stone kraals). While the landscape itself is not worthy of formal protection in terms of the NHRA, it possesses conservation-worthy landscape elements for aesthetic (visual, place making) and historical reasons.

### D.2 Landscape Elements

#### D.2.1 Topographical Features

- Wolwekop peak situated just north of the R61 near the Murraysburg secondary road. This is a distinctive landmark feature.
- Camdeboo Mountains and the “Sleeping Giant” formation framing the long views northwards.

#### D.2.2 Water courses and infrastructure

- The route of the periodical Kraai River crossing a portion of the site and informing a pattern of settlement.
- Dams, wind pumps and water furrows.

#### D.2.3 Planting Patterns

- Clumps of trees typically founds around homesteads as shelter from the sun/wind and as place-making elements.

#### D.2.4 Scenic and historic routes

- The R61 as a regional linkage route of some scenic value with dramatic views towards the mountain backdrop to the north.
- The combination of the intersection of the R61 and the Murraysberg Road, change in topography and the landmark qualities of the Wolwekop providing a threshold condition.
- The east-west historic route running parallel to the R61 and through the site, which has structured a historical pattern of settlement.

#### D.2.5 Settlements

- Aberdeen town of suggested Grade IIIA heritage value and situated approximately 16 km east of the proposed WEF.
- A number of farmsteads and stone kraals situated within or adjacent to the proposed WEF of mostly Grade IIIC heritage value and in some instances of suggested Grade IIIB heritage value. Refer to D.3 below.

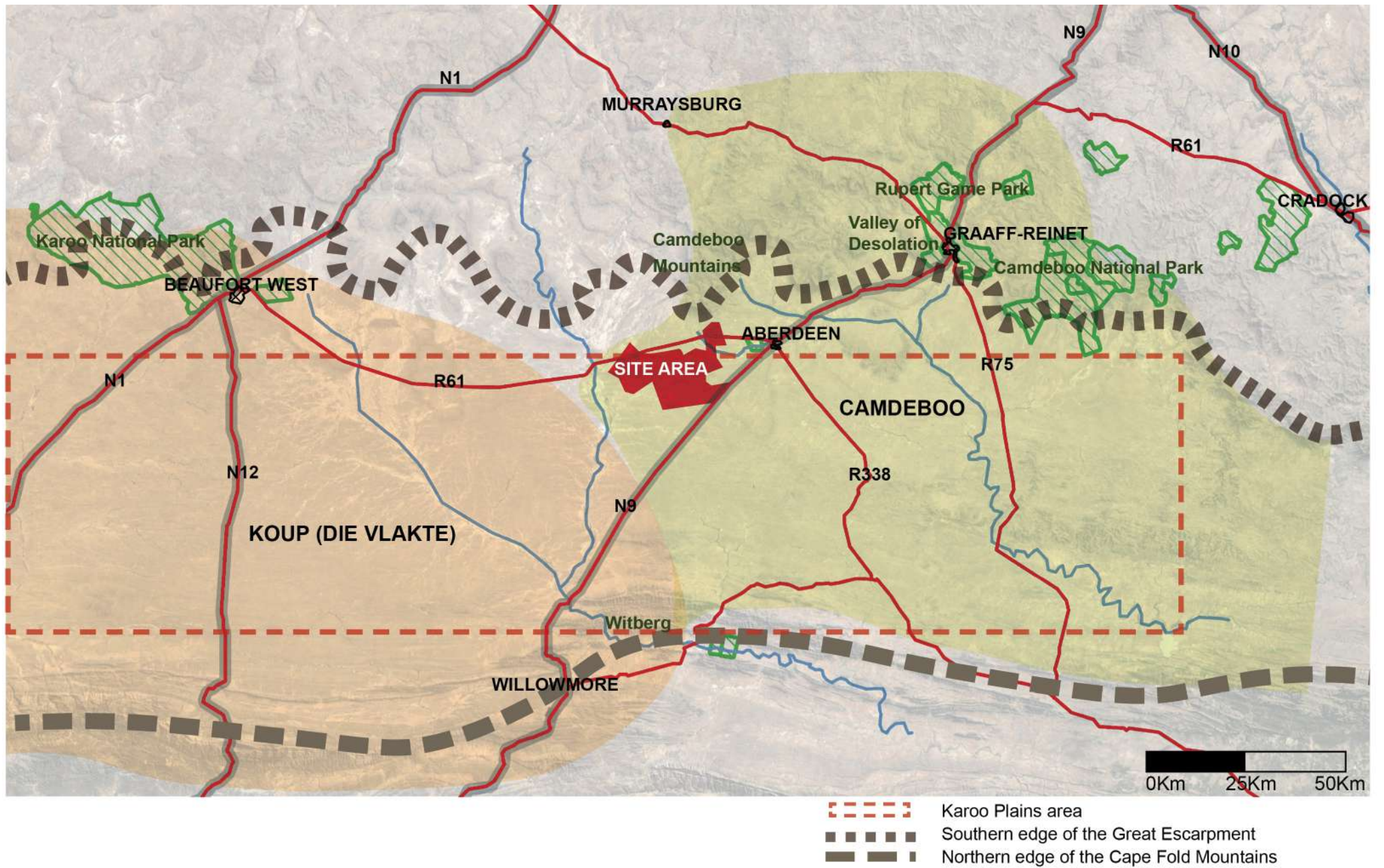


Figure 7. Cultural landscape overview at regional scale.

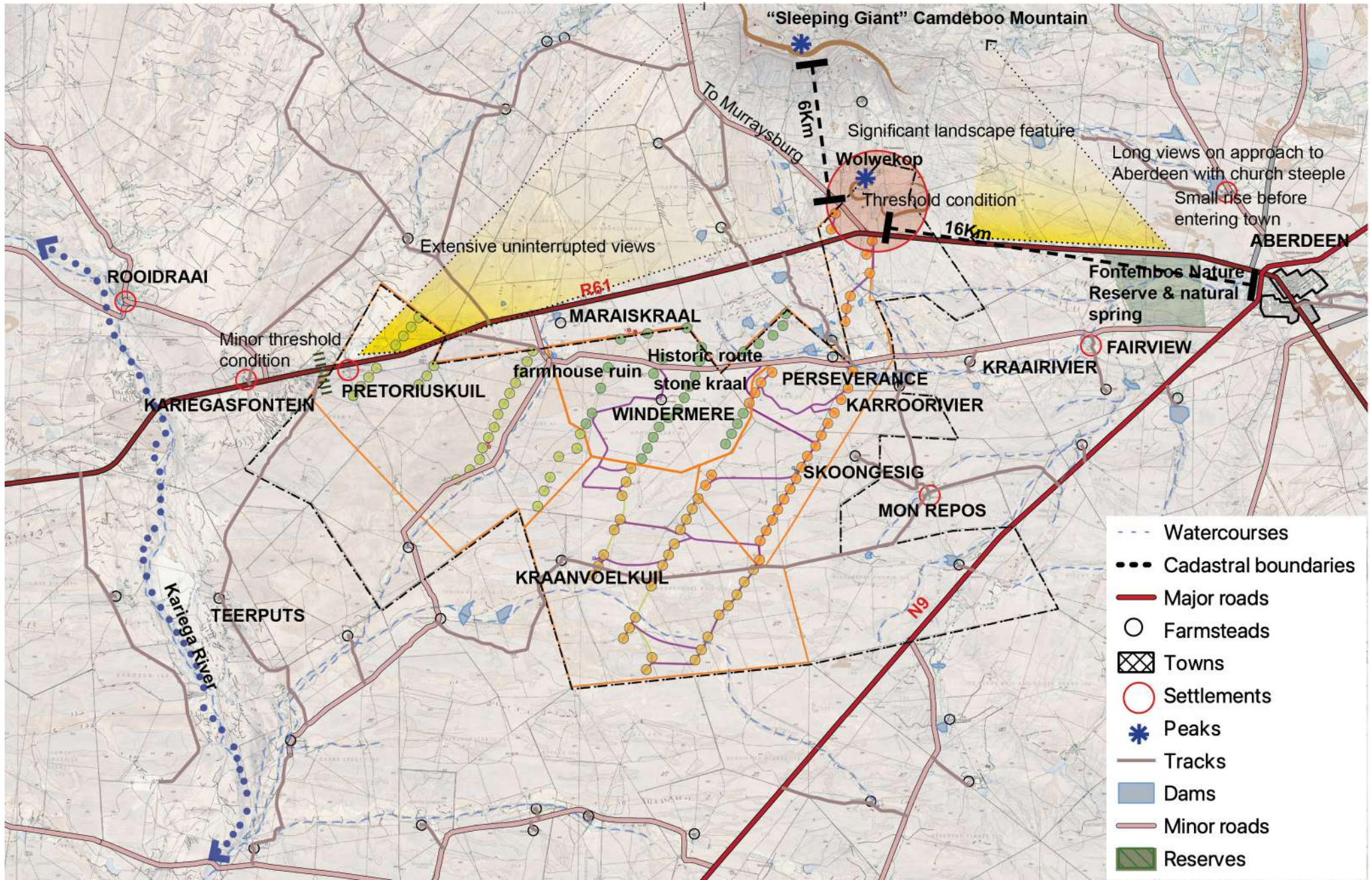


Figure 8. Cultural landscape elements at local scale.

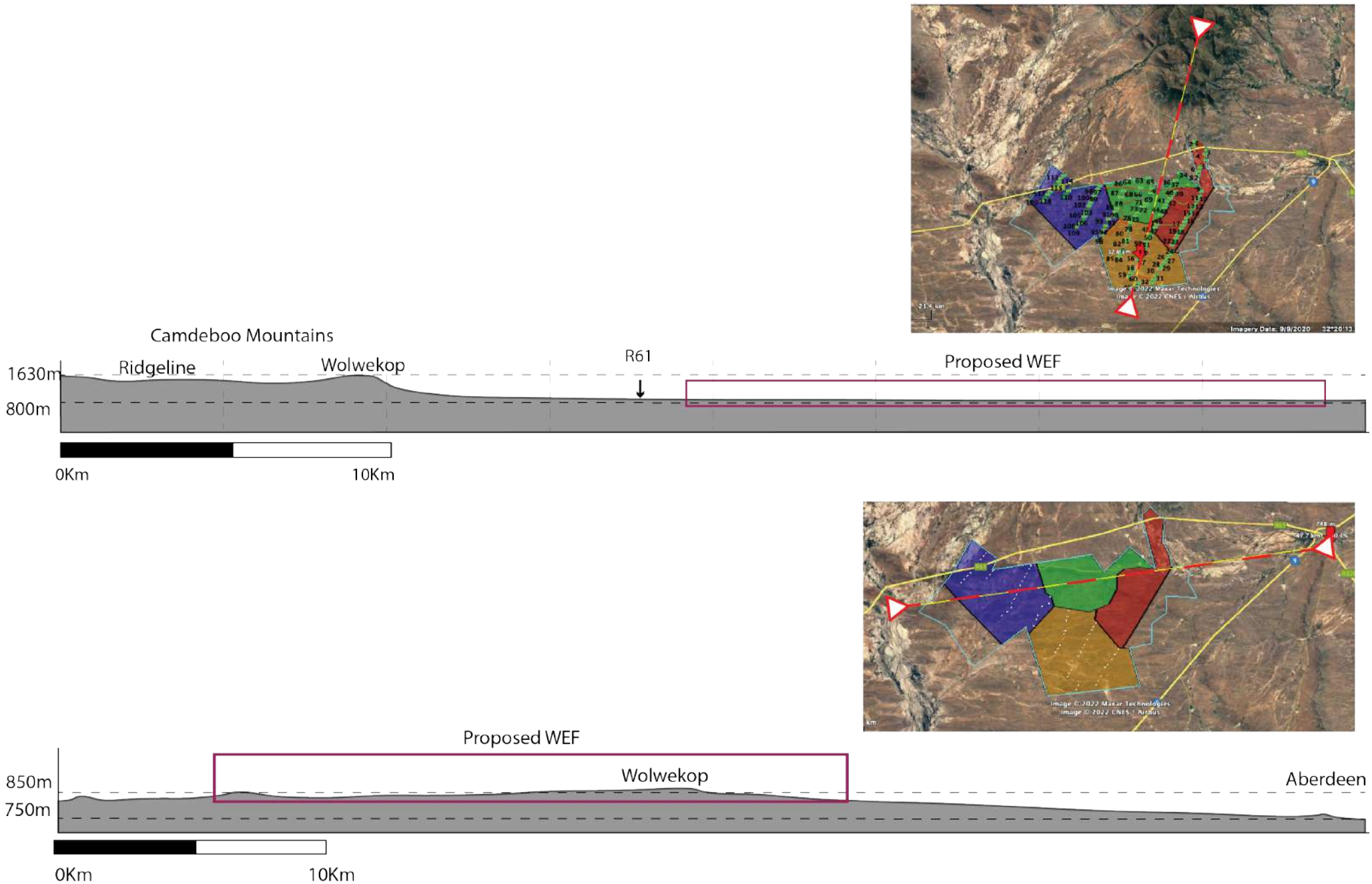


Figure 9. Diagrammatic sections of topographical condition



### D.3 Built Environment Elements

This section including the map below identifies built environment elements and their suggested gradings.

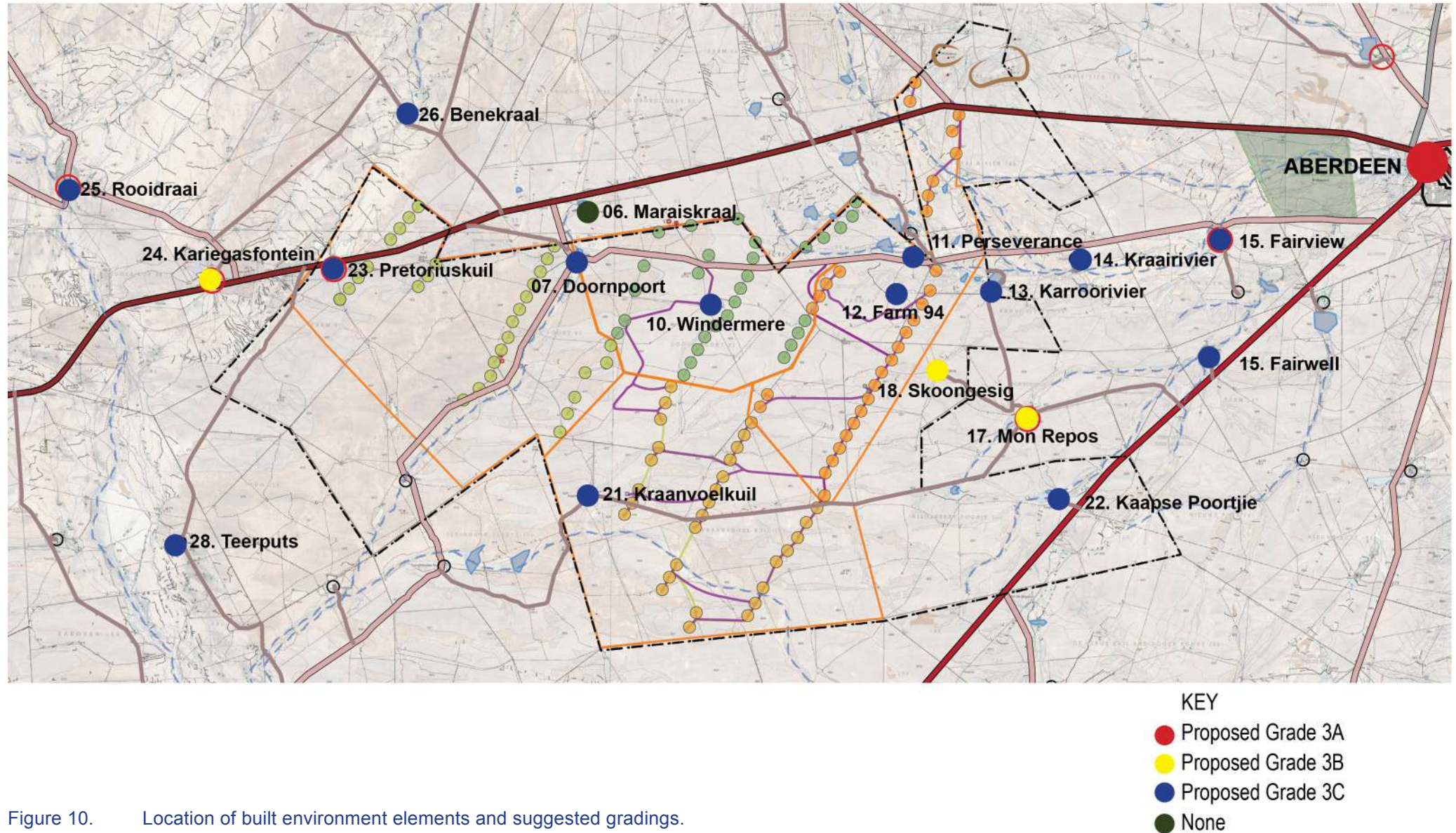






















Figure 10. Location of built environment elements and suggested gradings.




## Table of Built Environment Elements




MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
06. Maraiskraal	Abandoned farm structures located adjacent to the R61 and dam.	Minimal heritage value.	None		
07. Doornpoort	Ruinous homestead of mud brick construction with a clump of mature trees.	Some contextual heritage value as a historical marker in the landscape and related to historical east-west access route.	3C		
10. Windermere	Simple farmhouse with adjacent stone structure. Associated gum trees. Kraal structure to the east of the approach road on an elevated position overlooking plains to the south.	Some contextual heritage value as a distinctive feature in the flat open landscape and related to historical east-west access route.	3C		
11. Perseverance	Barn type structure located at entrance off historical access route and forming part of a group of mid-20th farm buildings. Located in the vicinity the confluence of tributaries of the Kraay Rivier and historical outspan.	Contextual heritage value as a historical marker in the landscape and related to the east-west historical access route, Kraay Rivier and historical outspan.	3C		

MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
12. Farm 94 (farmstead name undetermined)	Typical simple farmhouse dating to the mid-20 <sup>th</sup> century.	Some contextual heritage value as a historical marker in the landscape and related to the east-west historical access route.	3C		
13. Karroorivier	Typical simple farmhouse dating to the mid-20 <sup>th</sup> century	Some contextual heritage value as a historical marker in the landscape and related to the east-west historical access route.	3C		
14. Kraairivier	Abandoned farmstead of mud brick construction with stone kraal.	Some contextual heritage value as a historical marker in the landscape and related to the east-west historical access route.  <i>NOTE: Graves and historic material located at a different Kraairivier location by CTS (ABD124) included in the Archaeological Impact Assessment Report (August 2022).</i>	3C		

MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
15. Fairview	Farm complex with evidence of late 19th early 20th century fabric, highly altered. Treed setting.	Some contextual heritage value as a historical marker in the landscape and related to the east-west historical access route.  <i>Fairview farm as a whole has associations with the early military career of Captain Lawrence Oats, who participated in the South Pole Terra Nova Exploration 1911 – 1912. It was during his service in the South African War that he was wounded in a skirmish outside Aberdeen on Fairview farm (2022).</i>	3C	 	
16. Fairwell	Abandoned farmstead of mud brick construction visible from the N9.	Some contextual heritage value as a historical marker in the landscape related to the N9.	3C		
17. Mon Repos	Farm complex with late 19th early 20th century homestead (extensively altered), kraal structure, treed setting and associated dam.	Some intrinsic heritage value in terms of surviving historic fabric and as a historical marker in the landscape	3B	 	

MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
18. Skoongesig	Abandoned farm complex with a late 19th early 20th century farmhouse and stone kraal. Elevated location with expansive views.	Some intrinsic and contextual value in term of intact period features and as a historical marker in the landscape.	3B		
21. Kraanvoelkuil	Farm complex with simple dwellings and stone kraal. Remote setting.	Contextual heritage value as a historical marker in the landscape.	3C		
22. Kaapse Poortjie	Farm complex with 'Cape Revival' gabled homestead, possibly with earlier fabric. Treed setting. Large dam.	Contextual heritage value in term of contributing to landscape character.	3C		
23. Pretoriuskraal	Farmhouse dating to the mid-20th century. Possibly earlier fabric.	Some contextual value as a historical marker in the landscape	3C		

MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
24. Kariegasfontein	Farmstead dating to the late 19 <sup>th</sup> early 20 <sup>th</sup> century with 1930s additions. Treed setting.	Some intrinsic value in terms of period features and of contextual value as a historical marker in the landscape.	3B		
25. Rooidraai	Early 20 <sup>th</sup> century farmstead, highly altered. Treed setting.	Contextual value as a historical marker in the landscape.	3C		

MAP REFERENCE	DESCRIPTION	SIGNIFICANCE	SUGGESTED GRADING	PHOTOGRAPH (Winter July 2022)	
26. Benekraal	Early 20 <sup>th</sup> century farmstead. Remote setting.	Contextual value as a historical marker in the landscape.	3C		
28. Teerputs	Early to mid 20th century farmstead. Treed setting. Very remote.	Some contextual value as a historical marker in the landscape.	3C		

## E. HERITAGE INDICATORS (CULTURAL LANDSCAPE)

### E.1. Principle of the Proposed Development

The principle of a WEF in the proposed location is acceptable from a cultural landscape perspective. There are no red flags, which identify the project to be a fatal flaw from a cultural landscape perspective.

At a regional scale, the project is located to the south of the Great Escarpment, to the west of the distinctive Camdeboo Plains and at considerable distance from the cluster of Nature Reserves around Graaff-Reinet. At a local scale, the project is generally located away from major scenic topographical features and beyond 16km from the town of Aberdeen.

At a local scale, there are a number of sensitive heritage receptors from a cultural landscape perspective, which influence the location of certain wind turbines. Recommended buffer areas for these resources/receptors is unpacked in Section E.3 below.

### E.2. General Principles

These principles are derived from international best practice as contained in various International Charters on Conservation and a number of local adaptations, and apply to this cultural landscape assessment.

- Landscape significance - acknowledge the overall natural and cultural landscape, and the layered pattern of settlements in response to the natural landscape over time.

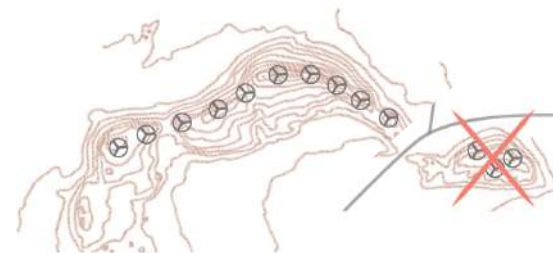


- Landscape integrity – retain the essential character and intactness of wilderness, rural and urban areas in the face of fragmentation through unstructured urbanisation and commercial agriculture.
- Landscape connectivity – retain the continuity and interconnectedness of wilderness and agricultural landscapes, including ecological corridors and green linkages.
- Landscape setting – maintain the role of the natural landscape as a “container” within which settlements are embedded, the landscape providing the dominant setting or backdrop.
- The logic of landscape – recognise the intrinsic characteristics and suitability of the landscape and its influence on land use, settlement and movement patterns, in response to geology, topography, water, soil types and microclimate.

#### E.2.1 Wind turbine placement principles

The following general principles are applicable to the placement of wind turbines.

- Avoid steep slopes and distinctive topographical features.
- Allow for a buffer of 3km around Nature Reserves.
- Allow for a buffer of 2km round historical towns.
- Avoid the placement of turbines of both sides of major routes.
- Allow for a buffer of 1km either side of major historical scenic routes and 500m either side of secondary historical scenic routes.
- Allow for a buffer of 1km to 500m around heritage sites.





### E.3 Heritage Receptors and Buffers

The following heritage receptors and associated buffer areas are applicable to the placement of wind turbines. Listed are those specific heritage receptors applicable to the study area of the proposed Aberdeen WEF.

HERITAGE RESOURCE/RECEPTORS	NO-GO AREAS	HIGH SENSITIVITY	MEDIUM SENSITIVITY
Cultural landscapes including natural reserves - formally protected or worthy of formal protection. <b>Fonteinbos Nature Reserve</b>	0 – 3 km	3 – 5 km radius	5 – 10km
Settlements (towns, villages and hamlets) - formally protected or worthy of formal heritage protection. <b>Aberdeen and its setting</b>	0 - 2km radius	2 - 4km radius	4 – 6km
Historic scenic linkage routes. <b>R61, N9 as major linkage routes</b> <b>Murraysburg Road and east-west historical access route</b> <b>Threshold condition at intersection of R61 and Murraysberg Road, and landmark topographical feature (Wolwekop)</b>	0 – 1km buffer either side	1 – 2.5km	2,5 - 5km
Heritage sites worthy of Grade I, II and IIIA heritage status. <b>Not applicable</b>	0 – 1km radius	1 – 2km	2- 5 km
Heritage sites worthy of grade IIIB and IIIC heritage status. <b>Various built environment features (farmsteads, stone kraals)</b> <b>Water features (rivers, wetlands and dams)</b> <b>Related mostly to the Kraay Rivier as a landscape structuring element</b> <b>Farmsteads generally associated with dam structures</b>	0 - 500m radius	500m – 1km	1 – 2km
Topographical features (ridgelines, peaks, scarps) <b>Wolwekop</b>	0 - 250m buffer either side/ surrounding water feature	250 - 500m	
Steep slopes <b>Not applicable due to placement of WEF in relatively flat landscape</b>	0 - 250m radius buffer from peak/apex	250 - 500m	
	>1:4 slopes	>1:10 slopes	<1:10 slopes

*Heritage receptors adapted from Oberholzer 2020*

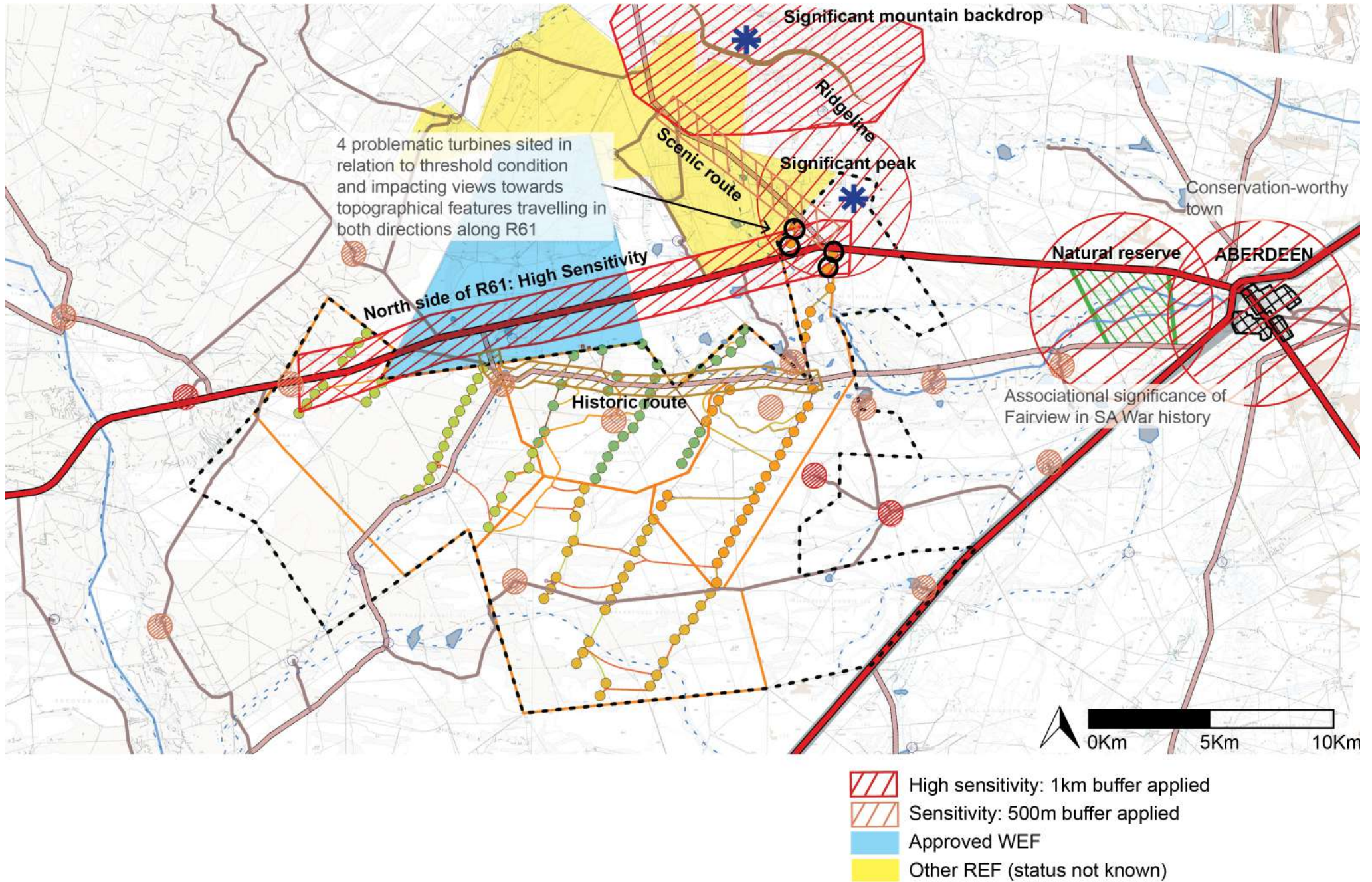


Figure 11. Buffer areas overlay with proposed WEF layout

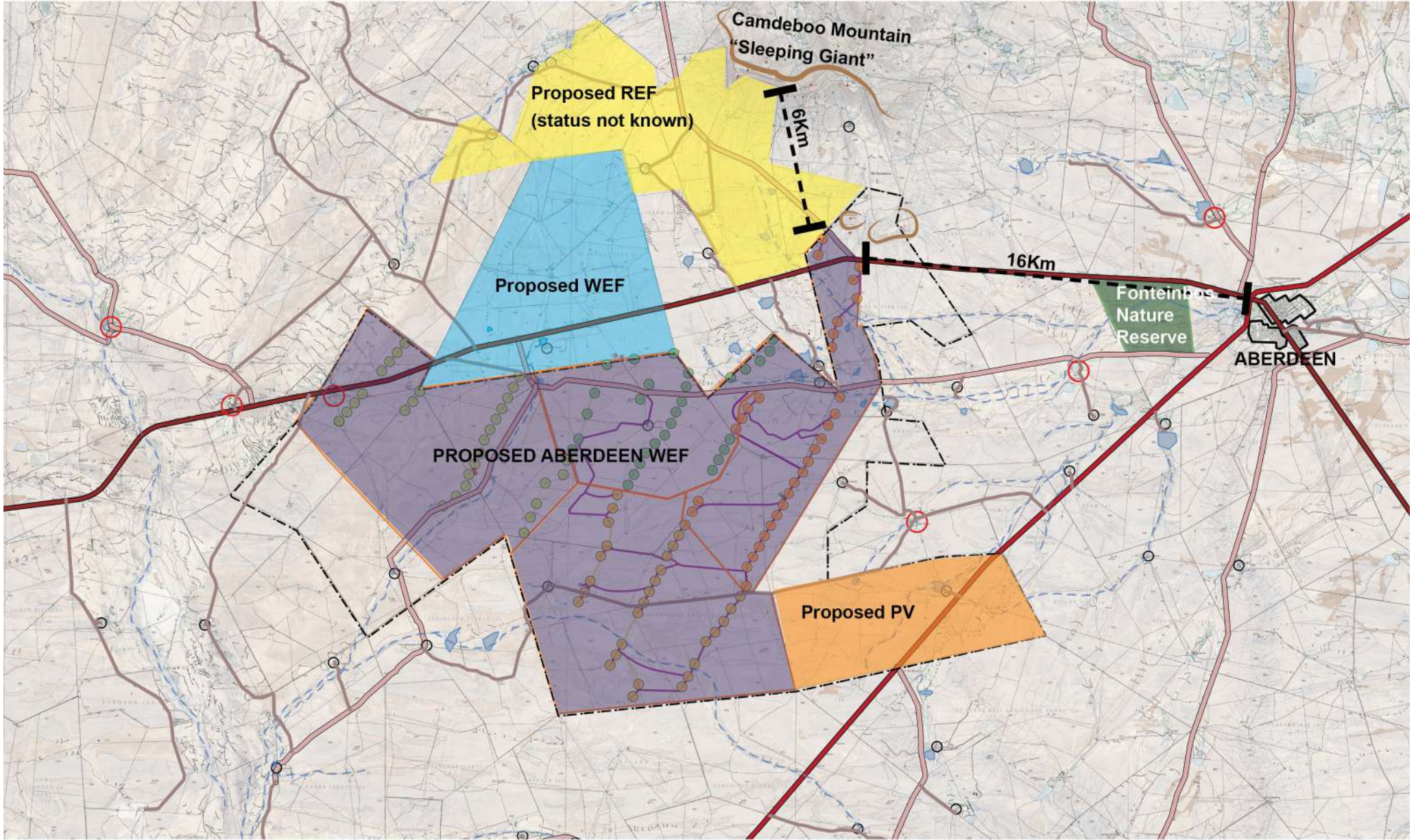


Figure 12. Cumulative impacts of approved and proposed REFs

## F. ASSESSMENT OF IMPACTS (CULTURAL LANDSCAPE)

Based on the desktop mapping and assessment of potential heritage resources and receptors, and subsequent fieldwork, the principle of a WEF in the proposed location is acceptable from a cultural landscape perspective. There are no red flags, which identify the project to be a fatal flaw from a cultural landscape perspective.

At a regional scale, the project is located to the south of the Great Escarpment, to the west of the distinctive Camdeboo Plains and at considerable distance from the cluster of Nature Reserves around Graaff Reinet.

At the local scale, the project is generally located away from major scenic topographical features and beyond 16km from the town of Aberdeen and beyond 10km from the Fonteinbos Nature Reserve.

At a local and site scales, the following sensitive heritage receptors have been identified:

- Historical farmsteads (Grade IIIB and IIIC)
- The scenic qualities of the R61
- The Murraysburg Road and east-west historical access route
- Wolwekop as a distinctive topographical feature adjacent to the R61

An overlay of the suggested buffer areas with the proposed WEF project in Figure 10 highlights the following problematic turbines:

- Turbines to the north of the R61: WET 1, 2, 113, 114, 115 and 116. These are located within the 1km buffer area along the R61 and should be removed avoid the placement of turbines both sides of the R61.
- Turbines south of the R61 within the 1km buffer area: WET 3, 4, 110, 117, 118 and 119.
- Turbines located in proximity to Wolwekop, which will impact views towards this topographical feature along the R61: WET 1 and 2.

- Turbines located within the 500m buffer either side of the Murraysburg Road and east-west historical access route: WET 9, 39, 66, 67, 68, 69, 87 and 97.

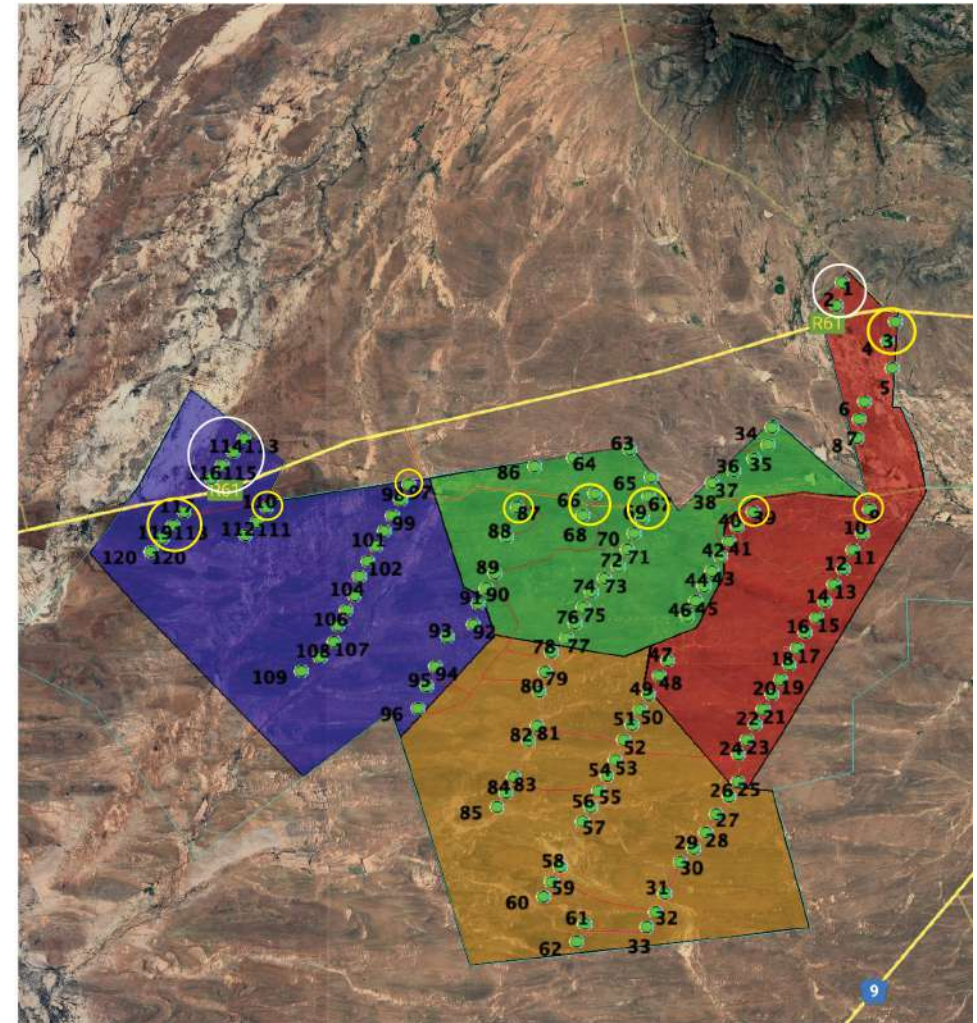


Figure 13. Recommended mitigation measures of no go buffer areas.

## F.1 Cumulative Impacts

The exact extent of cumulative impacts is uncertain as the approval status of the one of the adjacent projects has not yet been clarified. Refer to Figure 11. However, based on the extent of the proposed Aberdeen WEF and the extent of the known approved WEF to the north, the cumulative visual impact of combined projects will be high. However, this cumulative impact does not represent a fatal flaw from a cultural landscape perspective.

## G. CONCLUSION AND RECOMMENDATIONS

The principle of the proposed Aberdeen WEF is acceptable from a cultural landscape perspective.

At a regional scale, the project is located to the south of the Great Escarpment, to the west of the distinctive Camdeboo Plains and at considerable distance from the cluster of Nature Reserves around Graaff-Reinet. At local and site scales, the project is generally located away from major scenic topographical features and beyond 16km from the town of Aberdeen and beyond 10km from the Fonteinbos Nature Reserve.

The cultural landscape to the west of Aberdeen and forming part of the landscape affected by the proposed WEF has historical value in terms of forming part of a pattern of land grants dating to the mid-19th century. Natural features and patterns of use over time contribute to its landscape character (watercourses, topographical features, routes, farmsteads, stone kraals and patterns of planting).

The landscape itself is not worthy of formal protection in terms of the NHRA. However, it possesses conservation-worthy landscape elements for aesthetic (visual, place making) and historical reasons.

At a local and site scales, the following sensitive heritage resources/receptors have been identified:

- Historical farmsteads (Grade IIIB and IIIC)
- The scenic qualities of the R61

- The Murraysburg Road and east-west historical access route
- Wolwekop as a distinctive topographical feature adjacent to the R61

Based on the recommended buffer areas for these receptors, it is recommended that the following wind turbines be relocated or removed:

- WET 1, 2, 3, 4, 9, 39, 66, 67, 68, 69, 87, 97, 110, 113, 114, 115, 116, 117, 118 and 119

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