8 RECEIVING ENVIRONMENT

The site environment is described in the section below.

8.1 CLIMATE

8.1.1 *Data Collection*

Climate information was attained using the climate of South Africa database. Due to the close vicinity of the Kusile Power Station, the Air Quality Impact Assessment report which was done by Airshed Planning Professionals[1] for the Phola-Kusile overland conveyor system was used. The weather related information extracted from the weather report was obtained from the Kendal 2 monitoring station, which is in close proximity to Kendal Power station.

8.1.2 *Regional Description*

The site area displays warm summers and cold winters typical of the Highveld climate. The region falls within the summer rainfall region of South Africa, rainfall occurs mainly as thunderstorms (Mean Annual Precipitation - 662 mm) and drought conditions occur in approximately 12 % of all years. The mean annual potential evaporation of 2 060 mm indicates a loss of water out of the system.

The area experiences frequent frosts, with mean frost days of 41 days. In addition to frost the area is prone to hail storms during the summer time. Winds are usually light to moderate, with the prevailing wind direction north-westerly during summer and easterly during winter.

Ambient Temperature

Air temperature is important, both for determining the effect of plume buoyancy (the larger the temperature difference between the plume and the ambient air, the higher the plume is able to rise), and determining the development of the mixing and inversion layers. Minimum, mean and maximum temperatures for Kendal 2 for the period January 2005 – April 2011 are illustrated in Figure 8-1 below.

Annual average maximum, minimum and mean temperatures for Kendal 2 are given as 27°C, 10°C and 16°C, respectively, based on the January 2005 to April 2011 record. Average daily maximum temperatures range from 31°C in December to 20°C in June, with daily minima ranging from 15°C in January to 3°C in July.

[1] Air Quality Impact Assessment for the 'AIR QUALITY SPECIALIST IMPACT ASSESSMENT FOR THE PROPOSED NEW PHOLA-KUSILE COAL CONVEYOR, NKANGALA DISTRICT MUNICIPALITY, MPUMALANGA'. Report No.: APP/09/SYN-03B Rev 0.2, 2011.

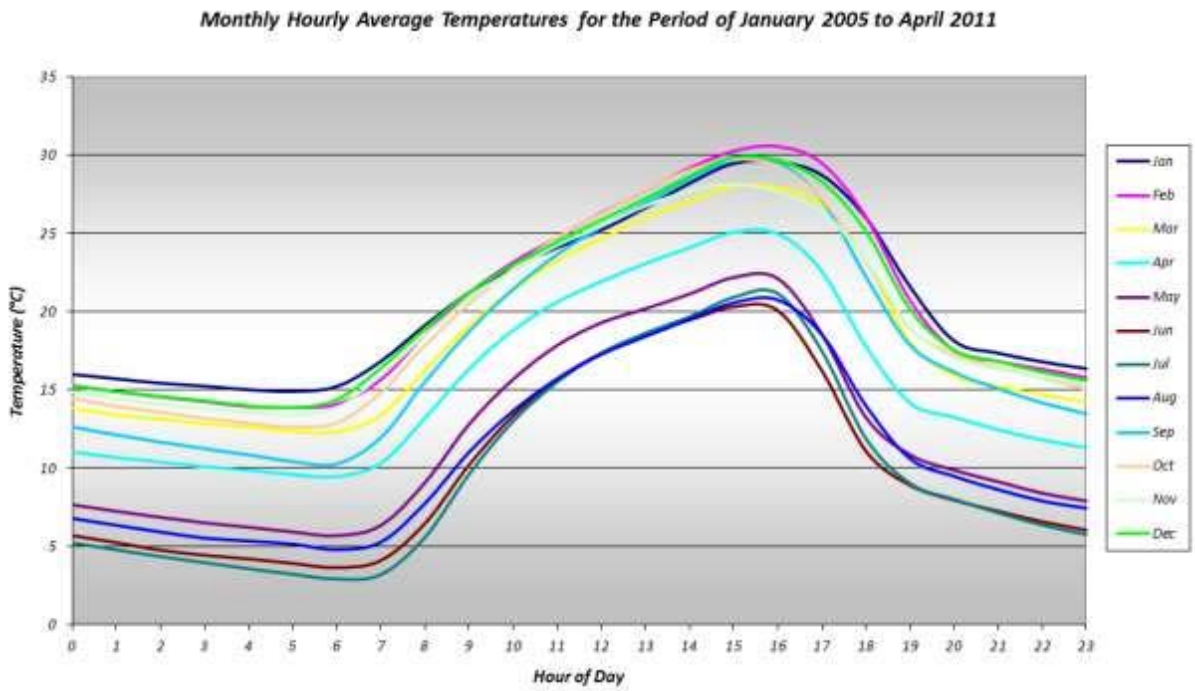

Figure 8-1 - Diurnal temperature profile at Kendal 2 monitoring station for the period

Wind

The predominant wind direction at Kendal 2 for the period January 2005 to April 2011 is from the west-northwest (~16 % frequency of occurrence). Calm periods and low wind speeds are more prevalent during the night-time, as is to be expected (Figure 8-2). The gentle slope of the terrain may account for the increased frequency of occurrence of west-north westerly winds during the day-time and increased east-south easterly winds during the night-time.

During winter months (July to August), the enhanced influence of westerly wave disturbances is evident in the increased frequency of south westerly winds at Kendal 2 (Figure 8-3). An increase in the frequency of easterly and east-south easterly winds during summer months (December to February) reflects the influence of easterly wave systems. Autumn months are associated with a greater frequency of calm wind conditions, with the smallest number of calms occurring during spring months.

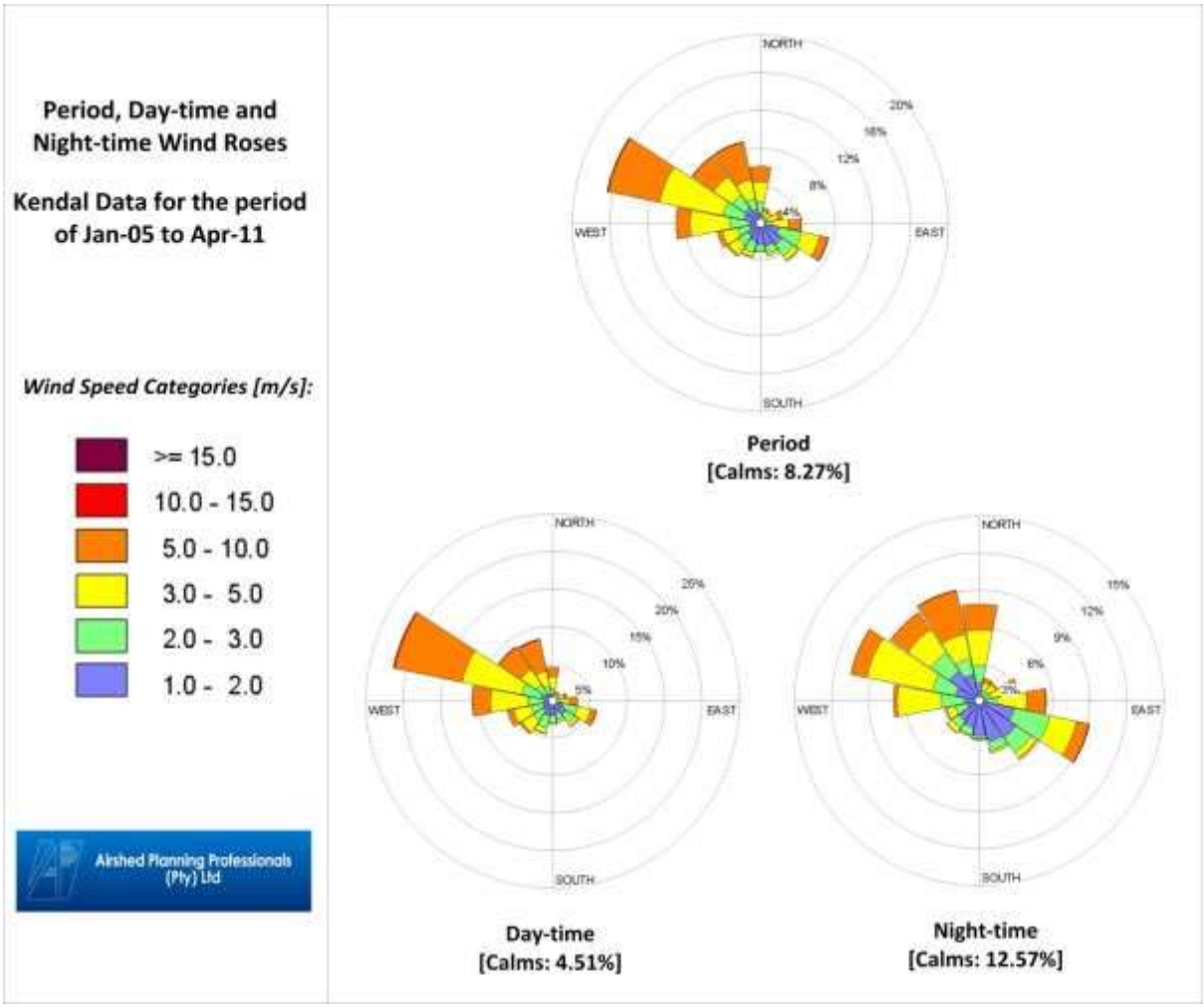

Figure 8-2: Period, day- and night-time wind roses for the Kendal 2 monitoring station (January 2005 to April 2011)

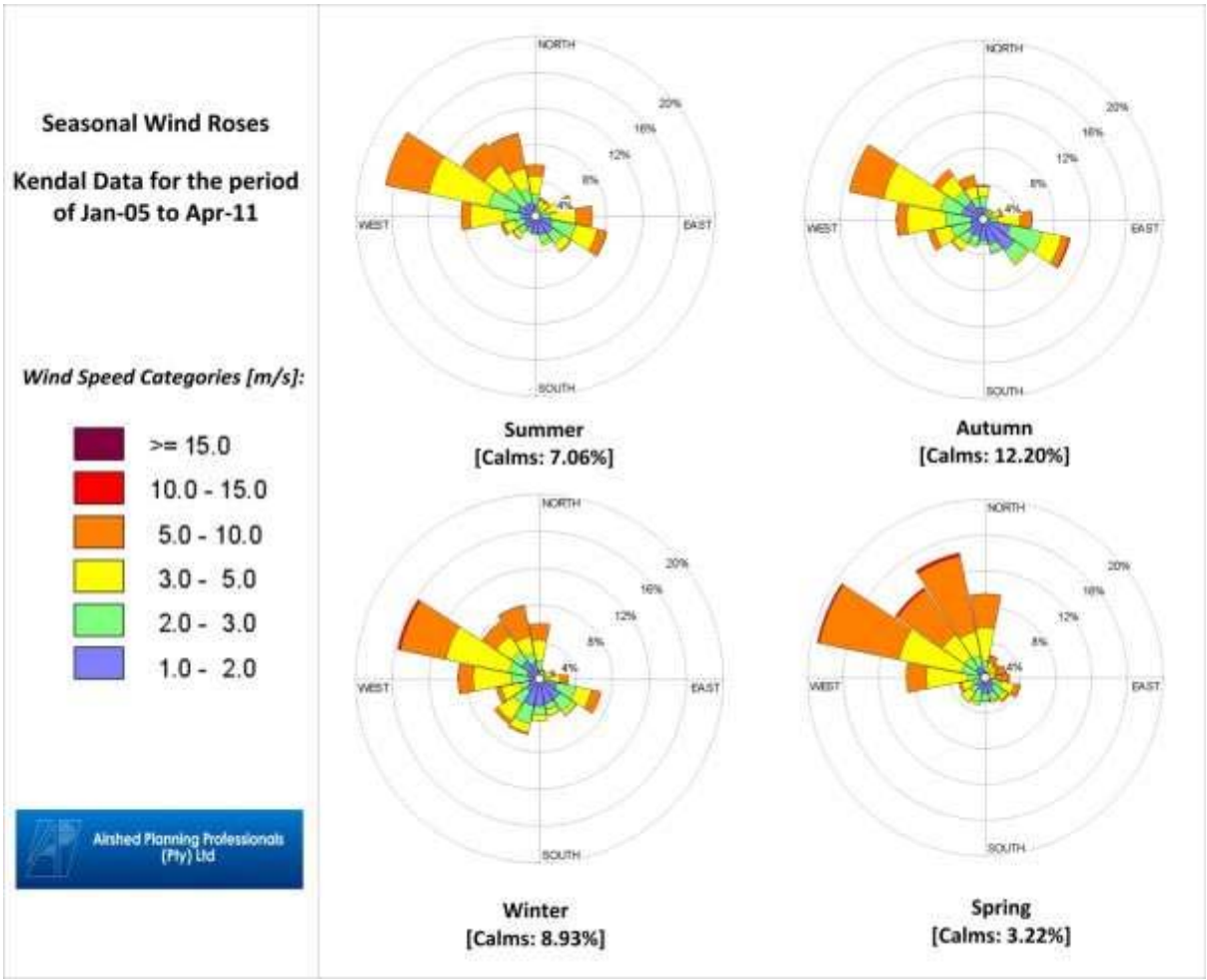

Figure 8-3: Seasonal wind roses for the Kendal 2 monitoring station (January 2005 to April 2011)

8.2 GEOLOGY

8.2.1 *Methodology and Data Sources*

The geological analysis was undertaken through the desktop evaluation using a Geographic Information System (GIS) and relevant data sources. The geological data was taken from the Department of Water Affairs Geology data.

8.2.2 *Regional Description*

The geology in the areas mainly consists of the following geological groups as per Figure 8-4 below.

Table 8-1 - Site Geology

Group	Main rock types
Karoo Super group/Ecca Group	Arenite, Shale, Coal
Bushveld complex	Granite
Transvaal Super group/Rooiberg Group	Rhyolite

The above table will be updated once the Geotechnical assessment is available.

8.2.3 *Sensitivities*

With regards to the construction of an ash disposal facility geological sensitivities to consider include:

1) Areas of unstable geology, which in this instance refer to the areas of deep clay layers. The clay deposits tend to shrink and swell and can slip under the foundation of the ash disposal facility. Special foundation designs will need to be made to accommodate this type of geological founding conditions.

2) Areas of shallow soils or rock outcrops also present problematic founding conditions and are also deemed to constitute sensitive geology. In such areas cut to fill operations may be required to create suitable ash storage areas / capacity, resulting in permanent damage to in-situ geology.

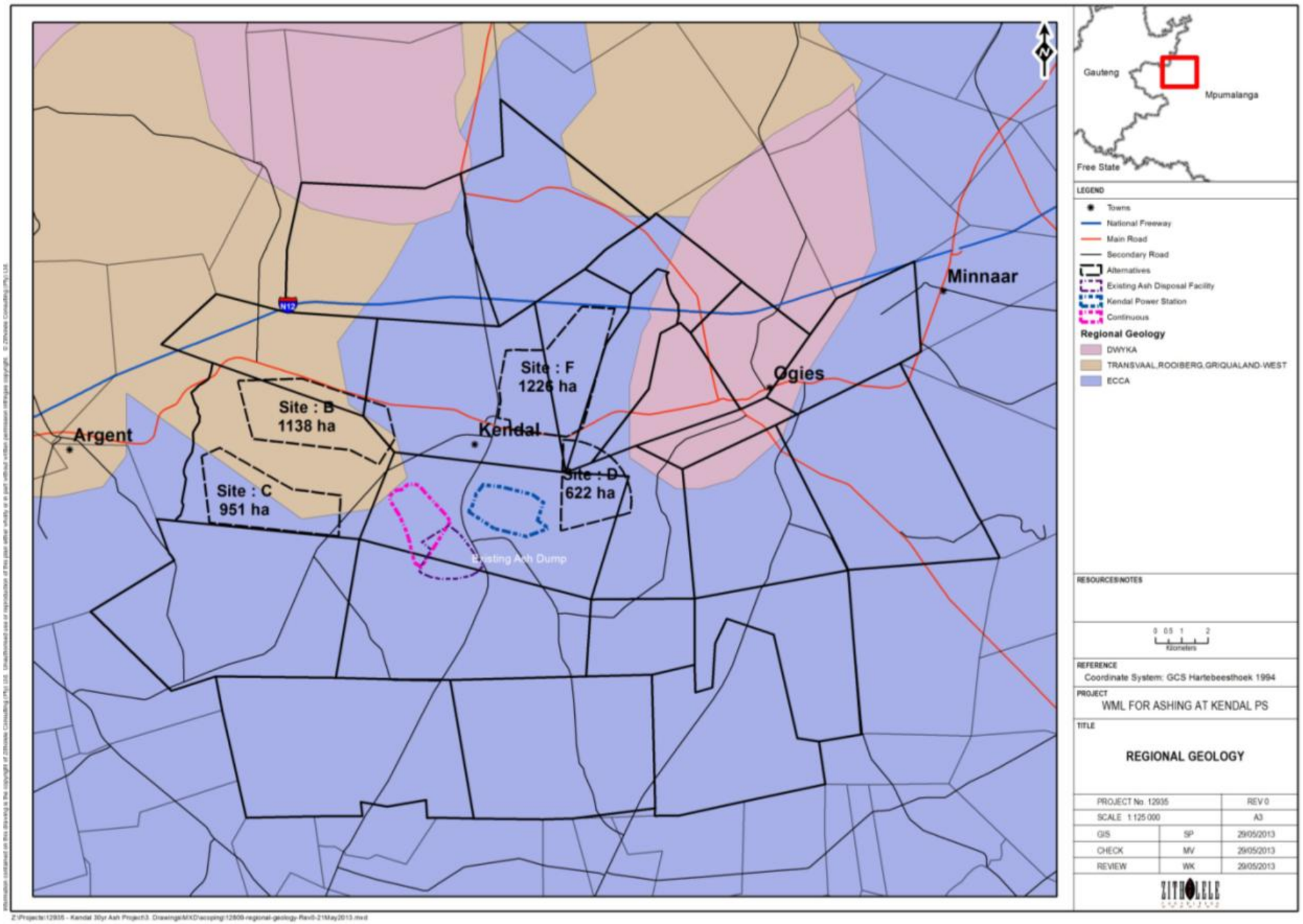

Figure 8-4: Site Geology of the area

8.3 SOILS AND LAND CAPABILITY

8.3.1 *Data Collection*

8.3.2 *Regional Description*

The soils in the region are mostly derived from the geology of the region (as described above). The harder geologies (such as granite and quartzite) weather into rocky and sandy soils, while the softer geologies have weathered into deeper red or brown sandy soils (sandstone and dolerite). The soils in the region form a typical Highveld plinthic catena with shallow soils on the crests of slopes, deeper sandy apedal soils on the slopes and soils with some plinthic clay layers in the foot slopes. In the valleys the clays accumulate and in some cases harden into ferricrete (hardpan / ouklip). The study site for the Kendal 30 year ash disposal project is classified as having moderate to high potential arable land as per Figure 8-5 below which provides an illustration of the soils within the region.

8.3.3 *Sensitivities*

The sandy apedal soils as well as the deeper plinthic soils mentioned above result in the wide spread occurrence of high potential arable soils in the region. These soils are considered to be sensitive because:

1) Arable soils in South Africa are considered to be valuable because it constitute such a small percentage of the total soil distribution in the country;

2) The arable soils in the region underpin the basis of agricultural activities in the area;

3) The ash disposal facility will result in the sterilisation of a large area of soil;

8.4 TOPOGRAPHY

8.4.1 *Data Collection*

The topography data was obtained from the Surveyor General's 1:50 000 toposheet data for the region, namely 2628 and 2629. Using the latest aerial photography of the area a digital elevation model (DEM) was developed of the region as shown in Figure 8-6 below.

8.4.2 *Regional Description*

The topography of the region is a gently undulating to moderately undulating landscape of the Highveld plateau. Scattered wetlands and pans occur in the area, with a higher concentration of wetlands and streams occurring in the southern portion of the study area. Rocky outcrops and ridges also form part of significant landscape features in the wider area. The altitude ranges

between 1 400 – 1 645 metres above mean sea level (mamsl). Figure 8-6 below provides an illustration of the topography of the region as well as the ridges.

8.4.3 *Sensitivities*

Ridges on the Highveld typically constitute areas of high biodiversity. In Mpumalanga these areas have also been significantly transformed over the years. Once transformed, restoration and rehabilitation are difficult or impossible. Thus ridges are deemed to be sensitive features.

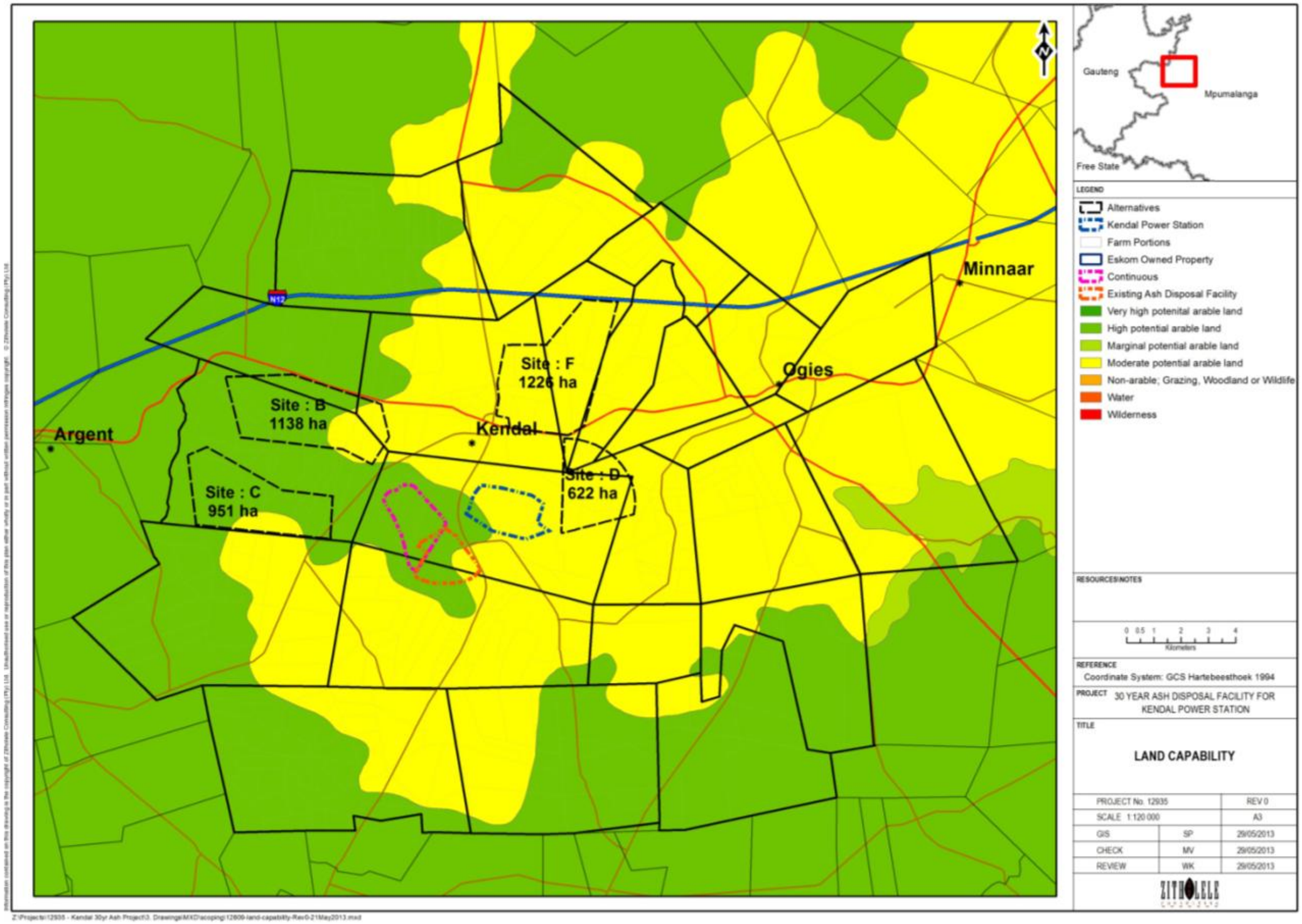

Figure 8-5 – Land Capability of the soils within the study site

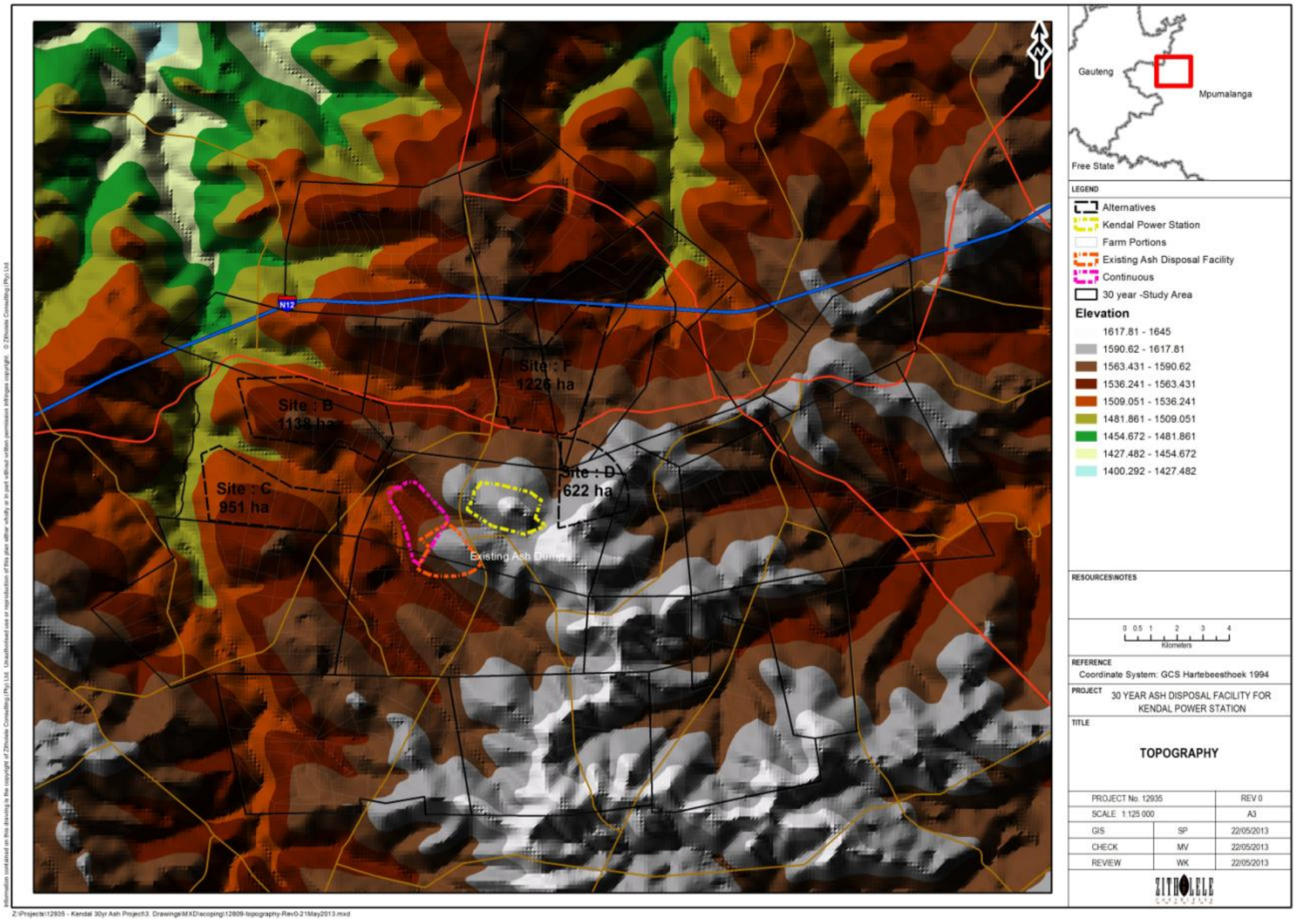

Figure 8-6: Topography of the area.

8.5 SURFACE WATER

8.5.1 *Data Collection*

The surface water data was obtained from the WR90 database from the Water Research Council and the National Freshwater Ecosystem Priority Area (NFEPA) database from DWA. The data used includes pans, dams, wetlands, catchments, river alignments and river names.

8.5.2 *Regional Description*

The study area falls partly in the B20E, B20F, B20G and B11F quaternary catchments. The main drainage feature of the area is the Wilge River which traverses the study area along the western boundary and drains northwards, including several tributaries to the Wilge River situated in the western portion of the study area. The study area falls entirely within the Olifants Water Management Area.

8.5.3 *Sensitivities*

One of the most sensitive features of the study area is the Wilge River that drains through the area. The Wilge River and tributaries largely constitute the upper catchment area of the Olifants Water Management Area (WMA) and is still in a relatively good condition compared to the rest of the rivers and streams in the Olifants WMA, which are considered to be in a poor state. As a result the Wilge River and tributaries has enjoyed a high level of conservation effort by the Department of Water Affairs in recent years. The streams, unnamed drainage lines and wetlands, and pans supports a number of faunal and floral species uniquely adapted to these aquatic ecosystems and therefore all surface water bodies are earmarked as sensitive features.

The sensitivity of wetlands is typically determined by its structure, function and composition (which are discussed in more detail in Section 8.7 and 8.8 of this report).

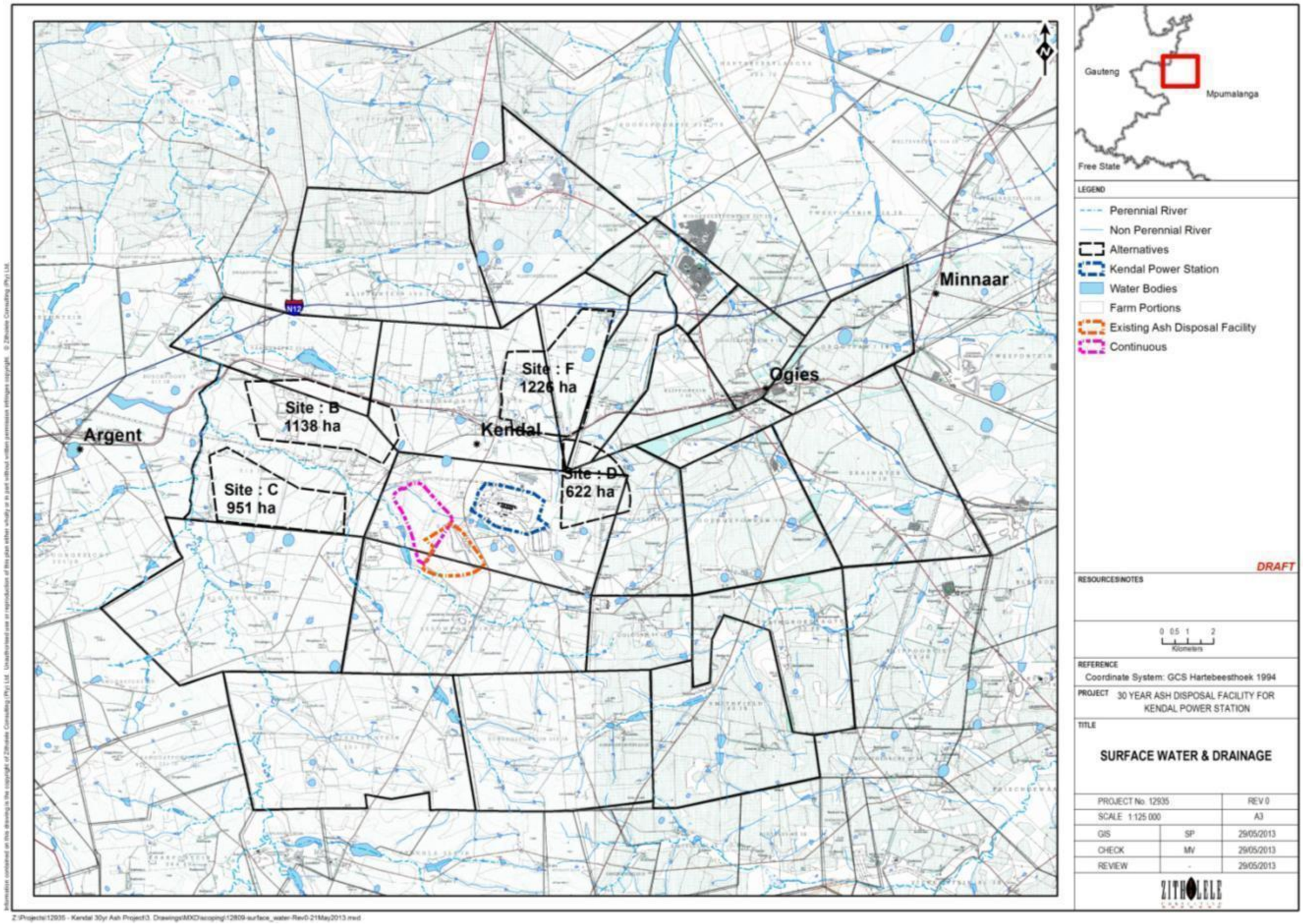

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Figure 8-7: Surface water and drainage features of the study site.

8.6 LAND USE

8.6.1 *Data Collection*

The land use data was obtained from the CSIR Land Cover database (2006) and supplemented with visual observations from aerial photography.

8.6.2 *Regional Description*

From Figure 8-8 below it can be seen that a large portion of the study area, which belongs to Kendal Power Station, is located on cultivated land. The land use in the area is dominated by maize cultivation and grazed fields (mostly cattle).

A portion of the western half of the study area is leased to a farmer for agricultural use by means of centre pivots, however the lease contract will come to an end in due course. The farmer has been informed of the intention of Eskom to develop a potential ash disposal facility in the area. The rest of the site is undeveloped and natural ground.

Although not indicated on the map in Figure 8-8, mining is another important and sensitive land use that is present in the study area. Large portions of the study area are either currently being mined, or are earmarked for mining or have mineral rights registered on properties. Open pit or strip mining is currently occurring in the area between the N12 and R545 (Site areas E1, E2, and F), while underground mining is occurring east and south east of Kendal Power Station. Determining the extent and scheduling of the mining activity is required in order to determine the feasibility of the identified and recommended site alternatives in the EIR phase of the EIA.

8.6.3 *Sensitivities*

Sensitive land use features include:

- Intensive and specialised agricultural activities;
- Open cast and underground mining activities, and existing registered mineral rights on a number of the properties in the study area.

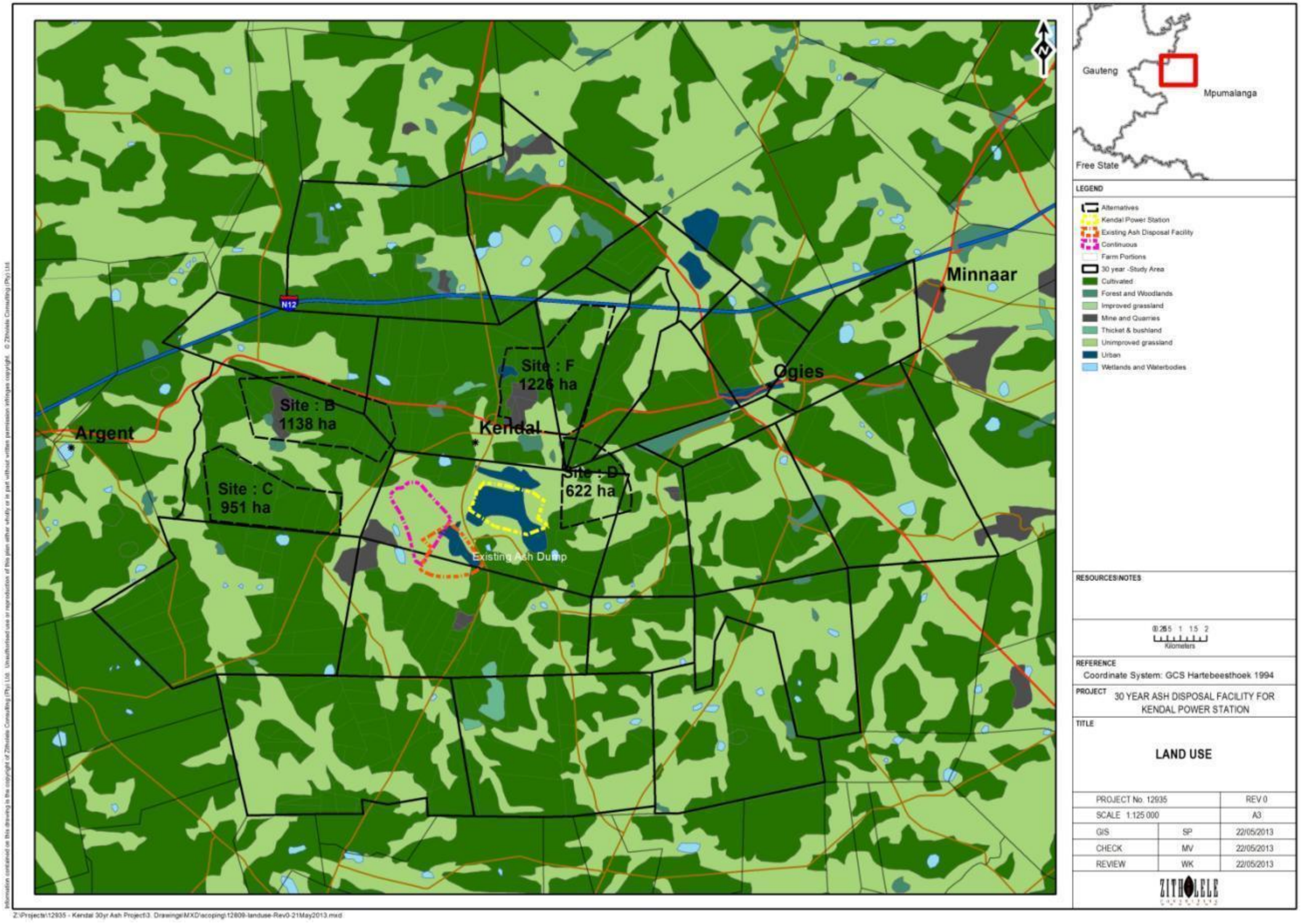


Figure 8-8: Land Use Map of the study site.

8.7 FAUNAL BIODIVERSITY

8.7.1 *Data Collection*

A literature review of the faunal species that could occur in the area was conducted. C-Plan data provided from the Mpumalanga provincial department was used to conduct a desktop study of the area. This data consists of terrestrial components; ratings provide an indication as to the importance of the area with respect to biodiversity.

8.7.2 *Regional Description and Sensitivities*

The biodiversity rating for the study area (Figure 8-9) is rated from largely least concern to Important and Necessary habitat remaining. One patch of area in the south eastern section of the study area is regarded as a highly significant vegetation type or biodiversity unit. Protected species may occur in the area and the report will be updated once the specialist studies are completed.

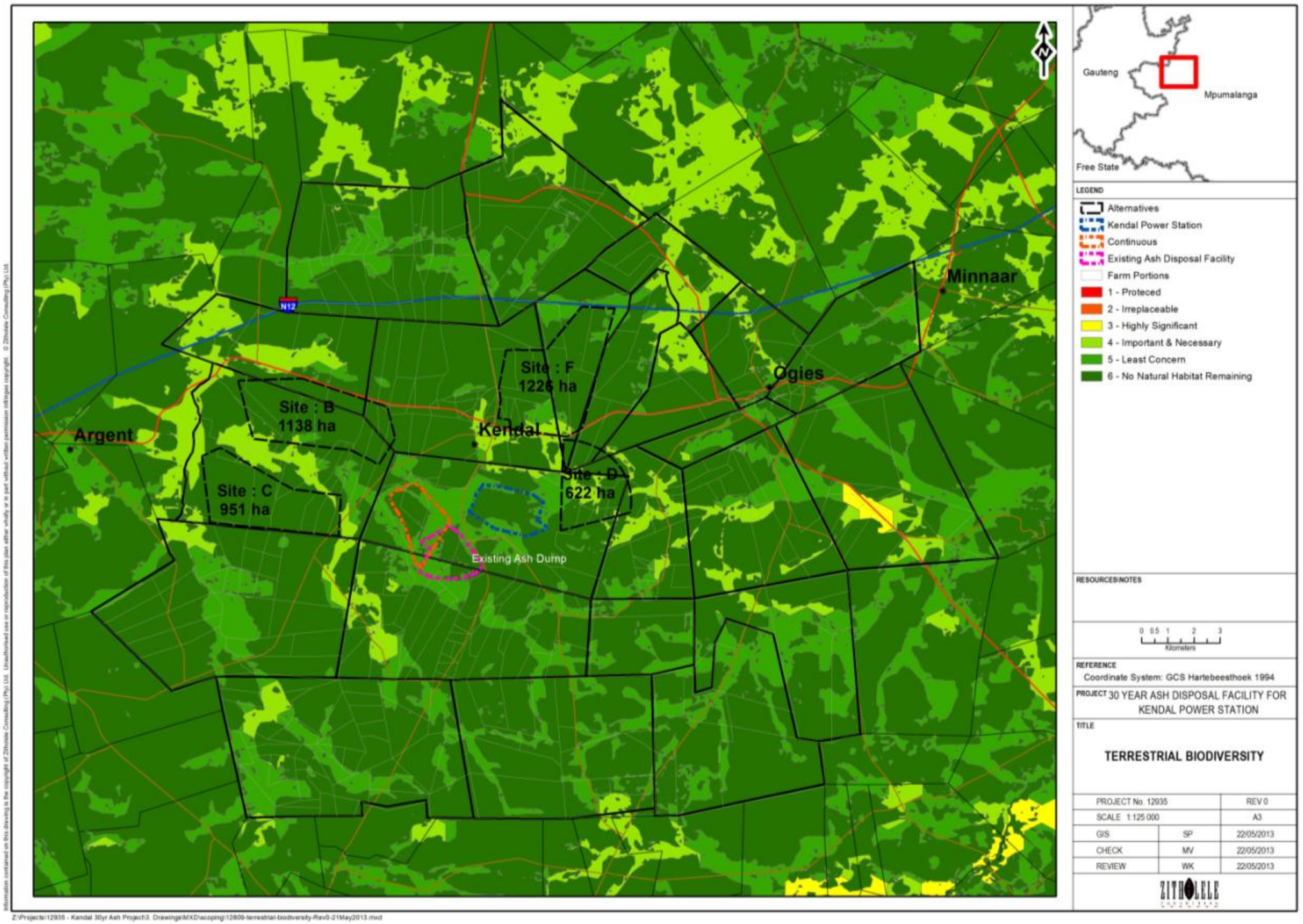


Figure 8-9: Biodiversity of the study area.

8.8 FLORAL BIODIVERSITY

8.8.1 *Methodology and Data Sources*

The floral data below is taken from The Vegetation of South Africa, Lesotho and Swaziland (Mucina and Rutherford 2006).

8.8.2 *Regional Description*

According to the South African National Biodiversity Institute, the study area falls within the Grassland Biome, where most of the country's maize production occurs. The vegetation of the area is classified as Rand Highveld Grassland and Eastern Highveld grassland as classified by Mucina and Rutherford[2].

Rand Highveld Grassland

Rand Highveld Grassland is found in the highly variable landscape with extensive sloping plains and ridges in the Gauteng, North-West, Free State and Mpumalanga Provinces. The vegetation type is found in areas between rocky ridges from Pretoria to Witbank, extending onto ridges in the Stoffberg and Roossenekal regions as well as in the vicinity of Derby and Potchefstroom, extending southwards and north-eastwards from there. The vegetation is species rich, sour grassland alternating with low shrubland on rocky outcrops. The most common grasses on the plains belong to the genera *Themeda*, *Eragrostis, Heteropogon* and *Elionurus*. High numbers of herbs, especially *Asteraceae* are also found. In rocky areas shrubs and trees prevail and are mostly *Protea caffra, Acacia caffra, Celtis africana* and *Rhus* spp.

Eastern Highveld Grassland

Eastern Highveld Grassland is found in the Mpumalanga and Gauteng Provinces. This vegetation type is found in plains between Belfast in the east and the eastern side of Johannesburg in the west and extending southwards to Bethal, Ermelo and west of Piet Retief.

8.8.3 *Sensitivities*

Rand Highveld Grassland

This vegetation type is poorly conserved (~1 %) and has a target of 24 % of the vegetation type to be conserved. Due to the low conservation status this vegetation type is classified as endangered. Almost half of the vegetation type has been transformed by cultivation,

[2] The Vegetation of South Africa, Lesotho and Swaziland, Muccina and Rutherford 2006.

plantations, urbanisation or dam-building. Scattered aliens (most prominently *Acacia mearnsii*) are present in the unit.

Eastern Highveld Grassland

This vegetation type is poorly conserved (only about 0.3 %) and has a target of 24 % of the vegetation type to be conserved. Due to the low conservation status this vegetation type is classified as endangered. Approximately 44 % of the vegetation type has been transformed by cultivation, mining, plantations, urbanisation or dam-building.

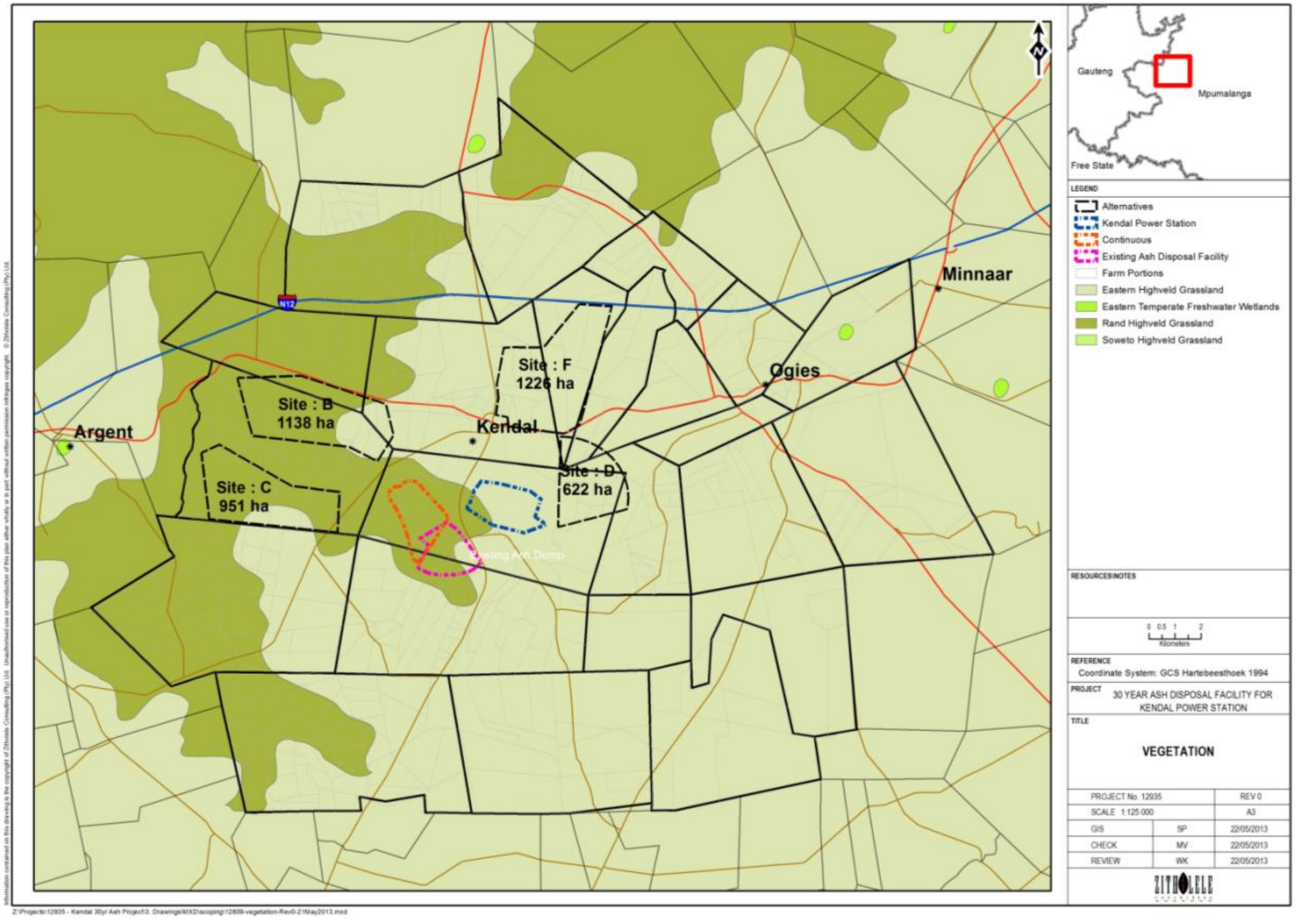


Figure 8-10: Vegetation of the study site.

8.9 INFRASTRUCTURE

8.9.1 *Methodology and Data Sources*

Infrastructure was identified using the 1:50 000 topocadastral maps of the area, and information provided by Eskom regarding existing services.

8.9.2 *Regional Description*

The following infrastructure are found in the study area:

- Kendal Power Station;
- Agricultural centre pivot and electrical cabling;
- Power lines and associated infrastructure;
- The Kendal - Kusile pipeline and Transnet pipeline;
- National, Regional and Local Roads;
- Rails roads and associated infrastructure;
- Grain silos;
- Low, medium and high residential housing;
- Mining related infrastructure such as conveyor belts, and immovable plant.

8.9.3 *Sensitivities*

All identified infrastructure is considered sensitive and the feasibility of possible relocation thereof to be investigated should it be required.

8.10 CULTURAL AND HISTORICAL RESOURCES

The regional area has several small cultural sites including graveyards, old buildings and some old battlefields and will be further investigated as part of the EIA and specialist studies.

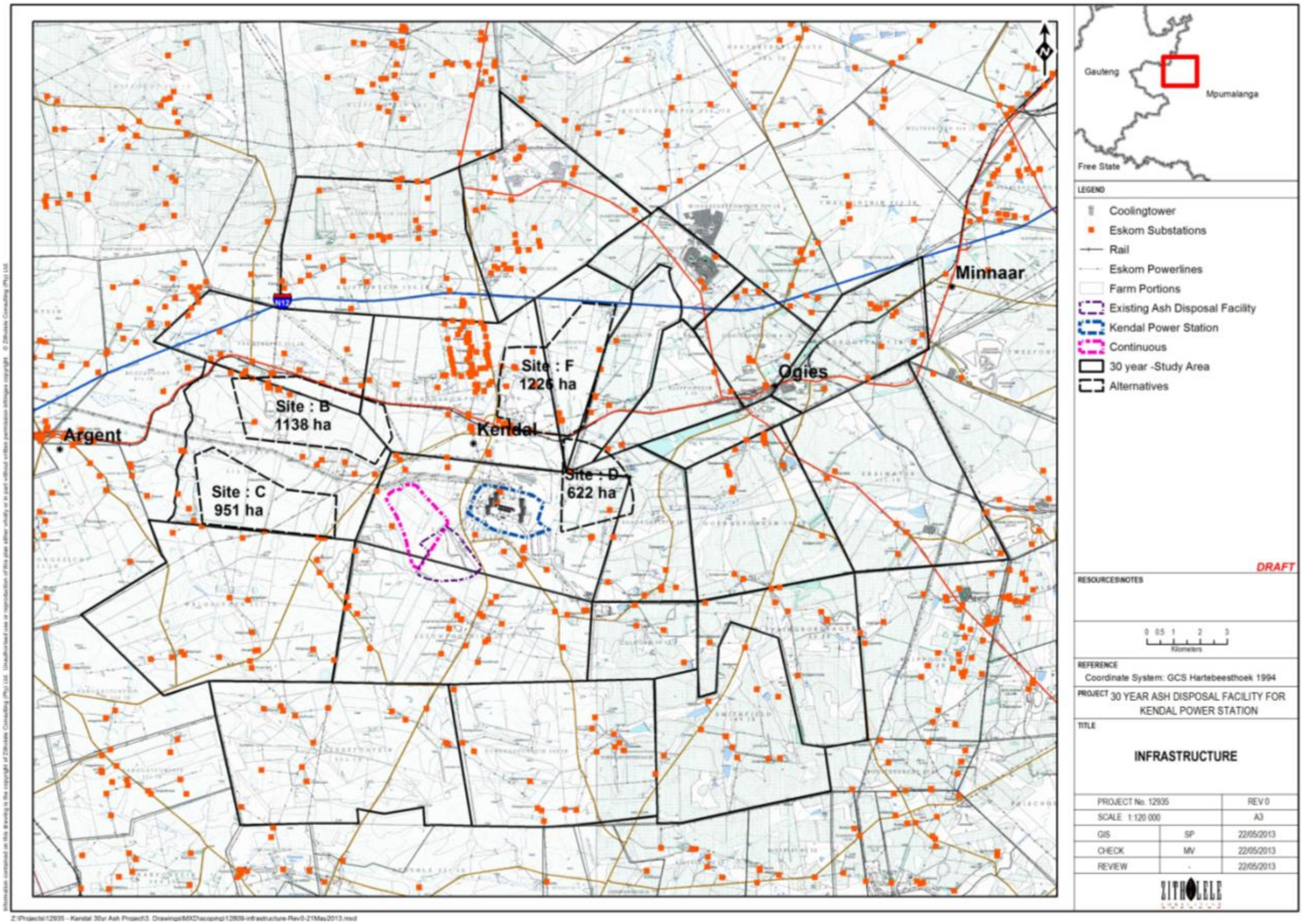


Figure 8-11: Infrastructure of the Study Site

9 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The proposed project is anticipated to have a range of impacts to the biophysical and socio-economic environment. The main purpose of the EIA process is to identify and evaluate potential impacts and to determine possible mitigation measures and management plans to address such impacts that may arise.

The potential environmental impacts identified during the Scoping Phase, which will be investigated further in the EIA phase of the project, are summarised in **Table 9-1** below.

Table 9-1: Potential Environmental Impacts to be investigated in the EIA Phase.

Environmental Element	Potential Impact
Geology	Permanent destruction of geological strata caused by: • Cut and fill operations;
Soils and Land Capability	Soil resources will be sterilised by: • The establishment of the ash disposal facility over a large area (~ 1000 ha); • The construction of roads that will be permanent for the construction and maintenance of the proposed project. Some soil may be lost through: • Erosion during the construction phase over exposed areas; • Pollution of soils (i.e. hydro-carbons from construction / maintenance vehicles); Some soils will only be temporarily impacted through compaction during the construction phase and will be rehabilitated.
Topography	Altered topography caused by: • Deposition of ash on surface over a large area; • The construction of cut off drains and berms; and • Profiling for the construction of surface infrastructure.
Surface and Ground Water	Reduction in surface water flow caused by: • Alteration of surface water drainage patterns causing run-off to be impeded or entrained. Pollution of surface / ground water resources caused by: • Surface water runoff over exposed soils may result in the sedimentation or increased turbidity of surface water features. • Surface water features may become contaminated by hydro-carbons from construction / maintenance vehicles, dust, or ash. • Leachate from the facility may percolate into, and contaminate, ground / surface water features. • Pollutants could have a human / animal health impact if groundwater is contaminated, and is being used.

Environmental Element	Potential Impact
Terrestrial Ecology	Vegetation and habitat will be lost or the quality reduced because of the: • Establishment of the waste facility of approximately 1000 ha; • Establishment of associated infrastructure (i.e. roads, and dams); • Possible displacement of species; • Propagation of alien invasive species; • Health implications due to pollution/ash deposition; and • Impact on sensitive species / habitats.
Avifauna	Avifauna may be negatively impacted in the following way: • Disturbance of breeding birds, particularly the Red Listed species through the construction and operational activities. • Habitat destruction through the construction of associated infrastructure during the construction phase of the project e.g. roads and the clearing of footprint.
Air Quality	Decrease in air quality as a result of increased airborne dust particulates caused by: • Vehicles traversing dirt roads during construction and operation; • Dust from the exposed surfaces of the ash facility during operations; • Dust blown from the conveyor belt during operations.
Social	Impacts to human health may be caused by: • Increased airborne particulates. Individuals, families, or small communities, may need to be relocated because: • There is no area large enough to accommodate the facility that is unpopulated. • People may be located too close to the proposed boundary of the facility. Social perceptions may be altered because: • The sense of place may be altered; • They may have a positive / negative attitude to Eskom; • Safety and security perceptions are inclined to be dependent on the influx of people to and from an area.
Land Use	Property values may decrease as a result of: • The change in land use of land affected by the project; • The visual impact created by the project; and • Perceived security risks introduced by the proposed project. Spatial planning may be negatively affected because: • The proposed project may conflict with existing / future planned uses. • The land use of the site selected for the disposal facility will be altered, mostly agricultural uses at present (including grazing and crop farming is practiced).

Environmental Element	Potential Impact
Infrastructure	Infrastructure may need to be relocated including roads, power lines, pipelines and buildings, possibly causing the interruption of these services, because: • It is not possible to avoid the infrastructure due to the size of the project.
Heritage and Paleontological Resources	This is dependent upon the receiving environment and will be investigated further in greater detail in the EIR phase.

10 PLAN OF STUDY FOR EIA

10.1 INTRODUCTION

In terms of Chapter 5 of the NEMA EIA regulations, EIA refers to the process of collecting, organising, analysing, interpreting and communicating information that is relevant to the consideration of the application. This includes an assessment of the nature, extent, duration, probability and significance of the identified potential environmental, social and cultural impacts of the proposed development as well as the cumulative impacts thereof. Mitigatory measures for each significant impact are to be determined. Alternative land uses or developments, their impacts and their cumulative impacts will also be considered and compared with those of the proposed development. Details of the Public Participation Process (PPP) followed during the course of the assessment will be given and it will be indicated how issues raised by stakeholders have been addressed. Knowledge gaps will be identified and descriptions of the arrangements for monitoring and management of the environmental impacts will be given.

10.2 TERMS OF REFERENCE FOR SPECIALIST STUDIES

Based on the available data and the sensitivities identified the following specialist studies will be conducted in the EIA phase:

- Ecology (Terrestrial flora and fauna and Avifauna assessment);
- Heritage Impact Assessment;
- Social Impact Assessment;
- Surface water resources (hydrology and aquatic ecology) and wetlands (including wetlands delineation);
- Groundwater resources (Geohydrology);
- Geology and Geotechnical investigations (Phase 1 geotechnical investigations);
- Traffic impact studies;
- Air quality;
- Noise pollution;
- Soils, land capability and agricultural potential;
- Visual Impact Assessment;
- Resource economics and sustainability investigations;
- Ash classification
- Conceptual designs of the ash disposal facility; and

- Topographical Survey.

The findings of these studies will be reflected in the Environmental Impact Report (EIR). The proposed Terms of Reference (ToR) for each of these specialist investigations is indicated below.

10.2.1 *ToR: Terrestrial Ecology*

An ecological investigation will be conducted on the site and associated infrastructure. The objectives of these studies will be to:

- Review existing ecological information available;
- Conduct a site visit during the summer and winter seasons to determine the general ecological state of the proposed sites;
- Determine the occurrence of any red data and/or vulnerable species, or any sensitive species requiring special attention;
- Compile a detailed description of the baseline environment;
- Provide a ranking assessment of the suitability of the proposed site;
- Undertake a comparative assessment of the various alternatives;
- Provide mitigation measures to prevent and/or mitigate any environmental impacts that may occur due to the proposed project;
- Compile an ecological report, indicating findings, preferred site recommendations and maps indicating sensitive and/or no-go areas; and
- An indication of the confidence levels will be given.

10.2.2 *ToR: Avifauna*

The following methodology is proposed:

- Review existing ecological information available;
- Conduct a site visit during the summer seasons to determine the general ecological state of the proposed site;
- Determine the occurrence of any red data and/or vulnerable species, or any sensitive species requiring special attention;
- Describe the existing environment and the bird communities currently existing within the zone of influence of the proposed ash facility and associated infrastructure (including the roads) will be identified and described.

- Describe different bird micro-habitats as well as the species associated with those habitats.
- Gaps in baseline data will be highlighted and discussed and an indication of the confidence levels will be given. The best available data sources (both published and unpublished literature) will be used to establish the baseline conditions, and extensive use will be made of local knowledge if available (e.g. local bird clubs/amateur ornithologists/landowners) who are familiar with the study area.
- Map bird sensitive areas in a sensitivity map for easy reference, and particular emphasis will be placed on habitat for Red Data and endemic species.
- A full description of potential impacts (direct and indirect) will be provided, relative to these specific developments.
- Assess the potential impact on the birds and evaluated according to the criteria that are required by the EAP.
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Practical mitigation measures will be recommended and discussed.
- If a need for the implementation of a monitoring programme in the EMPr phase is evident, it will be highlighted and a programme proposed.

10.2.3 *ToR: Heritage (Archaeological and Palaeontological)*

A Heritage Impact Assessment will be conducted to comply with Section 38 of the National Heritage Resources Act (No 25 of 1999). Specific objectives of this study will be:

- Desktop study (consulting heritage data banks and appropriate literature);
- Site visit of the project area;
- Determine whether any of the types and ranges of heritage resources as outlined in Section 3 of the Act (No 25 of 1999) do occur in the project area;
- Determine what the nature, the extent and the significance of these remains are;
- Determine whether any heritage resources (including graves) will be affected by the development project;
- If any heritage resources are to be affected by the development project mitigation measures has to be undertaken and management proposals have to be set for heritage resources which may continue to exist unaffected in or near the project area.
- Compile a report which would:
  - Clearly identify possible archaeological, cultural and historical sites within the study site;

- Identify the potential impacts of construction and operation of the proposed development on such resources, with and without mitigation;
- Offer an opinion on a preferred site in terms of this specialist field;
- Provide mitigation measures to ameliorate any negative impacts on areas of heritage significance; and
- Include a map illustrating the salient aspects of the report.

- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives; and
- Provide suitable mitigation measures and implementation actions.

10.2.4 *Social Impact Assessment*

The objective of the Social Impact Assessment is to assess possible positive and negative social impacts associated with the projects, to ensure social license to operate for Eskom and to incorporate the voice of the community in environmental processes which affects their lives on a day-to-day basis. The following are included in the Social Impact Assessment:

- Social Baseline study;
- Scoping report;
- Social Impact Assessment report identifying social impacts and suggesting mitigation measures.

It is proposed that the following methodologies are followed:

- The SIA will commence with a baseline study of the study area and site which will include an in-depth literature review of available literature. This will include relevant legislation and existing provincial and municipal documents and studies, as well as any additional literature that is deemed to be applicable to the study. This study will focus on the local and regional level.
- Necessary demographic data will be obtained from Statistics South Africa and Municipal Integrated Development Plans.
- A scoping exercise consisting of an initial site visit and information search will be conducted. Stakeholders will include town councils, tribal councils, land owners, the relevant farmer's associations, community representatives and political leaders, amongst others.
- The initial site visit will be followed up with a longer period of field work to obtain additional information and communicate with key stakeholders. A preliminary report listing issues identified during this process will be submitted after the fieldwork is completed.

- All public meetings arranged by the stakeholder engagement team will be attended by the social scientists.
- Information will be obtained via focus groups, formal and informal interviews, participatory rural appraisal, observation, the internet and literature reviews. Minutes and notes will be kept of all interviews and focus groups. At this stage it is foreseen that four to five focus groups as well as a number of individual interviews will be conducted in each phase of the project, but more detailed planning regarding this can only be done once more detailed information is given, and key stakeholders have been identified.
- An interview schedule might be utilised instead of formal questionnaires. An interview schedule consists of a list of topics to be covered, but it is not as structured as an interview. It provides respondents with more freedom to elaborate on their views.
- The final SIA report will focus on current conditions, providing baseline data. Each category will discuss the current state of affairs, but also investigate the possible impacts that might occur in future. Recommendations for mitigation will be made at the end of the report.
- The SIA will have a participatory focus. This implies that the SIA will focus strongly on including the local community and key stakeholders.
- The public consultation process needs to feed into the SIA. Information obtained through the public processes will inform the writing of the SIA and associated documents.

10.2.5 *ToR: Surface Water and Hydrology*

The surface water data will be obtained from the WR90 database from the Water Research Council. The data that will be used includes catchments, river alignments and river names. In addition water body data will be obtained from the CSIR land cover database (1990) to show water bodies and wetlands. This information will be ground-truthed during a site visit.

A surface hydrology assessment will be undertaken and will consist of the following:

- A desktop assessment;
- Site investigation;
- Water sampling and analysis;
- Compilation of a baseline environmental description;
- Interaction with the design team during design interactions;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;

- Assess impacts and identify mitigation measures; and
- Compile a management and monitoring programme for the site.

The purpose of the surface hydrology study will be to address the following:

- Description of the surface hydrology:
  - Occurrence of drainage lines, springs, pans, dams, wetlands etc;
  - Characteristics of surface water features;
  - Precipitation patterns;
  - Determination of Floodlines for the 1:50 and 1:100 year flood events;
  - Surface water runoff patterns;
  - Water quality;
  - Sediment transport potential; and
  - Regional context of surface water resources.
- Description of impacts to surface water resources (quality and quantity):
  - Potential impacts in light of the vision for the area;
  - Potential impact on baseline conditions;
  - Possible use of surface water during construction and operation and the impacts thereof;
  - Trace the likely source path receptor pathways to determine all potentially significant, direct, indirect, and cumulative impacts;
  - Identify inter-connectedness of impacts to other environmental elements i.e. wetlands, groundwater, and aquatics; and
  - Assess pollution risk.
- Identify management measures to reduce negative impacts and exacerbate positive impacts. Compile a management plan appropriate to the requirements of the EIA process documenting such measures.

10.2.6 *ToR: Wetland Delineation*

The objectives of this study will be to:

- Review existing information available for the area;
- The riparian zone and wetlands will be delineated according to the guidelines and procedures developed by the Department of Water Affairs (DWA);
- During the site investigation the following indicators of potential wetlands will be identified:

- Terrain unit indicator;
- Soil form indicator;
- Soil wetness indicator; and
- Vegetation indicator.

- Assess the status of each of the wetlands identified and assess the potential impacts on the wetlands;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Compilation of a wetland delineation report that is sufficient to address the requirements of a water and waste license applications, the EIR and management practices including mitigation measures; and
- Recommendations toward study site.

10.2.7 *ToR: Geohydrology*

The geohydrological assessment will consist of:

- A review of all existing groundwater information available from the power station and formulate a baseline status;
- A hydrocensus compiled by a specialist;
- A geophysical investigation (electromagnetic and magnetic);
- The drilling of monitoring boreholes;
- Infiltration tests;
- Aquifer tests;
- Hydrochemical sampling and analysis;
- The development of a flow and mass transport models;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives; and
- Pollution plume simulation.

A report will be compiled that includes:

- A description of the groundwater flow regimes and the depth of the water table;
- A description of the aquifer parameters, classification and vulnerability;
- A description possible groundwater contamination or flooding;

- Assess possible pollution risks;
- A review of the current groundwater monitoring regime and make recommendations on any amendments required;
- Suggest mitigation measures to prevent any impacts to the groundwater;
- Highlight the current trends in the groundwater regime that could influence the design of the new ash disposal site; and
- Be of a sufficient standard to address the requirements of a water and waste license application, the EIR and management practices.

10.2.8 *ToR: Geotechnical assessment*

Geotechnical assessment undertaken on will consist of:

- Review of existing and available geological and geotechnical information;
- A site visit to verify available aerial photographs and to investigate the depth and properties of regolith by excavations and soil sampling;
- Test pits, if required, will be excavated on the site to characterise land forms or terrain units and anomalies identified during the API. Samples of representative soils will be collected for laboratory testing;
- Dynamic penetration tests (DCP) will be carried out at the site of each test pit to determine the variation in in-situ stiffness over the upper 1 m of the profile; and
- Soil samples from the test pits will be tested for classification, compaction characteristics and strength/stiffness properties. Problem soils, if presents, will be tested to quantify the degree of the problem condition (e.g. collapse potential).
- Compiling a map will be compiled indicating features observed;
- Identifying and assessing significance of potential geotechnical constraints to the proposed development;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Proposing mitigation measures that could reduce or eliminate the identified constraints; and
- Compiling a report that will be compiled based on the findings of the study.

10.2.9 *ToR: Traffic*

The traffic study will include the following:

- Undertake a site visit, taking cognisance of the traffic in the area;
- Undertake a review of existing information and conceptual plans of the study area;
- Provide an opinion on the existing and predicted traffic impact during and after construction of the ash site and assess the general impact of the project on traffic.
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Provide mitigation measures to prevent and/or mitigate any environmental impacts that may occur due to the proposed project; and
- Compilation of a Traffic Impact Opinion Report.

10.2.10 *Air Quality Assessment*

The Air Quality Assessment will include a Baseline Characterisation and an Impact Assessment that will include the following:

The baseline assessment will include the following:

- The regional climate and site-specific atmospheric dispersion potential;
- Preparation of hourly average meteorological data;
- Identification of existing sources of emission and characterisation of ambient air quality within the region based on observational data recorded to date (if available).

The Air Quality Impact Assessment will include the following:

- Identification and quantification of all sources of atmospheric emissions associated with the new ash disposal facility.
- Use a 1st tier screening model to provide some guidance on the potential impacts from the proposed ash disposal facility.
- Provide a professional opinion on the proposed air quality impacts from the proposed ash facility and recommendations on air quality monitoring.

Other tasks will include:

- A desktop literature review and information gathering exercise will be conducted.
- Identification of expected air emissions sources and likely air quality parameters of potential concern on-site, based on potential health effects to identified sensitive receptors.
- Identification of applicable air quality standards, legislation and guidelines which would constitute project adherence / compliance requirements, including those specified by the World Bank.

- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Incorporation of air quality criteria into the Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) documents.
- Management interventions to control and/or mitigate the identified project air quality impacts.

10.2.11 *Noise Assessment*

Based on the terms of reference typically included in a noise assessment, the noise assessment will include the following tasks:

A baseline noise survey, including:

- A site visit which will be conducted in order to familiarise the consultant with the environment of the proposed development. Possible noise issues and the nearest noise sensitive receptors will be identified;
- Measurement and assessment of existing environmental noise levels at sensitive receptors in vicinity of the Kendal Power Station and surrounds;
- Measurement and calculation of existing noise emissions from the existing ash disposal;
- A survey of ground characteristics and other site specific features that may influence the propagation of noise; and
- The identification of existing sources of environmental noise in the area.

A noise impact assessment including:

- A review of local and international legislation and guidelines pertaining to environmental noise impacts;
- The identification and quantification of potential sources of environmental noise associated with the proposed project;
- The preparation of meteorological data and site specific acoustic parameters for use in the calculation of noise propagation;
- The calculation of noise propagation from through the application of a suitable noise propagation model to be compared with noise from existing air pollution control equipment;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;

- A qualitative discussion on the potential for cumulative noise impacts and the evaluation of estimated noise impacts based on legislation and guidelines; and
- A review of mitigation measures pertaining to environmental noise management.

10.2.12 *ToR: Aquatic Ecology*

A surface water aquatic ecological assessment in accordance with the River Health Programme (RHP) will focus primarily on the biological responses as an indicator of ecosystem health, with only a vague cause-and-effect relationship between the drivers and the biological responses. The minimum tools required for this assessment include:

- Drivers: Habitat and in situ Water Quality; and
- Responses: Fish, Aquatic Invertebrates and Riparian Vegetation.

The methodologies that will be adopted for the assessments are based on methodologies widely accepted by and utilized in the RHP of South Africa. The RHP is a national monitoring program used to monitor and assess South Africa's freshwater resources. An integrated ecological state assessment report will include:

- Habitat: Integrated Habitat Assessment System (IHAS) and the Index of Habitat Integrity (IHI);
- Water quality: pH, Dissolved oxygen concentration and saturation, temperature and conductivity (TDS);
- Fish: Fish Assessment Integrity Index (FAII);
- Aquatic invertebrates: South African Scoring System (SASS, version 5); and
- Riparian vegetation: Riparian Vegetation Index (RVI).

Other tasks will include:

- Providing a ranking assessment of the suitability of the proposed sites;
- Undertaking a comparative assessment of the various alternatives;
- Providing mitigation measures to prevent and/or mitigate any environmental impacts that may occur due to the proposed project; and
- Compilation of a draft report for Zitholele and client review and approval, before compiling the final assessment repoirt.

10.2.13 *ToR: Soils and Land Capability/Agricultural Potential*

The objectives of this study will be:

- Review existing information available from land type maps, previous reports and GIS information;
- A field visit to verify the aerial photographic study observations. Additionally, during the visit, the depth and properties of regolith will be judged from natural exposure (dongas) and hand augering where applicable. The following soil characteristics will be documented:
  - Soil horizons;
  - Soil colour;
  - Soil depth;
  - Soil texture (Field determination)
  - Wetness;
  - Occurrence of concretions or rocks; and
  - Underlying material (if possible).
- Assess the potential impacts and their significance on the agricultural potential of the site;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Propose mitigation measures to reduce or mitigate potential impacts;
- Compile a report detailing the findings of the assessment; and
- Recommendation pertaining to proposed site.

10.2.14 *ToR: Visual Assessment*

The proposed methodology to be adopted for the visual assessment includes the following tasks:

- Examine the baseline information (contours, facility, dimensions, vegetation, inter alia);
- Determine the area from which any part of the facility may be visible (viewshed);
- Identify the locations from which views of the facility may be visible (observation sites), which include buildings and roads;
- Determine the visual landscape quality and character;
- Analyse the observation sites to determine the potential level of visual impact that may result from the facility;
- Provide a ranking assessment of the suitability of the proposed sites;

- Undertake a comparative assessment of the various alternatives;
- Identify measures available to mitigate the potential impacts; and
- Compile a draft report for Zitholele and client review and approval, before compiling the final assessment report.

10.2.15 *Resource economics and sustainability investigations;*

The proposed methodology to be adopted for the sustainability assessment includes the following tasks:

- Conduct a resource economics-based trade-off study on the socio-economic and the natural environment;
- Undertake a social-economic cost benefit analysis in compliance with the requirements of the Department of Environmental Affairs;
- Prioritise sites based on inputs received from the other specialist studies;
- Practical mitigation measures will be recommended and discussed;
- Sustainability assessment for each alternative;
- Impact statement on the preferred alternative;
- Opinion of the specialist on the preferred alternative;
- The no-go alternative will be assessed in terms of the NEMA Regulations.
- Facilitation / streamlining of trade-off assessment processes with relevant authorities, the proponent, and consulting team;
- Provide a ranking assessment of the suitability of the proposed sites;
- Undertake a comparative assessment of the various alternatives;
- Identify measures available to mitigate the potential impacts; and
- Compile a draft report for Zitholele and client review and approval, before compiling the final assessment report.

10.2.16 *ToR: Ash Classification*

The objectives of this study will be:

- Collect ash samples;
- Classify the ash according to the authorised and correct waste regulations (Minimum requirements);
- Determine if the ash from the site is classified as Hazardous or General Waste; and

- Based on classification, recommend appropriate mitigation measures

10.2.17 *ToR: Ash Disposal Facility Site Design and Operating Manual*

A specialist disposal facilities design engineer must complete the conceptual design of the ash disposal site. Included in this scope is:

- Site visit of the project area;
- Oversee the Topographical Survey of the site;
- Generate conceptual layout drawings for each of the four identified sites (C, F, D, and B);
- Compile design drawings for the preferred Kendal 30 year ash disposal facility;
- Submit drawings to DEA and DWA for review and make any alternations required;
- Include any mitigation measures prescribed by specialist into the design for example storm water drainage; and
- Review and amend current site operating manual to be relevant for the new site.

10.2.18 *ToR: Topographic Survey*

A specialist surveyor will be required to undertake a topographic survey, included in this scope is:

- Survey of the site at 0.5 m contours;
- Produce a digital elevation model (DTM) to inform engineering designs;
- Identify all features and structures on site; and
- Submit surveyed information in an electronic CAD and ECW format.

10.3 IMPACT ASSESSMENT METHODOLOGY

The impacts will be ranked according to the methodology described below. Where possible, mitigation measures will be provided to manage impacts. In order to ensure uniformity, a standard impact assessment methodology will be utilised so that a wide range of impacts can be compared with each other. The impact assessment methodology makes provision for the assessment of impacts against the following criteria:

- Significance;
- Spatial scale;
- Temporal scale;

- Probability; and
- Degree of certainty.

A combined quantitative and qualitative methodology was used to describe impacts for each of the aforementioned assessment criteria. A summary of each of the qualitative descriptors along with the equivalent quantitative rating scale for each of the aforementioned criteria is given in **Table 10-1**.

Table 10-1: Quantitative rating and equivalent descriptors for the impact assessment criteria

Rating	Significance	Extent Scale	Temporal Scale
1	VERY LOW	*Proposed site*	Incidental
2	LOW	*Study area*	Short-term
3	MODERATE	*Local*	Medium-term
4	HIGH	*Regional / Provincial*	Long-term
5	VERY HIGH	*Global / National*	Permanent

A more detailed description of each of the assessment criteria is given in the following sections.

10.3.1 *Significance Assessment*

Significance rating (importance) of the associated impacts embraces the notion of extent and magnitude, but does not always clearly define these since their importance in the rating scale is very relative. For example, the magnitude (i.e. the size) of area affected by atmospheric pollution may be extremely large (1 000 km^2) but the significance of this effect is dependent on the concentration or level of pollution. If the concentration is great, the significance of the impact would be HIGH or VERY HIGH, but if it is diluted it would be VERY LOW or LOW. Similarly, if 60 ha of a grassland type are destroyed the impact would be VERY HIGH if only 100 ha of that grassland type were known. The impact would be VERY LOW if the grassland type was common. A more detailed description of the impact significance rating scale is given in **Table 10-2** below.

Table 10-2: Description of the significance rating scale

Rating		Description
5	Very high	Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit.
4	High	Impact is of substantial order within the bounds of impacts, which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these.
3	Moderate	Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the

Rating		Description
		case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc.
2	Low	Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these.
1	Very low	Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity are needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale.
0	No impact	There is no impact at all - not even a very low impact on a party or system.

10.3.2 *Spatial Scale*

The spatial scale refers to the extent of the impact i.e. will the impact be felt at the local, regional, or global scale. The spatial assessment scale is described in more detail in **Table 10-3.**

Table 10-3: Description of the significance rating scale

Rating		Description
5	Global/National	The maximum extent of any impact.
4	Regional/Provincial	The spatial scale is moderate within the bounds of impacts possible, and will be felt at a regional scale (District Municipality to Provincial Level).
3	Local	The impact will affect an area up to 10 km from the proposed site.
2	Study Site	The impact will affect an area not exceeding the Eskom property.
1	Proposed site	The impact will affect an area no bigger than the ash disposal site.

10.3.3 *Duration Scale*

In order to accurately describe the impact it is necessary to understand the duration and persistence of an impact in the environment. The temporal scale is rated according to criteria set out in **Table 10-4**.

Table 10-4: Description of the temporal rating scale

Rating		Description
1	Incidental	The impact will be limited to isolated incidences that are expected to occur very sporadically.
2	Short-term	The environmental impact identified will operate for the duration of

		the construction phase or a period of less than 5 years, whichever is the greater.
3	Medium term	The environmental impact identified will operate for the duration of life of facility.
4	Long term	The environmental impact identified will operate beyond the life of operation.
5	Permanent	The environmental impact will be permanent.

10.3.4 *Degree of Probability*

Probability or likelihood of an impact occurring will be described as shown in **Table 10-5** below.

Table 10-5: Description of the degree of probability of an impact occurring

Rating	Description
1	Practically impossible
2	Unlikely
3	Could happen
4	Very Likely
5	It's going to happen / has occurred

10.3.5 *Degree of Certainty*

As with all studies it is not possible to be 100% certain of all facts, and for this reason a standard "degree of certainty" scale is used as discussed in **Table 10-6**. The level of detail for specialist studies is determined according to the degree of certainty required for decision-making. The impacts are discussed in terms of affected parties or environmental components.

Table 10-6: Description of the degree of certainty rating scale

Rating	Description
Definite	More than 90% sure of a particular fact.
Probable	Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring.
Possible	Between 40 and 70% sure of a particular fact or of the likelihood of an impact occurring.
Unsure	Less than 40% sure of a particular fact or the likelihood of an impact occurring.
Can't know	The consultant believes an assessment is not possible even with additional research.
Don't know	The consultant cannot, or is unwilling, to make an assessment given available information.

10.3.6 *Quantitative Description of Impacts*

To allow for impacts to be described in a quantitative manner in addition to the qualitative description given above, a rating scale of between 1 and 5 was used for each of the assessment criteria. Thus the total value of the impact is described as the function of significance, spatial and temporal scale as described below:

$$\textbf{\textit{Impact Risk}} = \frac{(\text{SIGNIFICANCE} + \textit{Spatial} + \text{Temporal})}{\mathbf{3}} \times \frac{\text{Probability}}{\mathbf{5}}$$

An example of how this rating scale is applied is shown below:

Table 10-7: Example of Rating Scale

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
	LOW	*Local*	Medium-term	*Could Happen*	
Impact to air	**2**	***3***	**3**	**3**	**1.6**

Note: The significance, spatial and temporal scales are added to give a total of 8, that is divided by 3 to give a criteria rating of 2,67. The probability (3) is divided by 5 to give a probability rating of 0,6. The criteria rating of 2,67 is then multiplied by the probability rating (0,6) to give the final rating of 1,6.

The impact risk is classified according to five classes as described in the **Table 10-8** below.

Table 10-8: Impact Risk Classes

Rating	Impact Class	Description
0.1 – 1.0	**1**	**Very Low**
1.1 – 2.0	**2**	**Low**
2.1 – 3.0	**3**	**Moderate**
3.1 – 4.0	**4**	**High**
4.1 – 5.0	**5**	**Very High**

Therefore with reference to the example used for air quality above, an impact rating of 1.6 will fall in the Impact Class 2, which will be considered to be a low impact.

10.3.7 *Cumulative Impacts*

It is a requirement that the impact assessments take cognisance of cumulative impacts. In fulfilment of this requirement the impact assessment will take cognisance of any existing impact sustained by the operations, any mitigation measures already in place, any additional impact to environment through continued and proposed future activities, and the residual impact after mitigation measures.

It is important to note that cumulative impacts at the national or provincial level will not be considered in this assessment, as the total quantification of external companies on resources is not possible at the project level due to the lack of information and research documenting the effects of existing activities. Such cumulative impacts that may occur

across industry boundaries can also only be effectively addressed at Provincial and National Government levels.

Using the criteria as described above an example of how the cumulative impact assessment will be done is shown below:

Table 10-9 - Example of cumulative impact assessment

Impact	Significance	Spatial Scale	Temporal Scale	Probability	Rating
Initial / Existing Impact (I-IA)	**2**	**2**	**2**	*1*	0.4
Additional Impact (A-IA)	**1**	***2***	**1**	*1*	0.3
Cumulative Impact (C-IA)	**3**	***4***	**2**	*1*	0.6
Residual Impact after mitigation (R-IA)	**2**	***1***	**2**	*1*	0.3

As indicated in the example above the Additional Impact Assessment (A-IA) is the amount that the impact assessment for each criterion will increase. Thus if the initial impact will not increase, as shown for temporal scale in the example above the A-IA will be 0, however, where the impact will increase by two orders of magnitude from 2 to 4 as in the spatial scale the A-IA is 2. The Cumulative Impact Assessment (C-IA) is thus the sum of the Initial Impact Assessment (I-IA) and the A-IA for each of the assessment criteria.

In both cases the I-IA and A-IA are assessed without taking into account any form of mitigation measures. As such the C-IA is also a worst case scenario assessment where no mitigation measures have been implemented. Thus a Residual Impact Assessment (R-IA) is also made which takes into account the C-IA with mitigation measures. The latter is the most probable case scenario, and for the purpose of this report is considered to be the final state Impact Assessment.

10.3.8 *Notation of Impacts*

In order to make the report easier to read the following notation format is used to highlight the various components of the assessment:

- Significance or magnitude- IN CAPITALS
- Temporal Scale – in underline
- Probability – in *italics and underlined*
- Degree of certainty - in **bold**
- Spatial Extent Scale – in *italics*

10.4 ENVIRONMENTAL IMPACT REPORT

Once the Scoping Report and the Plan of Study for the EIA is accepted by the DEA, Zitholele will begin the Environmental Impact Report.

The Environmental Impact Report will include the activity description; site / area and corridor assessments; public participation; a description of the issues and assessment of the site. The specialist studies results will be summarised and integrated into the Environmental Impact Report.

The WMLA Report will include all the technical information generated by the Design of the Facility, the Site Survey and the Operating Plan. In addition all the documents required by DEA for the waste license will also be included. These include the emergency and response plan, the closure and rehabilitation plan and the waste hierarchy implementation plan.

10.5 ENVIRONMENTAL MANAGEMENT PROGRAMME

An Environmental Management Programme (EMPr), in the context of the Regulations, is a tool that takes a project from a high level consideration of issues down to detailed workable mitigation measures that can be implemented in a cohesive and controlled manner. The objectives of an EMPr are to minimise disturbance to the environment, present mitigation measures for identified impacts, maximise potential environmental benefits, assign responsibility for actions to ensure that the pre-determined aims are met, and to act as a “cradle to grave” document. The EMPr will be drafted according to the findings in the Scoping Report and EIR.

10.6 PUBLIC PARTICIPATION DURING THE EIA PHASE

The purpose of public participation during the Impact Assessment Phase is to present the findings of the EIA phase and to avail the Draft EIR to the public for comments. I&APs will be afforded an opportunity to verify that their issues have been considered either by the EIA specialist studies, or elsewhere. Also, I&APs will comment on the findings of the Draft EIR, including the measures that have been proposed to enhance positive impacts and reduce or avoid negative ones. Once the review is completed, the authority may decide to request additional information on matters that may not be clear from the report, authorise the application with certain conditions to be complied with by the applicant or reject the application. An EA reflecting the decision of the authority as well as any conditions that may apply will be issued to the applicant.

I&APs will be advised in good time of the availability of these reports, how to obtain them, and the dates and venues of public and other meetings where the contents of the reports will be presented for comment.

The public participation process for the EIAs will involve the following proposed steps:

- Announcement of the availability and public review of the Draft EIR;
- Host a public meeting for the stakeholders to review the Draft EIR;
- Announcement of the availability of the Final EIR; and
- Notification of the authorities' decision with regard to EAs.

Below information is provided about each step.

10.6.1 *Announcing the availability of the Draft EIR and the EMPr*

A letter will be circulated to all I&APs, informing them in terms of progress made with the study and that the Draft EIR and EMPr are available for comment. The report will be distributed to public places and also presented at a stakeholder meeting. Advertisements will be placed in the same newspapers used in the scoping phase to announce the public review period of the Draft EIR.

10.6.2 *Public review of Draft EIR and EMPr*

The EIA Guidelines specify that stakeholders must have the opportunity to verify that their issues have been captured and assessed before the EIA Report will be approved. The findings of the specialist assessment will be integrated into the Draft EIR. The report will be written in a way accessible to stakeholders in terms of language level and general coherence. The Draft EIR will have a comprehensive project description, motivation and also the findings of the assessment and recommended mitigation measures. It will further include the Issues and Responses Report, which will list every issue raised with an indication of where the issue was dealt with in the EIR. The findings of the assessment and recommended mitigation measures will also be incorporated into the EIR.

As part of the process to review the Draft EIR and EMPr, one stakeholder workshop with an open house component will be arranged to afford stakeholders the opportunity to obtain first-hand information from the project team members and also to discuss their issues and concerns. Contributions at this meeting will be considered in the Final EIR.

10.6.3 *Announcing the availability of the Final EIR and EMPr*

A letter will be circulated to all I&APs, informing them in terms of progress made with the study and that the Final EIR and EMPr are available for comment. The reports will be distributed to the same public places (See Chapter 5 with the venues) as the previous reports for I&APs to review.

10.6.4 *Progress feedback*

After comments from I&APs have been incorporated, all stakeholders on the database will receive a personalised letter to report on the status of the process, to thank those who

commented to date and to inform them that the Final EIR and EMPr have been submitted to the lead authority for consideration. I&APs will be advised on the next steps in the process.

10.6.5 *Announce authorities decision*

Registered I&APs will be notified by individual letters of the decision made by the authorities. Should it be a requirement from the authorities an advertisement will be placed in the same newspapers which were used during the scoping and impact assessment phases.

10.7 SUBMISSION OF FINAL EIR AND DECISION MAKING

Using the comments generated during the PPP the Draft EIR will be updated and finalised. All comments received will be added to the CRR and attached to the Final EIR as an appendix.

The Final EIR once updated with additional issues raised by I&APs may contain new information. The Final EIR will be submitted to the DEA for decision making, and will be distributed to those I&APs who specifically request a copy. I&APs will be notified of the availability of the report by letters, advertisements and emails. Copies of the Final EIR will also be made available in the same public places as was used during the Scoping Phase.

10.8 OVERALL EIA PROJECT SCHEDULE

Table 10-10: Primary milestones of the Project

Milestones	Date
Final Scoping Report	July 2013
Undertake Specialist Studies	August to October 2013
Draft EIR and EMP	October 2013
Stakeholder Engagement on EIR / EMP	November 2013 to January 2014
Finalise EIR and Draft EMP	January 2014
Submission to Relevant Authorities	January 2014
Environmental Authorisation	January to April 2014
Appeal Period	To be confirmed in the Impact Assessment Phase
Negotiations with landowners and Site specific EMP	To be confirmed in the Impact Assessment Phase
Construction (including EMP Auditing)	To be confirmed in the Impact Assessment Phase

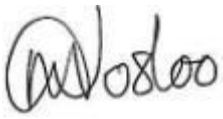
11 CONCLUSION AND WAY FORWARD

Eskom appointed Zitholele Consulting to undertake the EIA, WML and WUL application for the proposed 30 year ash disposal facility at Kendal Power Station, which also includes associated infrastructure such as road infrastructure, return water dams, etc. This Scoping study is being undertaken with the aim of identifying potential aspects of concern (both positive and negative) on the biophysical environment and identifying issues, concerns and queries from I&APs. This Draft SR documents the process followed, the findings and recommendations of the Scoping study, and the proposed Plan of Study for the EIA Phase to follow.

The way forward recommended by this study is as follows:

- Upon completion of the public review of the Draft SR all additional comments and issues received will be incorporated into the Final SR;
- The Final SR is then to be submitted to authorities for review and approval of the Plan of Study;
- Upon approval of the Plan of Study of the Final SR, execute the Plan of Study for the EIA phase of the project, including amendment required by conditions recommended by the competent authority; and
- Commence with engineering design and WML application.

ZITHOLELE CONSULTING (PTY) LTD



Dr. Mathys Vosloo Warren Kok

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