

6.1 INTRODUCTION

The proposed Roggeveld wind farm project is located within two Provinces, namely the Northern Cape and Western Cape. The Northern Cape portion of the site falls within the Namakwa District Municipality (DM) and in the Karoo Hoogland Local Municipality (LM). The Western Cape portion of the site is located within the Central Karoo DM and in the Laingsburg LM. The Namakwa DM has six local municipalities and covers a geographic area of approximately 126,747 km². The Central Karoo DM comprises of three local municipalities and it is the largest District in the Western Cape Province at 38,853km². *Figure 6.1* shows the location of the proposed project site.

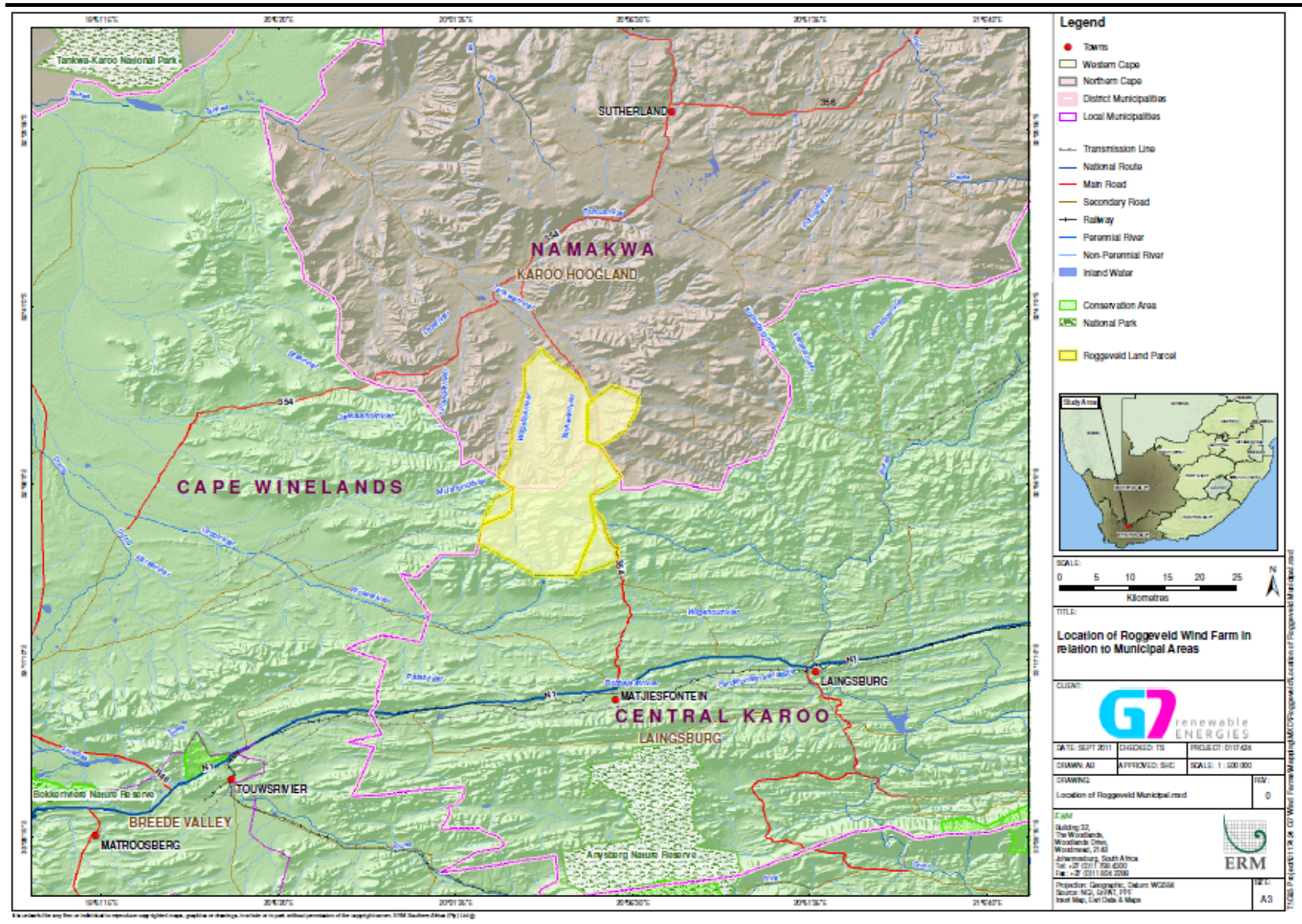
6.2 METHOD

The method used for data collection included desk-based review of secondary data sources and primary data gathering including semi-structured interviews as well as information gleaned from the public participation process. The secondary information was drawn from provincial, district and local sources, including

- Namakwa District Municipality Profile, conducted by the Department of Trade and Industry;
- Integrated Development Plans of the Namakwa DM and Karoo Hoogland LM; and
- Community Survey 2007 conducted by Statistics South Africa.

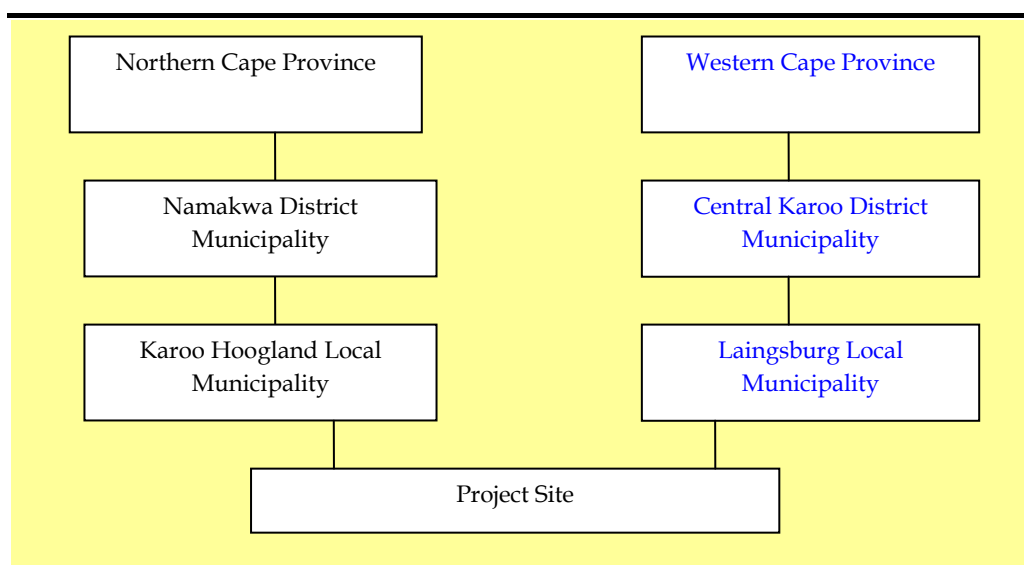
The primary data was provided by the directly affected landowners through semi-structured interviews and issues raised through the public consultation process.

Figure 6.1 Socio-Economic Study Area



The Provincial government is responsible for providing the strategic vision and framework for the Province. They are responsible for ensuring cooperation and collaboration between municipalities and that each municipality performs their respective functions. In turn, each of the District Municipalities is responsible for the development of Integrated Development Plans and for the overall provision of services and infrastructure within the District. *Figure 6.2* shows the administrative levels of the respective government structures.

Figure 6.2 *Administrative Structure*



DESCRIPTION OF PROJECT AREA

The Roggeveld site is approximately 37,000 hectares in size and is comprised of 22 farms, which are owned by 16 landowners (see *Table 6.1*). The site straddles the Northern Cape and Western Cape Provinces. It is located approximately 40km south of Sutherland and approximately 20km north of Matjiesfontein; it is accessed from the R354 arterial road. The site falls within a winter rainfall area. The rainfall is highly variable and the area is prone to drought. The primary activity is sheep farming but some farmers also practice crop farming such as onion seeds, onions, lucerne (alfalfa), and oats, depending on the availability of water on the individual farms. The farming activities are discussed in greater detail in *Section 6.4.1*.

Table 6.1 *Land Parcels*

Farm Name (Western Cape)	Farm Number	Farm Name (Northern Cape)	Farm Number
1. Bon Esperance	RE/73	1. Ekkraal	RE/199
2. Bon Esperance	1/173	2. Wilgebosch Rivier	188
3. Barendskraal	1/76	3. Rietfontein	197
4. Barendskraal	RE/76	4. Karreebosch	RE/200
5. Fortuin	1/74	5. Ekkraal	2/199

Farm Name (Western Cape)	Farm Number	Farm Name (Northern Cape)	Farm Number
6. Brandvalley	RE/75	6. Klipbanks Fontein	RE/198
7. Hartjies Kraal	1/77	7. Klipbanks Fontein	1/198
8. Brandvalley	1/75	8. Ekkraal	1/199
9. Fortuin	3/74	9. Appels fontein	RE 201
10. Fortuin	RE/74		
11. Hartjies Kraal	RE/77		
12. Kabeltouw	160		
13. Nuwerus	RE 284		

6.4.1

Farm Details

The farms that make up the Roggeveld site range in size from 1,800 hectares to 6,000 hectares. The average size of the farms is approximately 2,800 hectares.

The majority of the farms are owned by individual farmers and three of the farms are setup in family trusts; where the immediate family members are the trustees. One of the farms is owned by a farming company that the farmer operates. All farmers except two derive their primary income from sheep farming. The intensity of the farming varies depending on the size of the farm, quality of the grazing land and access to water.

Approximately two thirds (eight of the 13 farms) of the farms have been acquired through inheritance; where some of the farms have been in families since the 1800's, the earliest being 1840. The tenure of the current land owners ranges from three months to 27 years. Two of the farmers rent their farms, one from his father and another from a family trust.

There are no land claims on any of the farms that make up the proposed G7 Roggeveld site.

6.5

DEMOGRAPHIC PROFILE

6.5.1

Karoo Hoogland LM, Northern Cape

The population of the Karoo Hoogland LM was 10,424 in 2007, showing a slight decrease from the population recorded in 2001 ⁽¹⁾. The age profile for the LM illustrates a developing population dominated by youth (32 percent between 15 and 34 years). There are similar numbers of children (31 percent below 14 years) and middle aged (31 percent between 35 and 64 years) and the elderly population (above 65 years of age) comprise the remaining six percent. The racial composition is predominantly Coloured (79 percent), followed by Whites (18 percent), and Blacks/Africans (three percent).

(1) Community Survey, 2007

6.5.2

Laingsburg LM, Western Cape

The population of the Laingsburg LM is highly urbanised, with 91 percent of the population living in the urban area and the remaining nine percent residing in rural areas. The ages of the population within the LM vary greatly. The population aged between 35 and 64 years is slightly higher than the other groups at 32 percent, followed by the youth (31 percent between 15 and 34 years), and those below 14 years (29 percent). The elderly comprise eight percent of the population. The racial composition of the Laingsburg LM shows Coloured people as being the most dominant group at 83 percent, followed by the White population (15 percent) and then Black/African (two percent) ⁽¹⁾.

6.5.3

Project Site

The living arrangements of the farmers and their workers vary considerably. Most farmers have more than one farm and therefore generally do not live permanently on the site. Only four of the farmers, and their workers, live permanently on the farms that form part of the project area. The majority of the farmers stay permanently off-site and visit the farms intermittently when the livestock activities are based at the site. The workers spend more time on the farms with the livestock than the farmers do. The workers generally only live on the farm during the week and visit their family homes on weekends in Laingsburg. The number of workers living on the farms varies depending on the seasons and the farming activities. The farmers employ seasonal workers that may live on the farm for a short period. The most activity at the Roggeveld site is during winter as the site is predominantly used in the winter months.

Due to the remote location of the farms in relation to schools, many of the farmers children (who are of school going age) attend boarding school and only visit the farm during the school holidays. Usually if the workers have young children then the wife and the children generally live on the farm, but as soon as the children start school, the wives and children generally move to Laingsburg in order to be close to schools. All the farm owners are White and the workers are Coloured.

6.6

EDUCATION

Illiteracy levels in the local municipalities are relatively high with 28 percent of the population the Karoo Hoogland LM without any schooling. In Laingsburg LM, illiteracy is higher than that of Karoo Hoogland at 42 percent; see *Table 6.2* and *Table 6.3* below.

(1) Laingsburg Local Municipality IDP 2007 - 2011

Table 6.2 *Literacy Levels in Karoo Hoogland Local Municipality in Percentages*

No Schooling (%)	Some Primary (%)	Completed Primary (%)	Some Secondary (%)	Completed Secondary (%)	Tertiary Education (%)
28	20	7	23	14	8

Source: Demarcation Board Website, May 2010

Table 6.3 *Literacy Levels in Laingsburg Local Municipality in Percentages*

No Schooling (%)	Some Primary (%)	Completed Primary (%)	Some Secondary (%)	Completed Secondary (%)	Tertiary Education (%)
19.5	25.4	9.4	27.9	17.8	5.7

Source: Laingsburg Local Municipality SDF, July 2007

6.7 HEALTH

There are a lack of medical facilities ⁽¹⁾ in the Namakwa DM ⁽²⁾; primarily given the scattered settlement pattern in the area ⁽³⁾. The most prevalent illnesses experienced by the population of the DM are HIV/ AIDS, TB and substance abuse. There used to be an asbestos mine in the DM; those who were exposed to the asbestos are likely to get ill from further exposure to asbestos ⁽⁴⁾. Unfortunately, the healthcare facilities do not keep any records of these incidences.

The Central Karoo DM has four provincial Hospitals, 14 mobile clinics, nine built clinics and one Community Health Care centre (CHC) ⁽⁵⁾. Laingsburg LM has a Provincial hospital, clinic and mobile clinic which service the rural areas. The most common illnesses in both municipalities are TB, HIV/ AIDS and substance abuse. There are many problems hindering the delivery of medical services to the communities including inadequate staffing and other medical resources in both local municipalities.

6.7.1 Social Ills Affecting the Community

Alcohol and drug abuse is causing/exacerbating many of the social problems facing the broader community. The increasing levels are substance abuse are pushing farmers to seek alternatives to local labour, and leading to increased levels of foetal alcohol syndrome, HIV, unwanted pregnancies, physical abuse and increasing school drop-out rates.

(1) There is no information available regarding the number of facilities found in the Karoo Hoogland LM.

(2) No information was found regarding the number of health facilities available in the area. This is due to the fact that the provincial department of health does not have a website where this kind of information can be obtained.

(3) Namakwa District Municipality Profile, 2008

(4) Namakwa District Municipality Profile, 2008

(5) Central Karoo District Municipality IDP, 2006 -2011

6.8 *ECONOMIC PROFILE*

6.8.1 *Namakwa District Municipality Economy*

The Namakwa DM's ⁽¹⁾ economy is characterised by an undiversified economy, with a high dependency on mining (52.7 percent) ⁽²⁾. The relative contribution of this sector is, however, declining. The sector had an average annual growth rate of 0.3 percent between 2001 and 2007. Wholesale and retail trade, catering and accommodation is the next largest contributor to the GDP (13.2 percent), followed by finance and business services (7.8 percent), general government services (6.7 percent) and community, social and personal services (5.9 percent) ⁽³⁾. Other sectors not mentioned contributed less than five percent including agriculture.

Information for the Karoo Hoogland LM is not available.

6.8.2 *Central Karoo District Municipality Economy*

The economy of the Central Karoo DM was one of the biggest contributors to the GDP of the Western Cape Province in 2004 with an annual growth rate of 4,2 percent ⁽⁴⁾. The growth of the economy was largely driven by fast growing sectors such as transport and manufacturing, financial and business services, wholesale and retail, communications, and construction ⁽⁵⁾. The contribution made by these sectors to the economy of the DM between 1995 -2004 are outlined below:

- transport and communication (20,8 percent) of which transport made up approximately two thirds;
- finance and business services (18.4 percent);
- wholesale, retail trade, catering and accommodation (17.2 percent) of which the wholesale and retail trade sub-sector was 86.4 percent ;and
- agriculture, forestry and fishing (10.5 percent).

6.8.3 *Laingsburg Local Municipality*

The agricultural sector is the largest contributor to the Laingsburg LM's economy. The agricultural sector is, however, not optimally exploited, as natural resources are sold in their raw form and processed elsewhere. The sector accounts for 23.2 percent of Laingsburg's GDP ⁽⁶⁾ and has an average annual growth rate of between six and eight percent. The Laingsburg LM is currently investigating ways of growing this sector further through localised processing of raw materials.

(1) There was limited information available about the District and Local Municipalities economies. As such, no further information could be provided.

(2) Namakwa District Municipality Profile, 2008

(3) Namakwa District Profile, 2008

(4) Central Karoo District Municipality IDP, 2007 -2011

(5) Central Karoo District Municipality IDP, 2007 - 2011

(6) Laingsburg Municipality SDF, July 2008

The Agricultural Potential Map as shown in *Figure 6.3* below shows that the site is best suited for grazing in the Western Cape portion of the site and a relatively small portion of land in the Northern Cape Province is well suited for commercial agriculture depending on water availability. Large portions of the land are well suited for conservation purposes.

The other key economic sectors of the Laingsburg LM are wholesale and retail trade; catering and accommodation; and transport, communication and manufacturing.

- **Wholesale and retail trade; catering and accommodation**, contributed 22.7 percent ⁽¹⁾ to the regional GDP, making it the second largest sector in the Laingsburg LM. The real growth rate for this sector in 2004 was 9.5 percent ⁽²⁾.
- The **transport, communication and manufacturing** sector accounted for 19.3 percent of the regional GDP and experienced a real growth rate of 7.2 percent in the Laingsburg LM ⁽³⁾. This was attributed to the road traffic passing through the area along the N1 between Cape Town and Johannesburg. Manufacturing is the sixth largest sector in the region accounting for 5.9 percent of the regional GDP and is growing at a rate of three percent ⁽⁴⁾.

6.8.4

Project Area

Approximately 75 percent of the landowners have two or more farms (not necessarily in the immediate vicinity). For five of the 13 landowners, both/all of their farms are within the Roggeveld area. The Roggeveld site is predominantly a winter rainfall area, as such; farmers keep their sheep on the Roggeveld farm during the winter months and move them during the summer months. Where a landowner only has land within the Roggeveld area, the sheep are rotated between the farms/camps as dictated by water availability and the condition of the vegetation on the individual farms. The individual camps on each farm are fenced off and gated in order to manage the grazing impact in a particular area. The sheep are walked from one farm to the next farm over a number of days; this can take up to 3.5 days and sheep can walk up to 40 km per day. There are kraals en route which the sheep are kept in over night.

The carrying capacity of the land is approximately one sheep per six hectares. The number of sheep (ewes) per farmer ranges from 300 to 2,000. Some farmers grow animal fodder such as lucerne (alfalfa) and oats to supplement animal feed. This allows farmers to increase the number of sheep beyond the carrying capacity. To mitigate against overgrazing farmers alternate between farms during the winter and summer months. Farmers that do not use animal

(1) Laingsburg Municipality SDF, July 2008

(2) Laingsburg Municipality SDF, July 2008

(3) Laingsburg Municipality SDF, July 2008

(4) Laingsburg Local Municipality SDF, July 2008

fodder to supplement grazing generally farm sheep below carrying capacity, especially given the water scarcity in the area. The Karoo vegetation is very sensitive and is reported to take up to 50 years to rehabilitate.

Depending on water availability, a number of the farmers also grow crops such as onion seed, onions, lucerne and oats, amongst others. One of the main constraints to agricultural activities in the area is water; however, some of the farms have boreholes and/or springs while others do not have access to water. Irrigation systems are expensive and are therefore not an option for a number of farmers. The onion seed is grown for the export market and the other crops are for own use and/or sold on the local market.

Other land uses in the area include game farming, tourism (e.g. guesthouses) and 'lifestyle farming'. 'Lifestyle' or 'weekend farmers' refers to those people who live in the cities but own farms in the Karoo as a means of escaping the city and enjoying the peace and tranquillity. They generally reintroduce animals (including predators) as part of their plans to rehabilitate the land and conserve naturally occurring animals and habitat.

The property prices are reported to have increased dramatically in recent years. One farmer reported that the value of his land increased by 400 percent in one year. This rapid increase in price was attributed to the increased demand in land by the 'lifestyle farmers' who buy relatively small farms for recreational purposes. The average value of the land for grazing is approximately R1, 000 per hectare. Due to the high cost of land, the majority of the landowners are unable to expand their farming activities. This, together with the loss of stock resulting from the increased predators and lack of water is forcing many of the farmers out of business.

In general, livestock farming in the Karoo is not an easy lifestyle. Farmers in the area face many challenges but the main problems are associated with labour, predators, stock theft and water scarcity. These are discussed further in *Box 6.1*.

Box 6.1 *Challenges Faced by Local Farmers*

Labour: Many of the landowners indicated that alcohol and drug abuse are prevalent in the area and that many of the workers are unreliable and unproductive as a result. Although some farmers are fortunate to have committed workers who have worked for them for many years, other farmers have to contend with high staff turnover, low productivity, and a lack of interest in growth and development.

Predators: There has been an increase in the number of predators in the area and, in turn, an increase in associated stock losses. The main predators are jackal, *rooikat* and baboons. It is suspected that jackal and *rooikat* breed on the farms of the 'lifestyle farmers', the increasing number of 'lifestyle farmers' is threatening the financial viability of stock farming. The baboons are increasingly attacking baby lambs and sheep due to the lack of rain and thus alternate food sources. One farmer reported that stock losses have increased between 40 and 60 percent as a result of predators. The farmers are currently in negotiation with Cape Nature to identify means of controlling predators.

Stock Theft: Stock theft is reported to be a problem in the area and has been raised as one of the

key concerns associated with the project. Some of the theft is opportunistic and once-off while it seems that there are also syndicates operating in the area that steal large numbers of sheep at one time.

Water Scarcity: The area is water scarce and is prone to drought. Due to the unpredictability of rainfall in the area farmers are limited in the type of crops that they can cultivate and the number of stock they can keep. All of the farmers who cultivate crops rely on borehole water for irrigation and consumption. One farmer raised the concern that he thinks that the ground water levels are dropping posing a serious threat to farming.

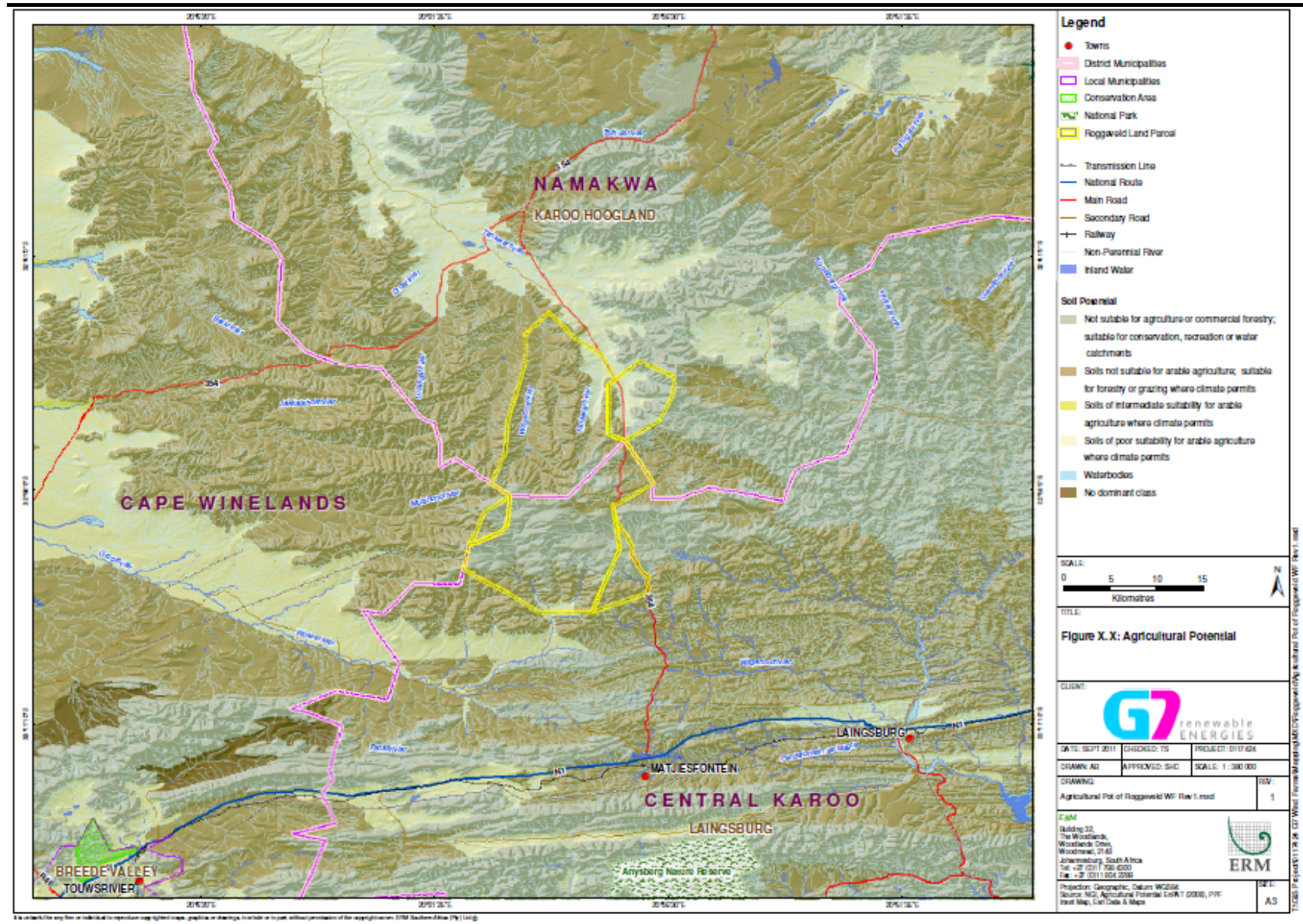
6.8.5 *Plans for Expansion of Agricultural Activities in the Project Area*

Most farmers did not mention any clear plans for expansion but had some ideas about what they wanted to do with the additional income derived from the proposed development. All farmers intend to continue farming and they plan to improve existing infrastructure or install new infrastructure to improve the farming practice. Although it varies between landowners, their plans include:

- upgrading worker accommodation and services;
- installing irrigation systems;
- renting/buying more land; and
- developing tourism facilities.

Two of the farmers noted that they wanted to decrease the number of livestock, and increase the area under cultivation by installing irrigation systems.

Figure 6.3 Agricultural Potential Map of the Project Site



Employment and Unemployment

Approximately 45 percent of the population in the Karoo Hoogland LM are employed ⁽¹⁾, while about 18 percent are unemployed ⁽²⁾ and 37 percent are not economically active. In the Laingsburg LM approximately 16.3 percent of the population are unemployed, 40 percent being employed and 43.7 percent being economically inactive ⁽³⁾.

Household Income

Approximately nine percent of the households in the Karoo Hoogland LM have no income and 35 percent live on a monthly income of between R1 and R9, 600 ⁽⁴⁾. The majority of households in the Laingsburg LM (44.3 percent) earn an income of between R4,812 and R9,600 per month, followed by 16.4 percent that earns between R12 and R4,800 a month, and 15.1 percent that earns between R9,612 and R19,200 a month ⁽⁵⁾.

Government grants (e.g. child support, disability and pension grants) have resulted in high levels of dependency on the State. These grants are often the only source of household income, given the high unemployment rate in the area.

Remuneration of Farm Workers

General farm workers are paid minimum wage and supervisors/farm managers are paid more. The monthly pay varies between R1, 200 and R2, 000 per month. The farmers raised concern that the majority of workers spend all their money immediately after payday (Friday) on alcohol and drugs and therefore do not have any money left to meet their basic needs.

Permanent farm workers also receive benefits from the farmers. The benefits vary but the standard benefits include free accommodation, electricity (where infrastructure is available), water and sanitation (where water is available), and wood for cooking purposes. Some of the farmers provide additional benefits, such as transportation to town/ school, work clothes, a bonus at the end of the year, additional income for killing predators such as jackal and *Rooikat* (approximately R300-400 per animal), other foodstuff including milk and vegetables from the farm, substantially discounted/ free meat, skin and wool of slaughtered sheep, and some workers are allowed to keep their own sheep and/or goats as well as to grow their own vegetable gardens on the property.

(1) This figure includes both people who are permanently employed and those who are seasonally employed

(2) Namakwa District Municipality Profile, 2008

(3) Laingsburg Local Municipality IDP, 2007/2008

(4) Demarcation Board, Census 2001

(5) Laingsburg Local Municipality IDP, 2007/8

6.9.2

Farm Workers

Sheep farming is not labour intensive; eight of the thirteen farmers employ less than five permanent workers on their farms. Four farmers employ between six and ten permanent workers and one farmer employs 13 permanent workers. The intensity of farming activities increases for about four months every year for seasonal tasks (e.g. sheep shearing, harvesting); during this time the farmers employ casual labour from Laingsburg and surrounding areas. The wives of permanent workers are also employed for this seasonal work. Some farmers will not use local labour because of the labour challenges; as an alternative, they contract the services of Cape Mohair and Wool (CMW) for sheep shearing services; farmers noted that they prefer to use the services of CMW because they are reliable and professional.

The employment tenure of workers varies considerably. For the majority of the farmers, the employment time range from a few months to several years. Some farmers have long-term employees. For example, one farmer has two workers that have been employed on the farm for 20 years and 30 years respectively. There is no clear trend regarding the length of employment. Employment depends on the individual circumstances of the worker and the farmer as the pay and worker benefits are relatively similar.

6.10

TOURISM AND HERITAGE

The Namakwa DM has been experiencing growth within this sector from tourists travelling through the Cape tourism route and those travelling to Namibia ⁽¹⁾. This growth is reflected on other economic sectors such as guest houses, arts and craft, communications and others dependent on an influx of people. The DM is rich in heritage of the Khoi San/Nama people. This is reflected in activities such as the Annual Namakwa Festival of Culture and Light pays tribute to this heritage ⁽²⁾. The main attraction in the LM is the town of Sutherland, where tourists can visit the observatory (seven telescopes and SALT) and flowers in the spring. The succulent route is open annually from mid July to end October ⁽³⁾.

There are a few select tourism attractions in the Laingsburg LM. In Matjiesfontein there is the Rietfontein Private Nature Reserve which offers visitors 4x4 trails, hiking, bird watching, game viewing from open Land Rover, and bushman painting ⁽⁴⁾. The town of Laingsburg has the Flood Museum which documents the devastating flood of 1981 ⁽⁵⁾. The museum houses the Wolfaardt collection; featuring artefacts from the Great Trek and the Anglo-Boer War, as well as prehistoric items and historical weapons used by the Khoi-San. Other historical features found in the area are the Anglo-

(1) Namakwa District Municipality, IDP 2006-2011

(2) Namakwa District Municipality, IDP, 2006 -2011

(3) www.sa-venues.com

(4) www.capetowntourism.co.za

(5) www.laingsburg.gov.za

Boer War blockhouse and buildings dating back to the 1800's and early 1900's ⁽¹⁾.

Some of the farms in the area have been in the families since the 1800s. Many farms show evidence of old stone walled sheep kraals. One farmer noted that he had Bushmen paintings on his farms and stone tools. Most of the farm houses are more than 100 years old. Farmers see their farming practise as an important part of their heritage. There are graves on some of the farms; these are located in close proximity to the farm houses.

6.11 GENERAL INFRASTRUCTURE AND SERVICES

6.11.1 Existing Site Infrastructure

The infrastructure on the farms is directly related to the land use (i.e. livestock and crop farming). The basic infrastructure found on the farms varies between farms but includes the following:

- perimeter and camp fencing;
- farm roads;
- sheds and storage;
- boreholes;
- wind pumps;
- solar powered water pumps;
- worker accommodation;
- the main farm house;
- farm dams;
- pivot and other irrigation systems; and
- various types of pumps to pump water from boreholes.

6.11.2 General Municipal Infrastructure and Services

Water

Water is limited in both the District Municipalities and is not adequate to meet the demands of proposed large-scale economic developments that require large quantities of water. Water shortages have an impact on local economic activities as it costs farmers more to transport livestock for processing. Water shortages also limit the addition of new economic sectors.

In Karoo Hoogland LM 85.4 percent of the population within the LM have access to piped water, 13.3 percent access their water from boreholes and 1.3 percent access water from rain, rivers and water tanks ⁽²⁾. Laingsburg LM has a relatively high number of households with access to tap water (93.6 percent) compared to Karoo Hoogland ⁽³⁾. Another 6.4 percent of the

(1) www.laingsburgtourism.co.za

(2) Community Survey, 2007

(3) Community Survey, 2007

population have no access to piped water and receive water from rain, boreholes and dams.

Sanitation

Access to sanitation facilities in the Karoo Hoogland LM is low, with only 57.3 percent of households having access to flush toilets. A further 36.9 percent use dry, chemical and ventilated (VIP) toilets, 2.3 percent use the bucket system and 3.5 percent have no toilets ⁽¹⁾. The Laingsburg LM has delivered toilets to 94.5 percent of the communities; this is significantly high compared to Karoo Hoogland's provision of sanitation facilities. In both the Karoo Hoogland and Laingsburg local municipalities there are still households without sanitation facilities (3.5 and 3.5 percent, respectively) and those who are using the buckets system (2.3 and 2.1 percent, respectively) ⁽²⁾.

Housing

In the Karoo Hoogland LM 76 percent of households live in formal houses and approximately 23 percent live in hostels or live in informal housing ⁽³⁾. The Laingsburg LM has a higher percentage of the population living in formal housing compared to Karoo Hoogland at 96.9 percent. Approximately 3.1 percent of the population in Laingsburg LM are living in informal housing such as shacks and backyard rooms ⁽⁴⁾.

Energy

In Karoo Hoogland LM 82.4 percent of households have electricity. Another 11.3 percent use candles, 3.3 percent use solar and 2.9 percent use other sources of energy. In the Laingsburg LM approximately 84.6 percent ⁽⁵⁾ of the population have access to electricity. Approximately 10.2 percent of the population use candles, 1.6 percent use solar energy and 3.6 percent use other sources of energy such as firewood and coal ⁽⁶⁾.

Roads

In the Namakwa DM, the current backlog on re-graveling was estimated to be R70 million for the District. Many complaints were received by the department regarding the worsening condition of the road network. The information from the gravel road management system report indicated that about 1,072km of the roads in the district are without any gravel (thus dirt/earth roads) ⁽⁷⁾. The condition of the gravel road network was rated as fair, with 22 percent of the roads considered to be in poor to very poor condition.

(1) Community survey, 2007

(2) Community Survey, 2007

(3) Community Survey, 2007

(4) Community Survey, 2007

(5) Community Survey, 2007

(6) Community Survey, 2007

(7) Namakwa District Municipality IDP 2006 -2011

The roads in the Central Karoo DM are critical to the transport sector; the largest GDP contributor. There are a total of 96 kilometres of trunk roads, 726 kilometres of Main Roads, 1,725 kilometres of Divisional roads and 4,256 kilometres of access roads ⁽¹⁾. The National and provincial roads are well financed and maintained, whereas those that are the responsibility of the District and Local Municipalities are not as well maintained.

Policing

Some landowners reported that there is a sense of lawlessness in the area because people are aware that the police are not very strong in the area. The police officers are Black/ African and do not speak the local language thus there seems to be a breakdown in communication between the police and community making enforcement and assistance/support more difficult.

6.12 PERCEPTIONS OF THE DEVELOPMENT

Farmers are generally positive about the development despite initial concern and scepticism. They feel that the development has the potential to benefit the area in many ways. The potential benefits are outlined in *Box 6.2* below.

Box 6.2 Potential Benefits for the Proposed Development

Local Economic Contribution: Job creation is perceived to be one of the most significant contributions of the project as unemployment in the area is extremely high. The additional spending on accommodation, restaurants, fuel, refreshments, etc will generate additional and income and indirect jobs. There is also hope that the proposed wind farm developments in the area will attract more tourists to the local towns.

Development of the area: Most farmers noted that any development in the area will be welcomed. Generally farmers feel that community projects would assist with some of the issues that the broader community faces. One farmer noted that the municipality concentrates development in the town and very little attention is paid to the farming areas.

Carbon credits: Many farmers cultivate onion seed for the export market, predominantly European markets. The farmers noted that the carbon credit would assist them in penetrating the European markets further. The farmers are hoping to receive a letter from the developer that states they have made their land available for a renewable energy project. Carbon credits will be accrued by a German utility company, similar to Eskom who are partners in the development.

Income from the development: All the farmers noted that the income they will receive will assist them greatly; especially in the current economic downturn where banks are reluctant to approve loans. The landowners all plan to develop and improve their farms and farming practices with the additional income.

Infrastructure: The farmers all welcomed the proposed infrastructure developments that will result from the project; including improved and regularly maintained access roads, and the potential for access to electricity. It is hoped that the development will be a catalyst for other development in the area.

(1) Central Karoo Nodal Economic Development Profile, No Date

Although the landowners had some concerns, primarily related to the construction activities, these have primarily been addressed as part of the contract negotiations with G7. The concerns raised by the farmers are outlined in *Box 6.3* below.

Box 6.3

Concerns about the Proposed Development

Sense of Place and Visual Impact: Only one farmer noted that the development will change the sense of the place of the area, by disrupting the tranquillity of the Karoo. Two farmers noted that they were concerned about the visual impact and noted that it was important for the wind turbines to be located a reasonable distance from their houses. All landowners noted that if the development did not interfere with their farming practices they have no objections to the development. The developer need to ensure that the impact on farming practises is kept to an absolute minimum.

Noise Impact: Only one farmer made reference to the potential noise impact and stipulated in their contract that the turbines had to be a reasonable distance away from the house so that they do not hear the turbines.

Access Roads: The concerns about the access roads are two fold; farmers are concerned that improved access to their farms will facilitate stock theft. Also farmers are concerned that if the access roads are not maintained properly it will result in erosion.

Stock Theft: Most of the farmers feared that the development would lead to an increase in stock theft, especially during the construction phase given the increased number of people in the area. One farmer said that he intended to sell his entire stock at the start of the construction phase and then replace his stock during the operation phase, which is his way of mitigating against stock theft.

Loss of vegetation: The farmers are concerned about the loss of vegetation that may result from the construction activities. These farmers noted that due to the climatic conditions of the Karoo and the slow growth of the vegetation the impact would be long lasting. .

Impacts on farming during construction: Farmers are concerned about the potential impact on farming activities during construction. It was recommended that construction should take place during the summer months as it will have the least impact on farming.

Local labour: One farmer is concerned about the use of local labour because it may result in expectations for higher wages from the farmers. The farmer also noted that higher wages could exacerbate the existing substance abuse problems.

6.13

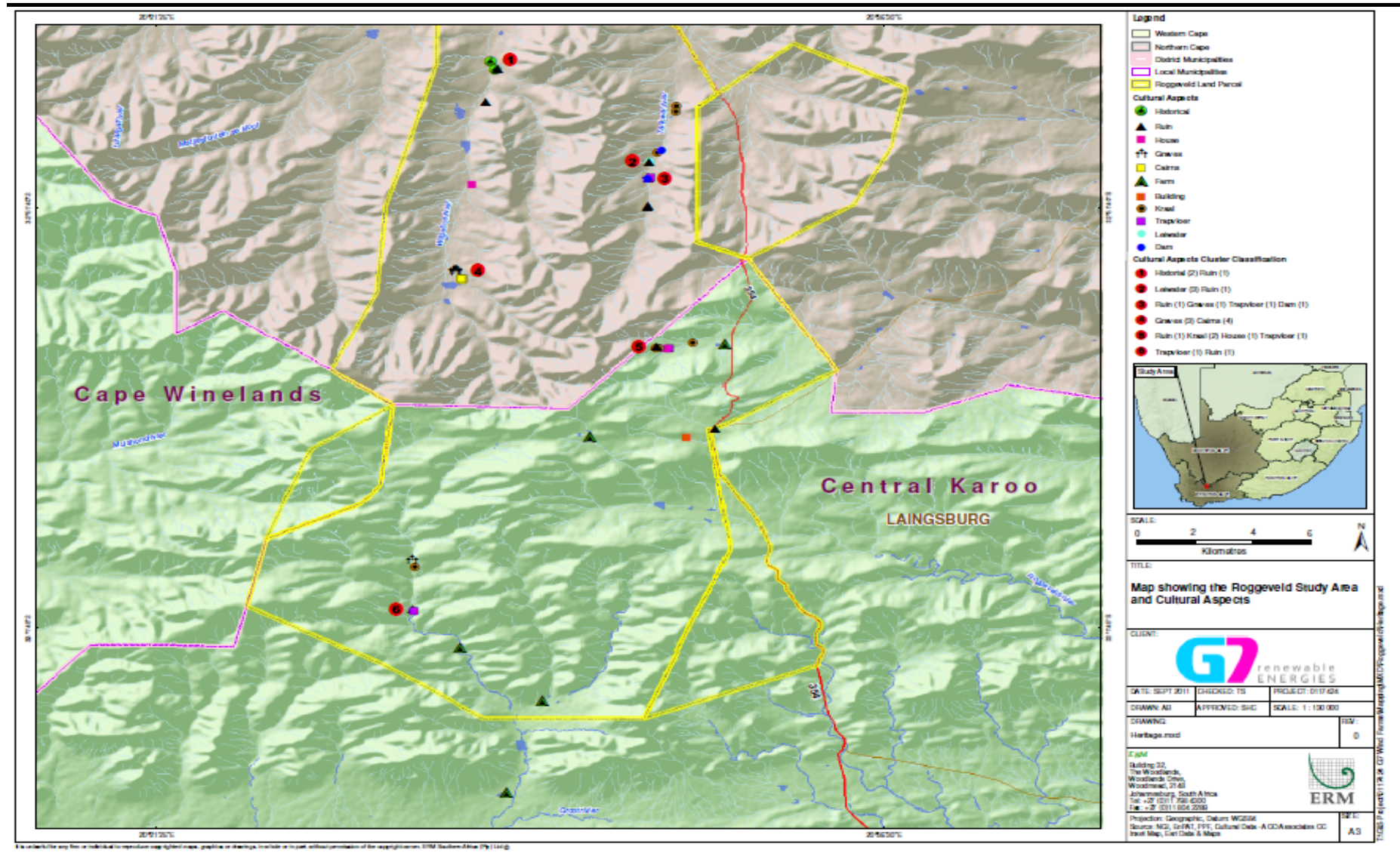
ARCHAEOLOGY, PALAEOLOGY AND CULTURAL HERITAGE

6.13.1

Cultural Heritage

The study area is relatively austere in terms of both colonial and pre-colonial heritage. There are a number of existing farm houses that contain 19th century fabric, however very few of these have anything more than moderate heritage significance, see *Figure 6.4* . Pre-colonial or stone age heritage and archaeology is extremely scarce. No significant heritage limitations were encountered during the survey

Figure 6.4 Cultural heritage resources identified



6.13.2 *Landscape and Visual Amenity*

The landscape of the area is largely agricultural with scattered farms and homesteads. The landscape is mountainous and views of the proposed development area are likely to be seen from a number of visual receptors including the R354 Sutherland – Matjiesfontein and surrounding farms and farmsteads in the area.

6.14 *TOURISM AND HERITAGE IN THE WIDER ROGGEVELD AREA*

The main attractions in the Karoo Hoogland Local Municipality close to the site are found in the town of Sutherland. The attractions include the space observation centre (seven telescopes and SALT) and Karoo flowers in the spring. The succulent route is a botanical tourist route which attracts tourists to the Sutherland area from mid July to end October ⁽¹⁾.

6.15 *GENERAL INFRASTRUCTURE AND SERVICES*

6.15.1 *Existing Site Infrastructure*

The infrastructure on the farms is directly related to the land use (i.e. livestock and crop farming). The basic infrastructure found on the farms varies between farms but includes the following:

- perimeter and camp fencing;
- farm roads;
- sheds and storage;
- boreholes;
- wind pumps;
- solar powered water pumps;
- worker accommodation;
- the main farm house;
- farm dams;
- pivot and other irrigation systems; and
- various types of pumps to pump water from boreholes.

6.15.2 *General Municipal Infrastructure and Services*

Water

Water is limited in both the District Municipalities and is not adequate to meet the demands of proposed large-scale economic developments that require large quantities of water. Water shortages have an impact on local economic activities as it costs farmers more to transport livestock for processing. Water shortages also limit the addition of new economic sectors.

(1) www.sa-venues.com

In Karoo Hoogland LM 85.4 percent of the population within the LM have access to piped water, 13.3 percent access their water from boreholes and 1.3 percent access water from rain, rivers and water tanks ⁽¹⁾. Laingsburg LM has a relatively high number of households with access to tap water (93.6 percent) compared to Karoo Hoogland ⁽²⁾. Another 6.4 percent of the population have no access to piped water and receive water from rain, boreholes and dams.

Sanitation

Access to sanitation facilities in the Karoo Hoogland LM is low, with only 57.3 percent of households having access to flush toilets. A further 36.9 percent use dry, chemical and ventilated (VIP) toilets, 2.3 percent use the bucket system and 3.5 percent have no toilets ⁽³⁾. The Laingsburg LM has delivered toilets to 94.5 percent of the communities; this is significantly high compared to Karoo Hoogland's provision of sanitation facilities. In both the Karoo Hoogland and Laingsburg local municipalities there are still households without sanitation facilities (3.5 and 3.5 percent, respectively) and those who are using the buckets system (2.3 and 2.1 percent, respectively) ⁽⁴⁾.

Housing

In the Karoo Hoogland LM 76 percent of households live in formal houses and approximately 23 percent live in hostels or live in informal housing ⁽⁵⁾. The Laingsburg LM has a higher percentage of the population living in formal housing compared to Karoo Hoogland at 96.9 percent. Approximately 3.1 percent of the population in Laingsburg LM are living in informal housing such as shacks and backyard rooms ⁽⁶⁾.

Energy

In Karoo Hoogland LM 82.4 percent of households have electricity. Another 11.3 percent use candles, 3.3 percent use solar and 2.9 percent use other sources of energy. In the Laingsburg LM approximately 84.6 percent ⁽⁷⁾ of the population have access to electricity. Approximately 10.2 percent of the population use candles, 1.6 percent use solar energy and 3.6 percent use other sources of energy such as firewood and coal ⁽⁸⁾.

Roads

In the Namakwa DM, the current backlog on re-graveling was estimated to be R70 million for the District. Many complaints were received by the department regarding the worsening condition of the road network. The

(1) Community Survey, 2007

(2) Community Survey, 2007

(3) Community survey, 2007

(4) Community Survey, 2007

(5) Community Survey, 2007

(6) Community Survey, 2007

(7) Community Survey, 2007

(8) Community Survey, 2007

information from the gravel road management system report indicated that about 1,072km of the roads in the district are without any gravel (thus dirt/earth roads) ⁽¹⁾. The condition of the gravel road network was rated as fair, with 22 percent of the roads considered to be in poor to very poor condition.

The roads in the Central Karoo DM are critical to the transport sector; the largest GDP contributor. There are a total of 96 kilometres of trunk roads, 726 kilometres of Main Roads, 1,725 kilometres of Divisional roads and 4,256 kilometres of access roads ⁽²⁾. The National and provincial roads are well financed and maintained, whereas those that are the responsibility of the District and Local Municipalities are not as well maintained.

Policing

Some landowners reported that there is a sense of lawlessness in the area because people are aware that the police are not very strong in the area. The police officers are Black/ African and do not speak the local language thus there seems to be a breakdown in communication between the police and community making enforcement and assistance/support more difficult.

(1) Namakwa District Municipality IDP 2006 -2011

(2) Central Karoo Nodal Economic Development Profile, No Date

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