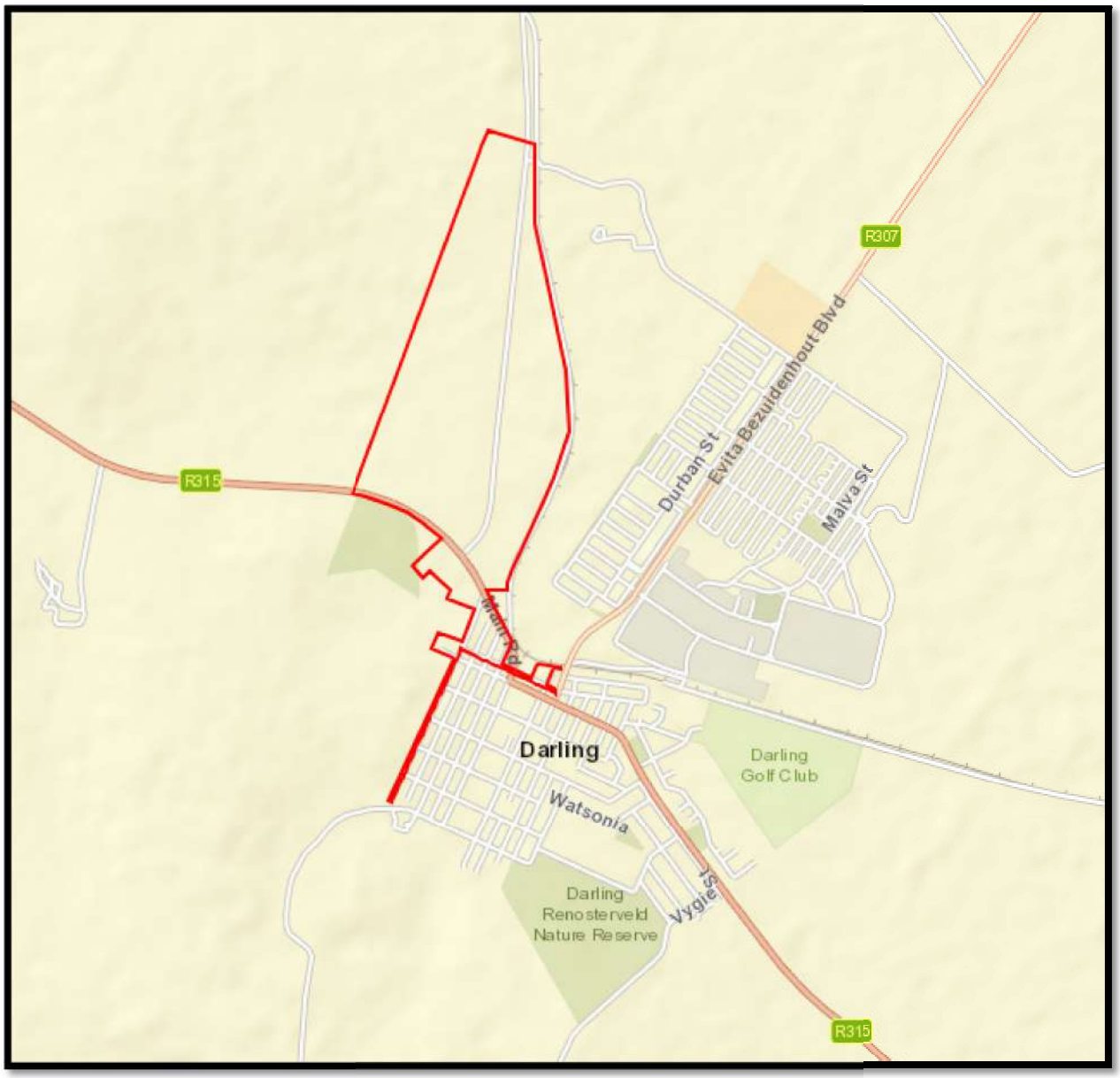
Our reference: DAR/13325/NJdK

MOTIVATIONAL REPORT

PROPOSED CONSENT USE TO ESTABLISH A SOLAR PHOTOVOLTAIC FACILITY ON PORTION OF ERF 551, DARLING



SWARTLAND MUNICIPALITY

CK RUMBOLL &
VENNOTE/ PARTNERS

INDEX

1. INTRODUCTION

This office was appointed by Madelaine Terblanche, on behalf of **Swartland Municipality** the owners of Erf 551, Darling, to prepare a land use application to obtain the necessary land use rights for the establishment of a *solar photovoltaic facility.* According to the Integrated Resource Plan (IRP 2010) which was promulgated in May 2011 a target of 17 800 MW of renewable energy is aimed to be achieved by 2030 in respect of the electricity generation mix. Application is therefore made to obtain the land use rights, in order to establish a 19.9MW *solar photovoltaic facility on a portion (±54ha) of Erf 551, Darling. (Power of Attorney and Resolution are attached as* ***Annexure A****)*

2. PURPOSE

The purpose of the motivational report is to apply in terms of:

- **Section 25(2)(o) of Swartland Municipal By-law on Land Use Planning, (**PG 8226, 25 March 2020), for a consent use on a Portion of Erf 551, Darling**,** to establish a 19.9MW solar photovoltaic facility on the property.

(Application form attached as ***Annexure B***):

3. PROPERTY DESCRIPTION

The solar photovoltaic facility is proposed on Erf 551. Property details are tabulated below (title deed and diagram attached as ***Annexure C***):

Owner:	Swartland Municipality
Property Description:	Erf 551, Darling
Extent:	371.3634Ha
Local Authority:	Swartland Municipality
Title Deed:	T14524/1953
Zoning:	Split Zoning: Commonage land

4. LOCALITY

The property is located west of Darling, along the railway The Locality Map can be found attached as *Annexure D*. (See ***Annexure D****:* ***Locality map***).

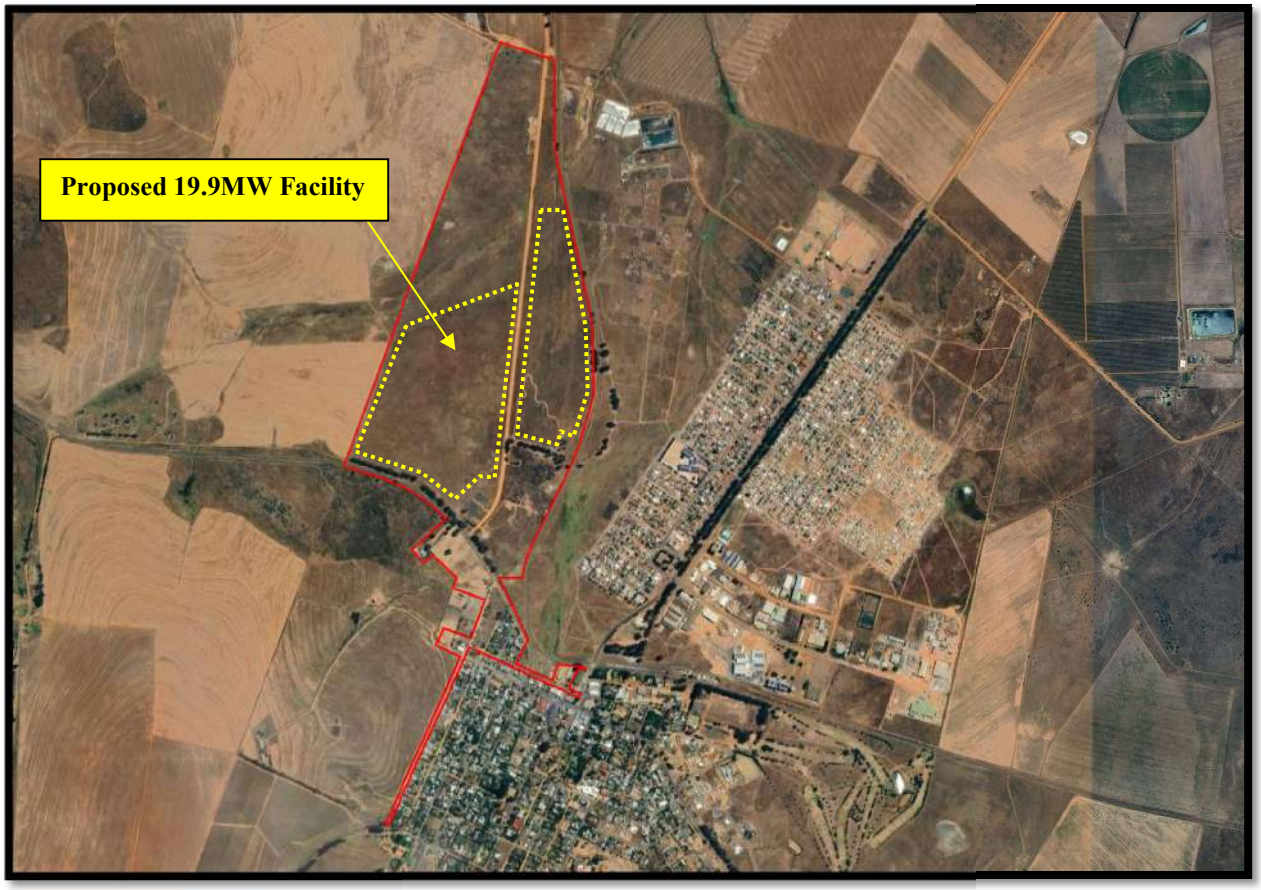


Figure 1: Locality of proposed facility

5. ZONING AND SURROUNDING LAND USES

Erf 551, Darling, is zoned Split Zoning: commonage land and was utilised for farming activities in 2014. This portion of the property is underutilised, making it ideal for this type of development. The property is surrounded by agricultural properties on the northern, western and southern boundary and residential development to the east. There are no structures or buildings erected on the area proposed for development, except the substation. Due to the relatively small extent of the proposed development (±54ha in total), the remainder of Erf 551 (371.3634Ha in extent) can still be used for farming activities. The R315 stretches through the property and will also be used to gain access to the proposed solar photovoltaic facility.

6. RESTRICTIONS AND OPPORTUNITIES

There are no restrictions on-site or in the title deed that will prohibit the development of a solar photovoltaic facility on Erf 551, Darling. No significant adverse impacts are anticipated. All impacts can be addressed through mitigation, rehabilitation and management. An environmental process in underway and comments / approval from the Department of Environmental Affairs and Development Planning (DEA&DP) will be submitted once obtained.

The benefits and related opportunities offered by the facility as an alternative renewable energy initiative are:

- Solar photovoltaic installations are the most reliable of all the renewable energy as it turns sunlight directly into electricity whilst the other techniques use indirect conversion.
- Solar photovoltaic is the most environmentally friendly of all the technologies.
- Solar photovoltaic uses no water whilst generating power.
- There is no runoff or pollution impact.
- The installation, maintenance and management are much cheaper than any of the other techniques.
- Solar photovoltaic is not labour-intensive and a high level of training is not essential.
- There are no physical restrictions on site or in the title deed that could negatively affect the proposed development.
- The proposed facility does not affect any CBA areas.
- The development is supported by policies/ SDF's as indicated in section 13 of this report.

It is for these reasons that the client decided to use solar photovoltaic technology and none of the other techniques that are available. It serves as an alternative to burning fossil fuels, which are associated with global warming and acid rain.

The development will ensure medium to long term job opportunities for the Darling area. The proposed development will not only create several job opportunities, but also provide a clean and renewable source of energy.

7. TERRAIN & ENVIRONMENTAL CHARACTERISTICS

A brief outline of the terrain and environmental characteristics follows.

7.1 Topography:

The area proposed for development has an evenly slope and falls from the southern side of the property to the northern side (see topographical survey attached).

7.2 Geology & Soils:

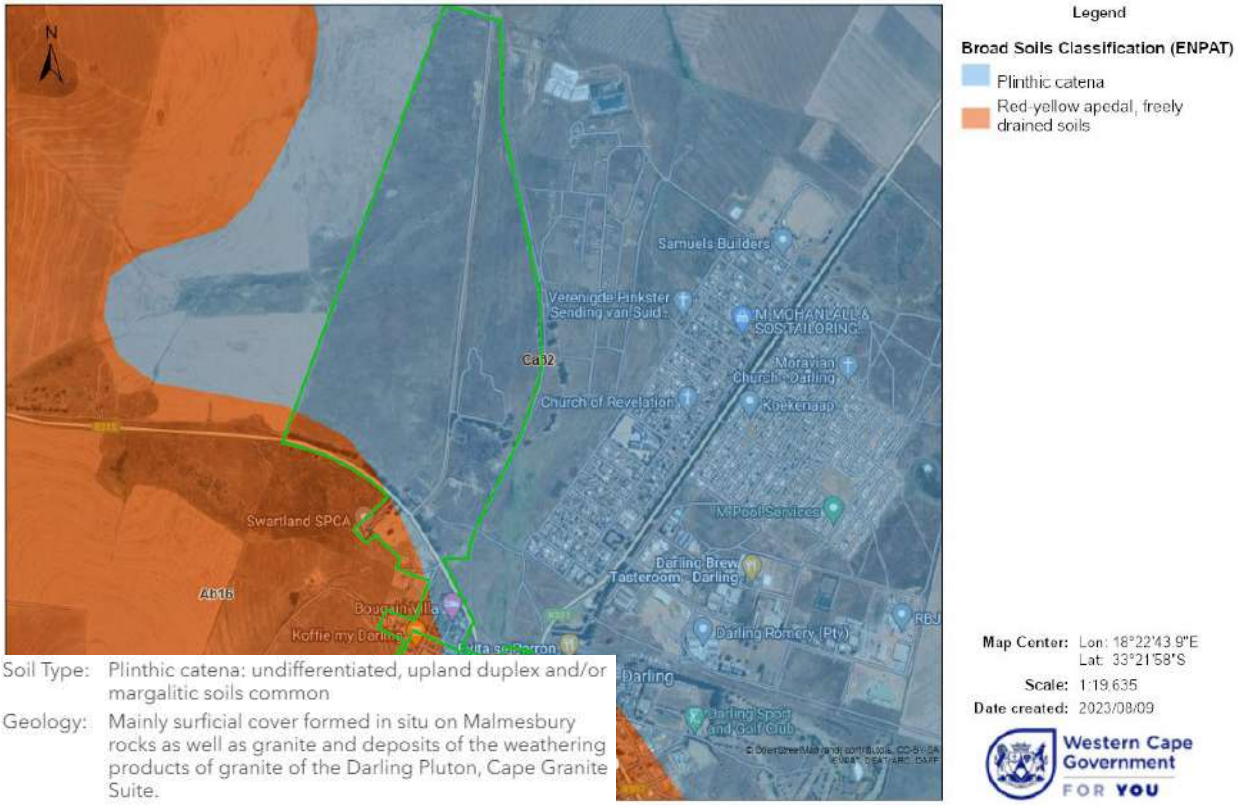


Figure 2: Geology & Soils of Farm no 3/552

7.3 Vegetation:

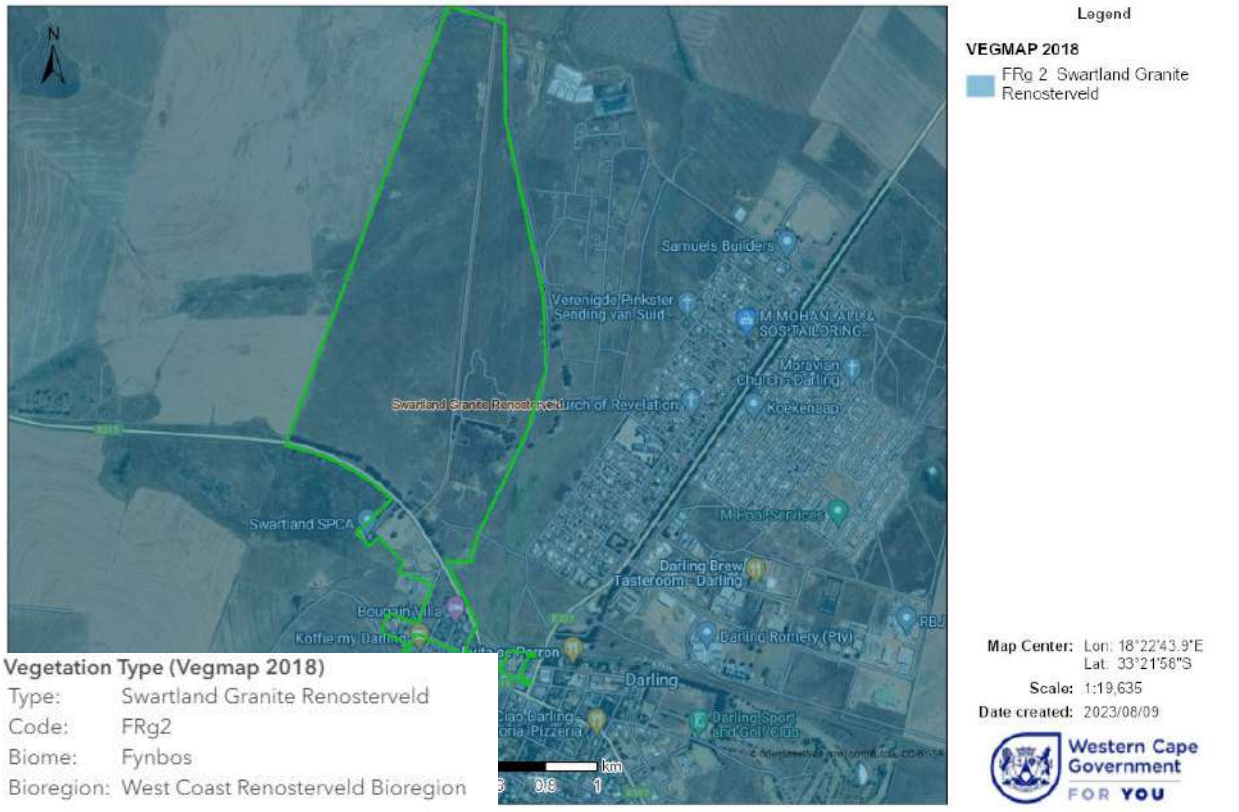


Figure 3: Vegetation on and around Erf Re/551

7.4 Rivers and wetlands:

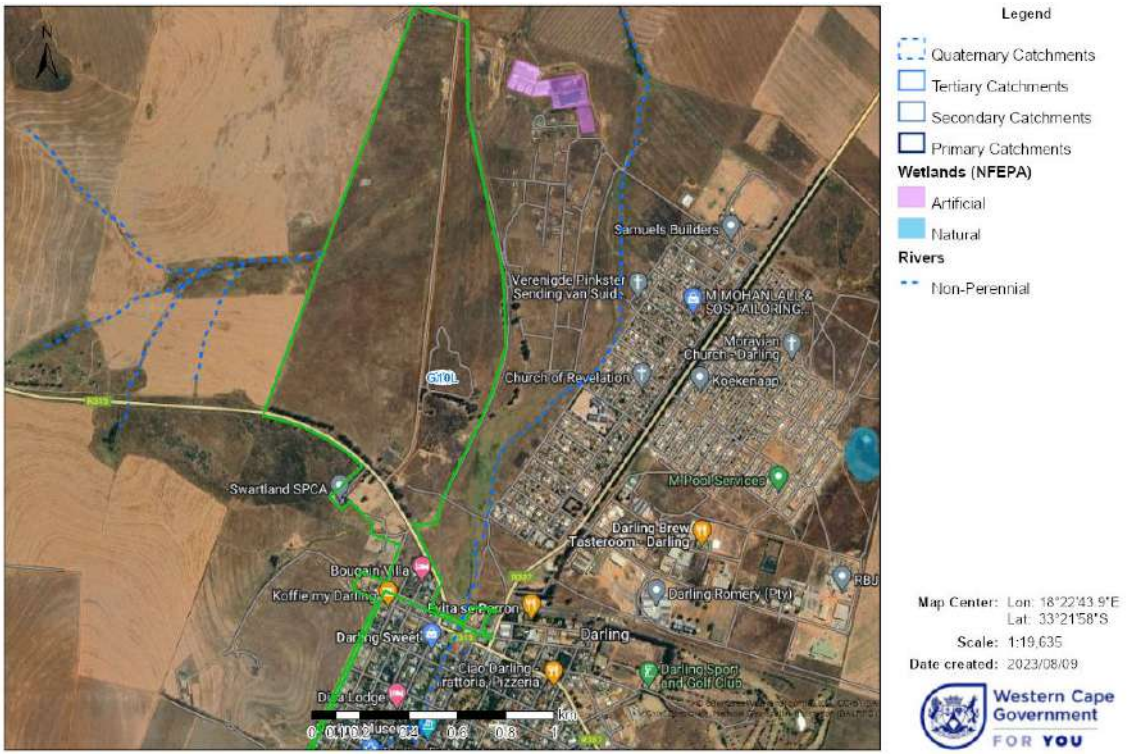


Figure 4: Rivers and wetlands around Erf Re/551

Several rivers are found on and around Erf Re/551. The proposed development will not adversely affect any rivers, wetlands or dams within the area. The position of the solar panels has been chosen to preserve the environment as much as possible.

7.5 Critical Biodiversity Area

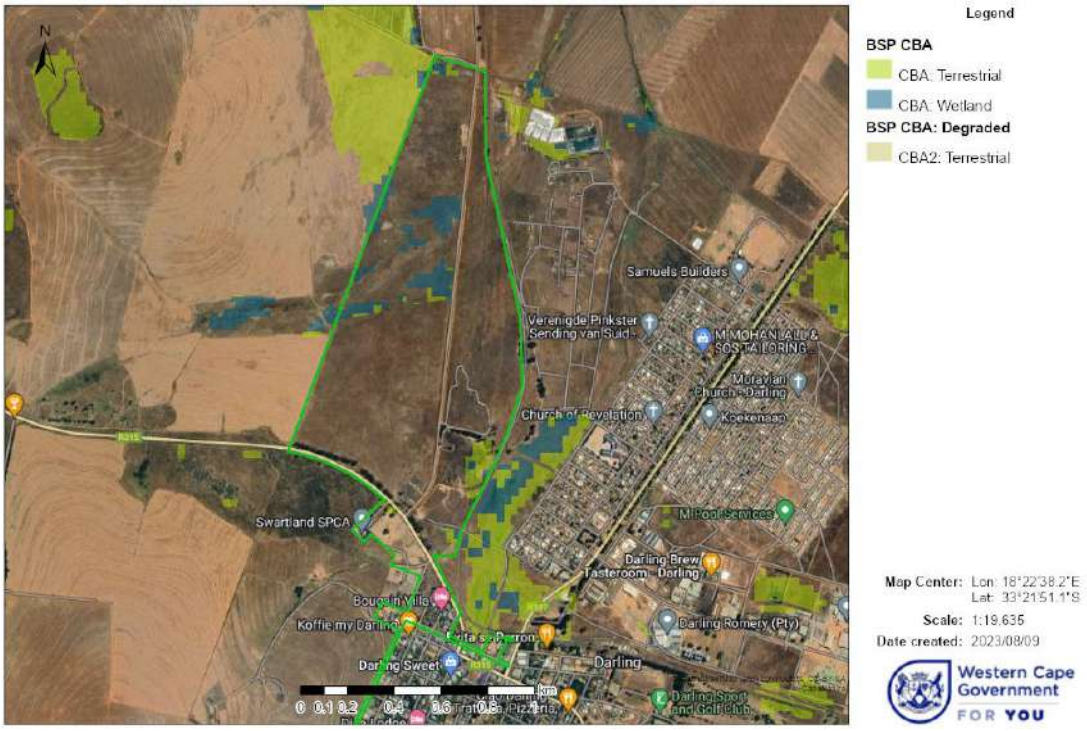


Figure 5: Critical Biodiversity Areas (CBA)

The CBA areas are excluded from the development. No CBA areas will be adversely affected by the proposed development.

8. PROPOSED DEVELOPMENT

7.1 CONSENT USE

As mentioned earlier, Swartland Municipality wants to erect a renewable energy facility (19.9MW) on a portion of Erf 551 to help reduce the energy crisis in South Africa. Application is made in terms of Section 25(2)(o) of the Swartland Municipal Land Use Planning By-Law on Erf 551, Darling, in order to utilise a portion (±54ha) of the property as a solar photovoltaic facility. The zoning of the property will not change and will still be maintained with the corresponding land uses. The proposed photovoltaic (PV) renewable energy facility will occupy an area of up to ±54ha of the site (371.3634ha), which is a small portion of the property. The number of panels comprising the array will depend on the solar resource at the site, the installed capacity and the choice of panels. The 1) solar field will comprise rows of panels called strings arranged to capture the most sunlight or 2) various solar containers (see *Figures 9 and 10).*

1. **Solar photovoltaic facility:**

The facility will comprise Solar PV generation, lithium battery storage and electrical reticulation equipment on approximately 54ha. The modules will be mounted on a table array anchored to the ground utilising rammed or planted steel support posts. A concrete foot piece secured to a steel pen driven into the ground will be used where ramming does not prove feasible. The maximum height of the solar array tables in operation would be approximately 5m and would allow sufficient ground clearance for the free flow of surface water underneath the panels. The facility and associated infrastructure will be accessed via existing access road. A 5m management track will surround each block of photovoltaic arrays. These single-track management roads will be used as access roads to service and maintain structures and to serve as fire breaks. On full commissioning of the facility, any access points to the site which are not required during operational phase will be closed.

The proposed PV Plant of approximately 54ha (solar panels) will generate a projected power peak (electricity) of approximately 19.9 MWp. Solar PV technology is a method of generating electrical power by converting solar radiation using semiconductors through a process known as the photovoltaic effect. It is not the heat required from the sun but the amount of irradiation available that allows for electrical energy to be generated. PV Panel technology has the following components which consist of:

- **PV Cell:** A basic PV device, which generates electricity when exposed to solar radiation. All PV cells produce Direct Current (DC) electricity;

- **PV Module or Panel:** The smallest complete assembly of interconnected PV cells. The modules are typically mounted in a lightweight aluminum frame to form a panel.
- **PV Array:** A group of PV panels connected together is termed as PV Array. An interconnected system of PV modules that function as a single electricity producing unit. The proposed PV panels are approximately 2.3 m in height and 1.3m in width (depending on the make and model – will be later confirmed). These panels will be installed on single axis tracking mounting structures.
- **Mounting Structure:** The single axis tracking mounting structure is approx. 4.5 m in height. Total height is approximately 5m depending on the specific ground clearance allowed below the structure and make and model of the PV array. The mounting structure is supported by soundly secured steel posts, planted in the ground, providing structural support for the PV array. Each PV Array table is approximately 12m in length and 4.5m width. The array tables are arranged in series to make a Solar Array table row. The total length of each row depends on site geometry but typically varies from 260-360m. The rows are then arranged in a matrix throughout the Solar field with all energy generated being consolidated at the electrical reticulation points. See example below.

Figure 6: Proposed solar facility (example)

2. Container solar facility:

Solar containers, also known as solar power containers or solar farms in a box, are self-contained units that house solar power generation equipment within a standardized shipping container. These containers are designed to make solar energy installations more modular, portable, and easy to deploy. Inside the

container, you typically find solar panels, inverters, batteries (if applicable), and the necessary control and monitoring systems.

The container's roof or sides are equipped with solar panels that capture sunlight and convert it into direct current (DC) electricity using photovoltaic (PV) cells. These panels are designed to efficiently harness sunlight and generate electricity even in challenging environmental conditions. The DC electricity generated by the solar panels needs to be converted into alternating current (AC), which is the type of electricity used in most buildings and for various appliances. Inverters inside the container perform this conversion. They ensure that the electricity produced is suitable for immediate use or for feeding into the grid.

Some solar containers also incorporate energy storage systems, usually in the form of batteries. These batteries store excess electricity generated during sunny periods so that it can be used during cloudy periods or at night when solar generation is not possible. This enhances the stability and reliability of the energy supply. Solar containers are equipped with sophisticated control systems that manage the operation of the solar panels, inverters, and batteries. These systems optimize energy production, monitor system health, and can be remotely controlled and monitored. This remote management capability is particularly useful for maintenance and troubleshooting.

Solar containers offer a flexible and relatively quick way to set up solar power installations. They can be transported to various locations, making them suitable for temporary or remote power needs, such as disaster relief, events, construction sites, or off-grid applications. Additionally, they can be integrated into the existing power grid, feeding excess energy back to the grid and potentially earning revenue through net metering or other incentive programs.

In essence, solar containers provide a convenient and modular solution for generating clean energy from sunlight. They are designed to simplify the process of deploying solar power systems and can contribute to reducing reliance on traditional fossil fuels while promoting renewable energy adoption.

Figure 7: Solar containers (example)

The proposal will either make use of modules mounted on a table array anchored to the ground or solar containers. The final details will be determined once a developer is identified.

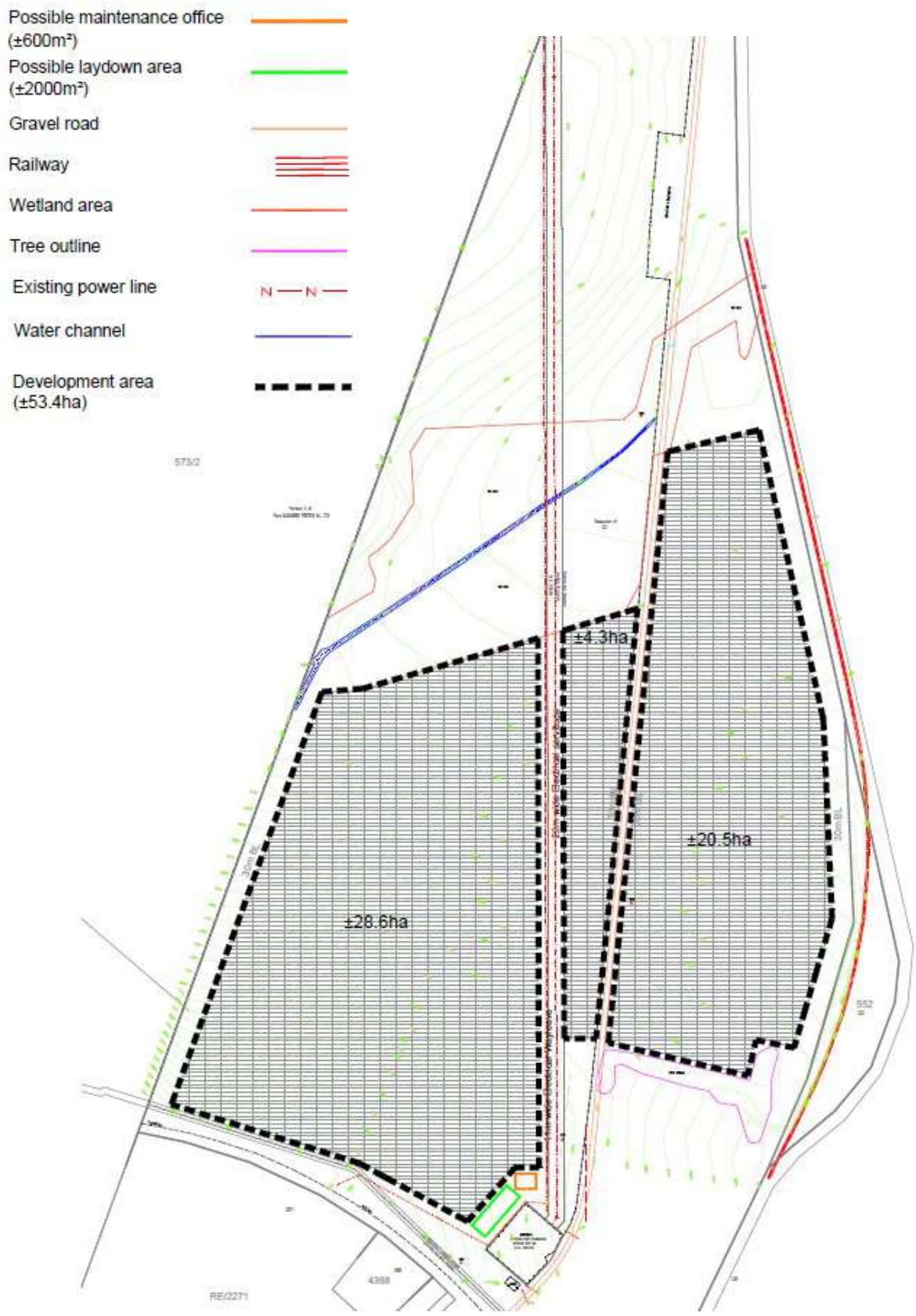


Figure 8: Proposed Site Development Plan

Site Development Plan is attached as **Annexure E**

Site Layout

The facility will be monitored and operated from an onsite operation centre / maintenance office. A temporary laydown area for the construction phase is proposed. The proposed facility will be located at the southern part of the property. The proposed containers/ solar array panels will be divided into three section blocks to effectively utilise the area. Future cables will run from the proposed containers/ solar array panels to the substation located on the southern portion of the development. The route of the cables is yet to be confirmed. An existing gravel road runs through the proposed development, giving easy access to each of the three section blocks.

Renewable energy generation projects are still in their infancy in South Africa, especially with regard to solar farms. A small number of solar projects have however been initiated. In 2003 the Provincial Government of the Western Cape, Department of Environmental Affairs and Development Planning, embarked on a rigorous program to pave the way for renewable energy development within the Province. Solar energy is seen as a clean, renewable resource that should be developed in South Africa on the basis of national policy and provincial and regional guidelines and should therefore be encouraged by Swartland Municipality. It will be essential to become accustomed with solar farms appearing in the landscape in the future as progressive, efficient and safe generators of clean energy.

11. INFRASTRUCTURE AND SERVICES

Infrastructure

There are currently no buildings or structures erected on the property, except the Eskom substation located to the southern part of the property.

Services

Please note: Swartland Municipality's role does not involve direct operation of the development; instead, they are solely acquiring the essential land use rights for the proposed renewable energy facility. The specific development particulars will be submitted and assessed by Swartland Municipality after a developer has been identified. Both the Electrical and Civil engineering departments of Swartland Municipality confirmed that services reports are not required at this stage.

- **Electrical services:** The developer must either request the necessary services, such as a temporary power connection, from the municipality if required, or alternatively, they can choose to provide these services themselves throughout the construction period. Final details will be confirmed by the proposed developer.

- **Civil Services:**
  - **Access and Roads:**

Access to the proposed facility will be from the R315 that stretches along the southern portion of the property. An internal gravel road network will be used by construction vehicles and will be retained throughout the lifetime of the facility for use by maintenance vehicles. Existing roads and tracks will be used, where possible.

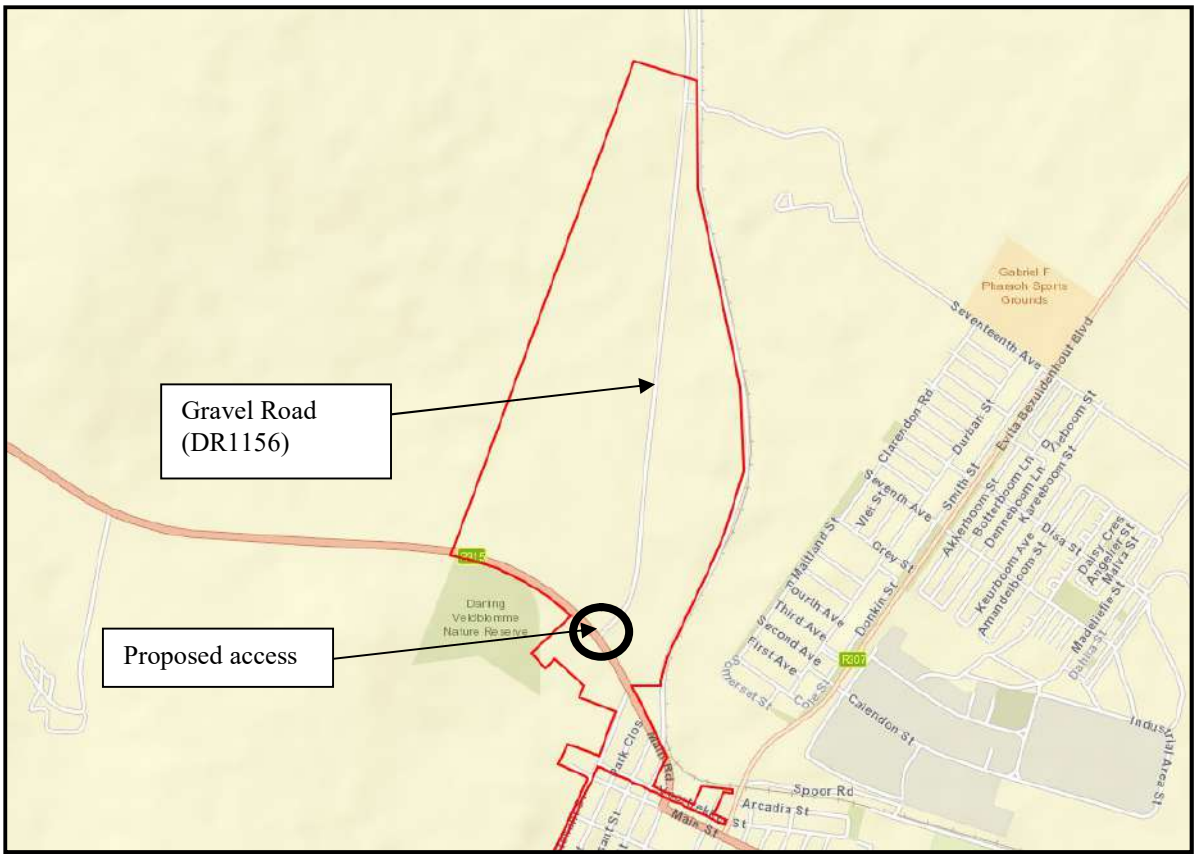


Figure 9: Access to proposed facility

- **Stormwater:**

The site is relatively flat with a gentle fall from south to north. Provision in the stormwater design of the development will be made for minor and major storms. The minor and major stormwater system will be designed as an overland system that will discharge stormwater from the roads into evaporation channels next to the roads to accommodate the total runoff from the development.

- **Water:**

Municipal drinking water will not be utilized for the purpose of cleaning the solar panels. Trucks will be used to transport water for the washing of the solar panels.

The estimated annual average daily domestic water demand for the development is 800 l/day.

The annual average daily domestic water demand for the proposed Solar Photovoltaic Facility was estimated as follows:

10 Persons @ 80 l/day = 800 l/day

- **Sewage:**

It is assumed that 80% of the water's average annual daily demand will end up in the sewerage system.
The expected sewer flow is as follow:
Total Average Daily Discharge = 0.8 x 800 = 640 l/day

- **Solid waste:**

The collection and disposal of the waste to the municipal landfill site will be done by Swartland Municipality as per their regulated collection system.

12. ALIGNMENT WITH POLICIES AND PLANS

The criteria for the assessment of applications as per the Swartland Municipal Planning By-Laws, but not restricted to, are outlined below:

Electricity Regulation Act (Act 4 Of 2006) & Integrated Resource Plan (IRP 2019)

The Integrated Resource Plan for Electricity (IRP) provides South Africa's long-term plan for electricity generation to ensure the security of electricity supply, minimise the cost of that supply, limit water usage and reduce greenhouse gas (GHG) emissions while allowing for policy adjustment in support of broader socio-economic developmental imperatives. The IRP 2019 calls for 37 696 MW3 of new and committed capacity to be added between 2019 and 2030 from a diverse mix of energy sources and technologies as aging coal plants are decommissioned and the country transitions to a larger share of renewable energy. By 2030, the electricity generation mix is set to comprise of 33 364 MW (42.6%) coal, 17 742 MW (22.7%) wind, 8 288 MW (10.6%) solar photovoltaic (PV), 6 830 MW (8.7%) gas or diesel, 5 000 MW (6.4%) energy storage, 4 600 MW (5.9%) hydro, 1 860 MW (2.4%) nuclear and 600 MW (0.8%) concentrating solar power (CSP). With reference to the above, it is clear that there is a shortage of alternative energy-producing facilities.

National Development Plan 2030

The NDP suggests that the following infrastructure investments should be prioritised: "*Procuring at least 20 000MW of renewable electricity by 2030, importing electricity from the region, decommissioning 11000MW of ageing coal-fired power stations and stepping up investments in energy-efficiency*."

The National Development Plan seeks to ensure: "*More investment in the enabling and catalytic infrastructure required for (1) renewable energy generation, storage and distribution,"*

Furthermore, the National Development Plan (NDP, National Planning Commission, 2012) sets out six interlinked priorities (National Planning Commission, 2012 - p. 29):

- Uniting all South Africans around a common programme to achieve prosperity and equity;
- Promoting active citizenry to strengthen development, democracy and accountability;
- Bringing about faster economic growth, higher investment and greater labour absorption;
- Focusing on key capabilities of people and the state;
- Building a capable and developmental state; and
- Encouraging strong leadership throughout society to work together to solve problems.

Transforming the South African economy is a challenging, long-term project. The NDP proposes to enhance human capital, productive capacity, and infrastructure to raise exports, which will increase resources for investment and reduce reliance on capital inflows. Higher investment, supported by better public infrastructure and skills, will enable the economy to grow faster and become more productive. Rising employment and productivity will lead to improved incomes and living standards and less inequality. Shifting the economy towards more investment and lower consumption is thus necessary for long-term economic prosperity (p. 42). Investment in renewable energy facilities will therefore contribute to achieving the vision of the NDP.

The proposed Solar Farm subscribes to the NDP principles by offering renewable resources in an area that requires development to assist employment creation. The proposed site falls within the Central (grid infrastructure) Corridor and close to the Western Corridor. See figure 10 below. The proposal can therefore be highly recommended.

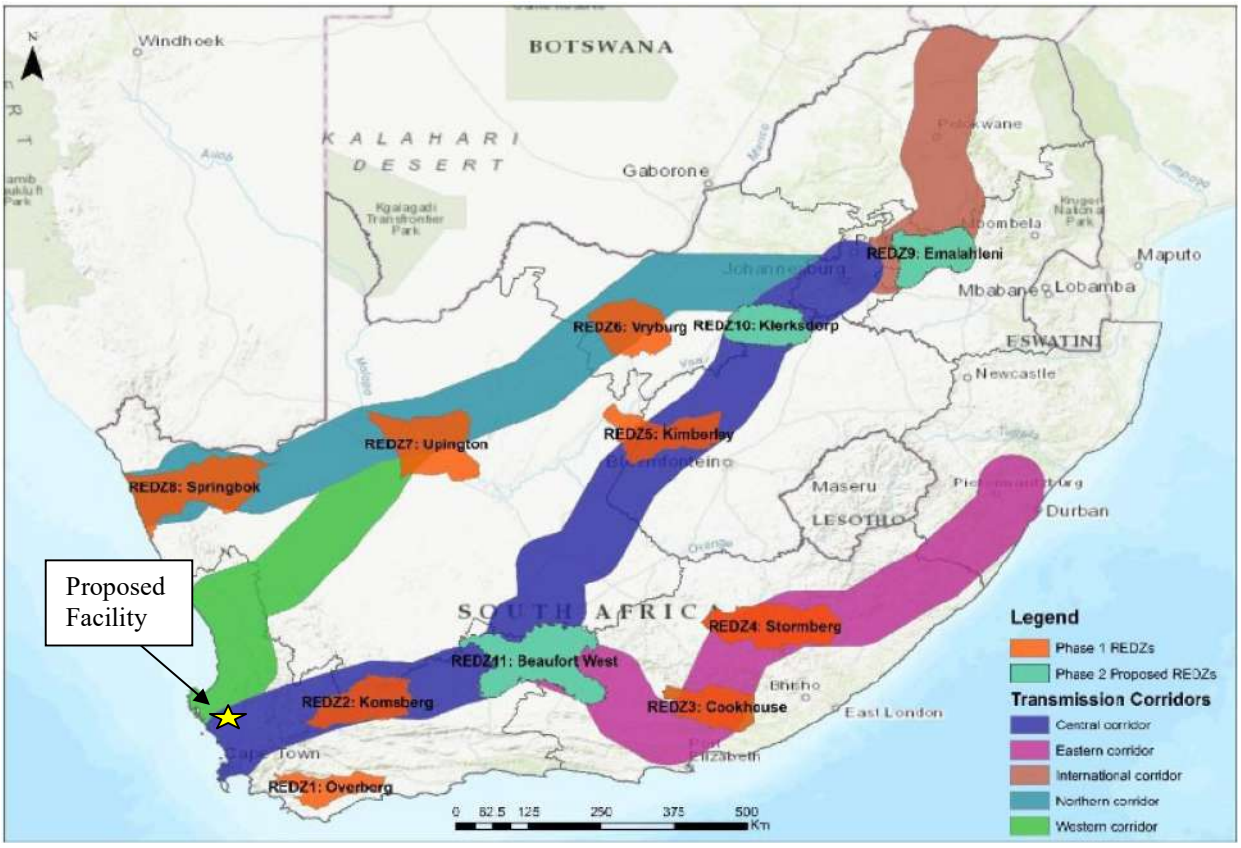


Figure 10: Electricity grid infrastructure corridors where investment in transmission infrastructure is planned.

Western Cape Provincial Spatial Development Framework (WCPSDF), 2014

Western Cape Spatial Development Framework (WCSDP), 2014, 2020 Amendment

The Western Cape government has set an ambitious goal of becoming the 'Green' Economic Hub of the African continent and introduced several strategic frameworks to achieve this goal. It was the first of South Africa's provinces to develop a Sustainable Energy Strategy and it has also launched a Green Economic Strategic Framework that targets job creation in the sector and building a strong environmentally conscious economy in the province. To support these objectives, the province is building institutional capacity and creating a conducive policy environment, with several renewable energy projects already implemented in the province (see Figure 11 below).

In particular, GreenCape provides support to renewable energy IPPs to unlock the potential for renewable energy production in the province. Other related provincial strategies include OneCape 2040 (the province's long term socio-economic vision), the Western Cape Infrastructure Framework, the Draft Western Cape Climate Change Response Strategy and 110% Green, the Western Cape Premier's green economy programme that aims to create a platform for mobilising society around the green economy through practical action, partnerships and networks.

The Province's green economy strategic framework emphasises the need for a sustainable growth path that is accompanied by job growth. The strategic framework also identifies opportunities beyond energy infrastructure development and includes unlocking manufacturing and employment opportunities in the broader 'green' economy. These efforts, in combination with the IPPPP, are contributing to the creation of new direct and indirect job opportunities. The provincial electricity industry is likely to receive a substantial boost from the electrical energy projects located in the province as a result of the IPPPP. With the newly developed IPP capacity, the province will produce around 8% of its own electrical power needs from renewable energy sources and will save a gross Eskom grid equivalent of 1.8 million tonnes CO2 emissions per annum.

Figure 11: Geographical distribution of renewable energy projects in the Western Cape Province

Growing the economy is the Western Cape Government's number one development priority. The PSDF's role is to open-up opportunities for inclusive economic growth in urban and rural areas. The significance of the Province's spatial asset base stems from the fact that it:

- is the origin of life-supporting ecosystem services (e.g. clean air and water, pollination);
- underpins the economy, particularly agriculture which provides food security, sustains rural livelihoods and draws income into the Province, and tourism;
- comprises globally significant and diverse habitats and ecosystems.

Resource management policy objectives include:

- The protection of biodiversity and agricultural resources;
- Minimisation of consumption of scarce environmental resources (particularly water, fuel and land);
- Conservation and strengthening the sense of place of important natural, cultural and productive landscapes.

The Western Cape Provincial Spatial Development Framework (Provincial Government of the Western Cape (2014), refers to the importance of a coherent framework for the Province's urban and rural areas that gives spatial expression to the National and Provincial development agendas. The Spatial Development Plan proposed a number of spatial policies, including policy R4 which relates to *"Recycle and recover waste, deliver clean sources of energy to urban consumers, shift from private to public transport, and adapt to and mitigate against climate change".* Specific objectives related to energy include pursuing energy diversification and energy efficiency for the Western Cape to transition to a low carbon, sustainable energy future, and delink economic growth from energy use. Furthermore, emergent Independent Power Producers (IPPs) and sustainable energy producers (wind, solar, biomass and waste conversion initiatives) should be supported in suitable rural locations.

In short, The Western Cape's energy is primarily drawn from the national grid which is dominated by coal-based power stations and the goal is to develop the renewable energy sector. All main objectives of the PSDF are in line with the current project's expected and desired outcomes, as various critical factors are taken into consideration, namely the provision of renewable energy to the South African and potentially SADC countries' energy grid, use and reuse of water, the conservation of biodiversity areas and boosting the area's economy and the livelihoods of its population.

The Western Cape infrastructure framework stated that *"Spatial policy must support the City's efforts to address vulnerabilities through actions aimed at improving energy efficiency and renewable energy in municipal operations. These include the prioritization of inward growth on the back of investment in public and non-motorised transport, encouraging embedded renewable electricity generation in the commercial and residential sectors, and providing the required planning support to the diversification of large-scale energy supply with solar, wind, energy storage solutions and possibly natural gas*." There is a rising demand for less carbon intensive and renewable energy as evidenced above. The proposal will therefore comply with the guidelines of the WCSDF to provide sustainable clean energy.

Western Cape Land Use Planning Guidelines (Rural Areas March 2019)

The PSDF called for the review of the Draft Western Cape PSDF Rural Land Use Planning and Management Guidelines, 2009 to support and guide the implementation of the Provincial agenda in rural areas and proposed that the draft guidelines be reviewed and updated to:

- Include guidelines for renewable energy facilities.

Agriculture

"*Buildings accommodating land uses ancillary to or associated with agriculture, should not detract from the functionality and integrity of farming practices and landscapes and be of an appropriate scale and form. These include: abattoir, additional dwelling units, airfield, and animal care centre, aquaculture, camping site, farm shop, freestanding base telecommunication station, and function venue, guest house, off road trail, plant nursery, quarry,* ***renewable energy structure****, tourist facilities and utility service*."

The proposed solar facility will not adversely affect the agricultural function of the property, as farming activities may still continue where active. Only a small portion (smaller than 15%) of the erf is proposed for the renewable energy facility.

Swartland Municipality Spatial Development Framework (2023)

The following are extracts from the Swartland SDF: "*The availability of bulk infrastructure and services contribute to the economy and future development in Swartland settlements." "Green/renewable projects for Swartland are provided for in Malmesbury and Darling".* The proposal will contribute to providing bulk electricity to Swartland Municipality, which can be utilised for either future development or can be fed back into the Eskom grid. The proposal will either way contribute to the relief of the energy crisis in South Africa.

The SDF also emphasizes the need to address vulnerabilities in the local economy, particularly in sectors such as the fishing industry, agriculture, and tourism. This can be achieved through the following measures:

- Diversify of activities,
- Strengthen municipal and communal disaster risk management and preparedness.
- Find & support alternative resources for energy and adopt **renewable energy technology**.

The proposal therefore complies with addressing these vulnerabilities in the local economy by proposing an additional renewable energy facility.

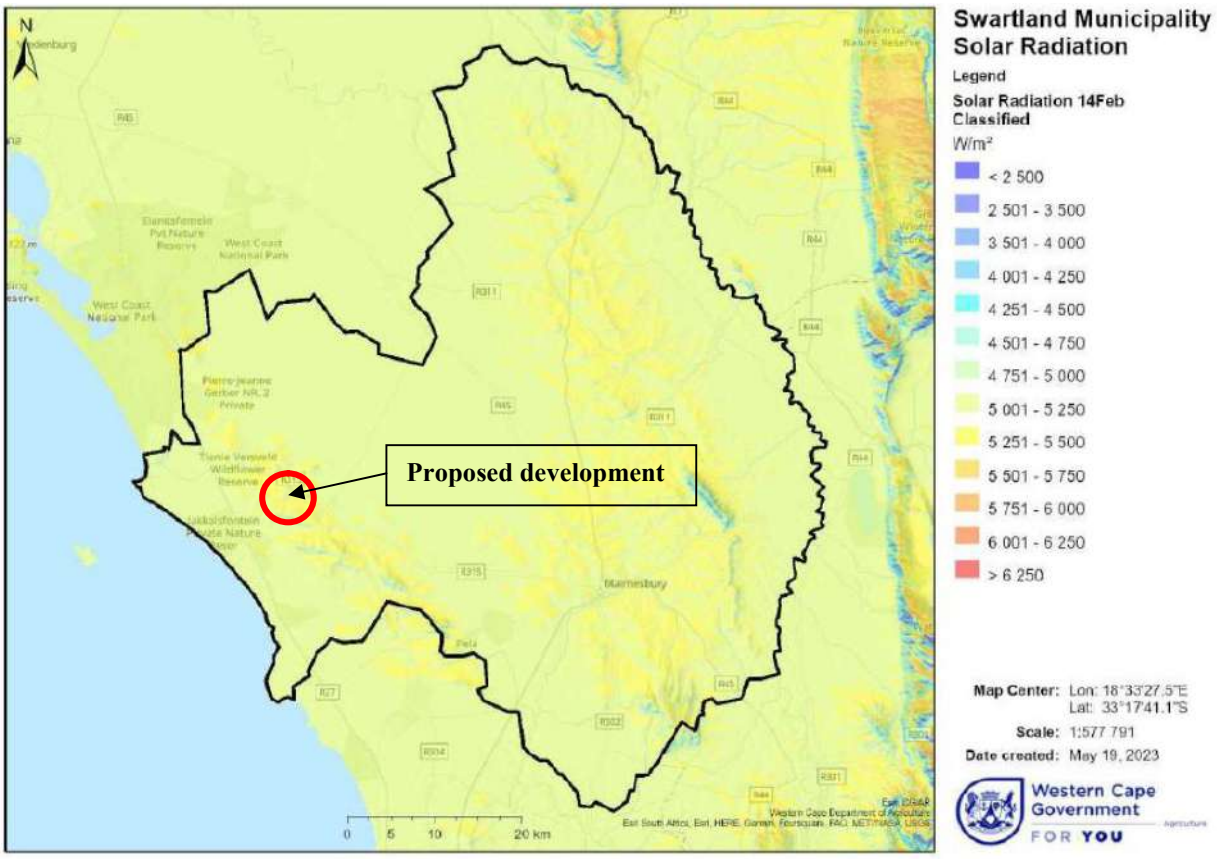


Figure 12: Extract from the Swartland radiation zones

The proposed development is located within a high irradiation zone. The proposal to operate a solar facility in this location is therefore highly favourable.

Alternative Solar Energy Facilities (extracts from the Swartland SDF)

- **Change:**
  - *Provide for solar facilities to cater for future urban expansion. Generate alternative energy: Plan for future urban expansion. Generate alternative energy.*
  - *Provide for expansion of transmission infrastructure.*
  - *Generate and use of alternative/renewable energy as per energy zones identified. Including generation and use on small & large farms.*
  - *Ensure maintenance of adequate electricity reticulation.*
- **Develop:**
  - *Develop and encourage the use of alternative/renewable energy resources in the identified zones: Zone A, medium to high wind speeds, ideal for wind turbines. Zone B, high wind-speed zone and C, northern section, high irradiation zone: photovoltaic plants photovoltaic plants; Ward 5: home to Darling Wind Farm (four wind turbines). Ward 6: home to solar panels.*

While the Swartland SDF has identified specific zones for promoting renewable energy, it's important to note that these zones are not restricted exclusively to a particular type of renewable structure. Examining Figure 12, it becomes evident that the town of Darling is situated within the radiation zone,

making it an ideal candidate for the development of a solar energy facility. The Swartland SDF makes provision for the development and expansion of solar facilities and since Darling already has an approved solar facility on Erf 3778 (which will be implemented within the next year or so), the proposal can be seen as an extension of the approved solar facility. The proposal aligns seamlessly with the Swartland SDF guidelines and recommendations for future development in the region.

Swartland Economic Development Plan, 2023

This strategy aims to establish improved economic development cooperation amongst stakeholders – to systematically identify and utilise more beneficial economic opportunities. This strategy is a response to the need to improve performance of the local economy, to benefit local citizens.

Between 2011 and 2020 the municipal area created 682 jobs annually, with the most jobs created in the trade sector (192 jobs). The municipal area lost 296 jobs annually between 2016 and 2020 owing to the large number of jobs shed in 2020 as a result of the COVID-19 pandemic. It is estimated that the effect of COVID-19 continued to result in job losses in 2021, with a total of 739 jobs lost. The sector with the most job losses was the agriculture sector, with 313 jobs lost.

Considering the above, the proposal to utilise a portion of Erf Re/551, Darling, for a renewable energy facility will contribute to the provision of job opportunities on a temporary and permanent basis. The proposal will also have an enormous capital injection to the town of Darling and municipality. The proposal will therefore contribute to economic development and job creation in Darling and the Swartland area as a whole.

Swartland Integrated Development Plan (IDP)

The Economic Development Plan is aligned with the Swartland's Integrated Development Plan (IDP), which is a municipality's principal strategic plan that deals with the most critical development needs of the municipal area (external focus) as well as the most critical governance needs of the organisation (internal focus).

SWARTLAND PRIORITIES FOR THE FUTURE:

a) Sustainability

- Electricity sustainability – **green energy**
- Long term Infrastructure planning, implementation and maintenance to ensure sufficient capacity for expansion and economic growth

c) Opportunities

- Promote our towns to attract investment and economic development and growth.
- Local economic development

(d) Good governance and financial management

- Creates confidence and attracts investment, ease of doing business.

When taking into account the future priorities, the proposal will provide green energy; contribute to providing sufficient capacity electricity, contribute to economic investment and create an attractiveness to invest/develop in Darling.

The need for renewable energy: A meeting was held with big businesses in the Swartland on 19 October 2022. The following inputs were received at the meeting: **"Work on a solution for electricity (sustainable/ renewable energy)."**

What are we doing to reduce the impact of loadshedding?

- "*The Municipality is also looking at making municipal land available for the possible development of renewable energy plants from which the municipality can purchase energy to lessen the reliance on Eskom and possible reduce the input cost of bulk electricity purchases*."

Considering the above, the Swartland IDP supports the provision of renewable energy facilities to help combat the energy crisis, as the proposal will be located on municipal land.

13. SPATIAL PLANNING AND LAND USE MANAGEMENT ACT

In accordance with Article 42 of the SPLUMA, a Municipal Planning Tribunal must be guided by the development principles as set out in Chapter 2 when considering an application. In terms of section 6(1), the general principles set out in Chapter 2 apply to all organs of state and other authorities responsible for the implementation of legislation governing the use and development of land. The following principles apply in terms of section 7 to spatial planning, land development and land use management, namely: Spatial justice, Spatial sustainability, Efficiency, Spatial resilience and Good administration. Accordance to section 59(2) of LUPA, a municipality considering a land-use application should take into account, among other things, the principles referred to in Chapter VI. Pursuant to Rule 58, the Land Use Planning Principles set out in Chapter VI apply to all organs of state responsible for implementing legislation that governs land use planning and development. These principles correspond with those of SPLUMA namely: Spatial justice, Spatial sustainability, Efficiency, Spatial resilience and Good administration.

(a) **Spatial Justice**: The proposed development is in line with provincial goals and frameworks which earmark Swartland as a key area for generating renewable energy in order to pursue sustainable energy initiatives. The application will not result in the exclusion of any groups. The proposed facility will create numerous job opportunities, especially in the construction phase.

(b) **Spatial Sustainability:** The proposed solar photovoltaic facility aims to use the most efficient method (which is cost effective and utilises the least space) to generate sustainable energy. The proposal will contribute to the social and economic growth of the region without threatening any ecological resources. The application will not result in extensive loss of agricultural land with high potential, due to the small extent that will be used to accommodate the proposed facility. The development will be self-sustaining, making use of electricity generated by the facility. Water and waste related infrastructure will be provided and maintained by the developer. These services will not be similar to those provided for residential occupancy as the facility will be remotely operated with inspections and occupancy only recurring from time to time. The facility will promote long term financial sustainability for the property and the surrounding Swartland region.

(c) **Efficiency:** Natural resources will be used and less pressure will be on non-renewable resources. The proposal will result in the efficient use of land by capitalising on the opportunity created by the unique climate, without threatening the prosperity of the larger agricultural landscape.

(d) **Spatial Resilience**: The proposed development can be demolished after 30 years and agricultural activity can occur if the need arise.

(e) **Good Administration:** The application will be assessed by the Swartland Municipality and all public participation processes will be followed accordingly. All relevant departments will have the opportunity to comment on the proposed development.

14. SOCIO-ECONOMIC BENEFITS (REGIONAL LEVEL):

Increased energy security:

The current energy crisis in South Africa, emphasized the important role that renewable energy can play to generate electricity. The release of solar energy into developments will reduce the pressure of non-renewable resources.

Reduced pollution levels:

The emissions of carbon dioxide by-products generated from burning fossil fuels to generate power have a very harmful impact on human health and contributes to the deterioration of ecosystems. The generation of electricity will not result in any emissions.

Acceptability to the community:

Energy generation through wind and solar have a number of benefits to the community such as reduced pollution, improved human and ecosystem health, generation of jobs in the short term and no contribution to factors that cause climate change.

Socio-economic benefits (local level):

Although the proposed development is of a small-scale nature and the impacts are low, yet positive the cumulative contribution of a number of proposed renewable energy projects is significant.

The advantages of the local community are the following:

- Job creation
- Reduce the demand for electricity generated from non-renewable resources and reduce pressure on the network
- Reduced pollution

15. VISUAL IMPACT

A visual impact assessment is underway and will be provided to swartland Municipality once obtained.

16. CONCLUSION

The proposed solar photovoltaic facility on a portion of Erf 551 will not only be in the interest of Swartland Municipality's local economy but also in the national interest as it contributes to the goals of the White Paper on Renewable Energy. Renewable energy provides an environmental friendly alternative to energy generation and can contribute to the restriction of pollution and global warming. The application can be seen positively in the light of the following:

- The facility will Increase electricity capacity to contribute to the alleviation of SA's energy crisis;
- The facility will meet the demand for diversified energy sources;
- Ensure the future of sustainable energy use;
- Provide local employment opportunities;
- Reduce CO2 emissions and the nation's carbon footprint;

- The proposed development is supported by the Swartland Spatial Development Framework (SDF) that guides sustainable future development;
- The proposed development supports spatial sustainability in terms of LUPA and SPLUMA;
- The proposed development is supported by the Swartland Local Economic Development (LED);
- The proposed development is supported by the Western Cape Provincial Spatial Development Framework (WCPSDF) that guides sustainable future development in the Western Cape area.;
- The proposed development is supported by the Swartland Integrated Development Plan (IDP);
- The proposed development is supported by the national Development Plan 2030 (NDP)
- The development will not adversely affect the character of the area, due to its scale.

NJ de Kock

For **CK RUMBOLL & PARTNERS**