

*PROPOSED PV SOLAR PLANT AND BATTERY ENERGY STORAGE SYSTEM (BESS)
ON REMAINDER OF ERF 2018,
RIVERSDALE, WESTERN CAPE*

Visual Impact Assessment

Draft Report ver.1.1

9 February 2023

Prepared for:

*Sharples Environmental Services cc (SES)
Unit 17, Cathedral Square
Cathedral Street, George, 6530*

Prepared by:

*Megan Anderson Landscape Architect
33 Hoop Street, Bredasdorp, 7280*

Table of Contents

EXECUTIVE SUMMARY	3
1. NAME, EXPERTISE AND DECLARATION	5
1.1 NAME	5
1.2 EXPERTISE	5
1.3 DECLARATION OF INDEPENDENCE	5
2. INTRODUCTION	6
2.1 BACKGROUND TO THIS REPORT	6
2.2 TERMS OF REFERENCE	6
3. PROPOSED DEVELOPMENT	9
3.1 LOCATION	9
3.2 DESCRIPTION OF THE DEVELOPMENT	10
4. VISUAL FRAMEWORK STUDY	12
4.1 SCENIC RESOURCES	12
4.2 VIEWSHED AND ZONE OF VISUAL INFLUENCE(ZVI) - VISIBILITY OF THE PROJECT	16
4.2.1 VIEWSHED	16
4.2.2 ZONE OF VISUAL INFLUENCE	17
4.3 RECEPTORS	18
4.4 VISUAL SENSITIVITY OF THE SITE	19
4.5 VISUAL ABSORPTION CAPACITY	21
4.6 VISUAL INTRUSION	21
5. POTENTIAL VISUAL IMPACTS OF THE PROPOSED DEVELOPMENT	22
5.1 CONSTRUCTION PHASE - VISUAL SCARING AS A RESULT OF VEGETATION CLEARANCE AND EARTHWORKS	23
5.2 OPERATION PHASE - VISIBILITY FROM THE NATURE RESERVE AND N2, CHANGE OF VISUAL CHARACTER.	24
6. MITIGATION MEASURES	25
7. ENVIRONMENTAL MANAGEMENT PLAN (EMP)	25
8. CONCLUSION	25
9. REFERENCES	26

Executive Summary

A PV Solar Plant is proposed for Riversdale on Erf 2018 of Riversdale. One preferred site and seven alternative sites have been identified on Erf 2018.

Megan Anderson was appointed to undertake a Visual Impact Assessment for SES Environmental Consultants.

The **Scenic Resources** of the site and surrounding area can be described as natural and rural with mountain, riverine and coastal plain views. These visual resources are **Moderately to Highly rated**.

The site is approximately 2 kms from the N2, and adjacent to the Werner Frehse Nature Reserve.

The **Viewshed** of the site is restricted by the surrounding hills and ridgelines with the **Zone of Visual Influence (ZVI)** being **local** and limited to an area within a radius of 5kms.

The **Receptors** are rated as **highly and moderately sensitive**.

The inherent **visual sensitivity of the site is Low to High** with the preferred site being on an area of **Moderate to Low sensitivity**.

The **Visual Absorption Capacity** of the site is **Low to high** with the preferred site being on an area of **Moderate to Low sensitivity**, there is partial screening by topography.

The **Visual Intrusion** will be **moderate**, partially fitting into the surroundings yet being clearly noticeable in the rural landscape.

The potential visual impacts will be:

- **Visual scarring during Construction** (vegetation clearing and earthworks);
- **Visibility** from Sensitive Receptors (Werner Frehse Nature Reserve, <500m section of the N2 which is 2 kms away and the Vermaaklikheid Road

Alternative A (Preferred Site)		Alternative B (2 Sites in valley)		Alternative C (Other 5 Sites)		No-Go Alternative	
Significance before mitigation	Significance after mitigation	Significance before mitigation	Significance after mitigation	Significance before mitigation	Significance after mitigation	Significance before mitigation	Significance after mitigation
a. Construction Phase - Visibility scarring during construction							
Medium(-)	Low (-)	Medium - Low (-)	Low (-)	Medium - High (-)	Medium(-)	Neutral	Neutral
b. Operations Phase - Visibility from Sensitive Receptors							
Medium (-)	Low (-)	Medium - Low (-)	Low (-)	Medium - High (-)	Medium(-)	Neutral	Neutral

The potential impacts of the proposed Preferred Alternative development will have a Medium significance (negative) before mitigation and Low significance (negative) after mitigation.

The mitigation of the impacts will entail:

- Limiting disturbance during construction,

- Stockpiling topsoil for rehabilitation,
- Vegetating the site surrounds/borders with indigenous shrubs and trees.

We are of the opinion that if the mitigation measures are enforced, that the Preferred Alternative will have a LOW VISUAL IMPACT

Visual Glint and Glare study has not been included in this study.

1. Name, Expertise and Declaration

1.1 Name

Megan Anderson, of Megan Anderson Landscape Architects, is a self-employed Landscape Architect who has been consulting in the Western Cape since 1991, to clients from the public and private sector.

1.2 Expertise

Megan Anderson's projects range from:

- visual impact assessments (VIAs) of proposed developments for EIA and HIA processes;
- environmental and landscape policy and planning;
- upgrading and rehabilitation of natural systems;
- planning and implementation in heritage and cultural precincts; and
- planning, design and landscape development in residential and urban areas and community projects.

PRINCIPAL AGENT: Megan Anderson Registered Professional Landscape Architect
(PrLArch) BLArch (UP) 1983 MILASA

REGISTRATION OF PRINCIPLE AGENT

1994 South African Council for Landscape Architect Professionals (94063)
1992 Institute of Landscape Architects of South Africa (P217)

QUALIFICATIONS

1983 University of Pretoria Bachelor of Landscape Architecture

VISUAL IMPACT ASSESSMENT EXPERTISE

Megan Anderson has been doing Visual Impact Assessments (VIA's) since 1989 when working for OvP and BOLA. Since then, she has completed more than 100 VIA's for a variety of developments including mining, harbours, wind and solar farms, communication towers, commercial and residential developments.

1.3 Declaration of independence

I, Megan Anderson declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed PV Solar Plant and Battery Energy Storage System (BESS) in Riversdale in the Western Cape, application or appeal in respect of which I was appointed, other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances that compromise the objectivity of my performing such work.



MEGAN ANDERSON

Megan Anderson Landscape Architects

Professional registration number: SACLAP - 94063

2. Introduction

2.1 Background to this report

SES has been appointed as the Independent Environmental Assessment Practitioner (EAP) to conduct the Environmental Impact Assessment process for the proposed Proposed Riversdale PV Solar Plant And Battery Energy Storage System (BESS) on the Remainder of Erf 2018, Riversdale, Western Cape

Megan Anderson Landscape Architects have been appointed to undertake a Visual Impact Assessment Report for the proposed Project.

2.2 Terms of reference

The PGWC's DEA&DP's "Guidelines for involving visual and aesthetic specialists in the EIA process" will be referred to as required content of study and report.

This document provides 'triggers' (i.e. characteristics of either the receiving environment or the proposed project), which indicate that visibility and aesthetics are likely to be 'key issues' and may require specialist input.

The following characteristics of the site and project are probable triggers which suggest potential visual issues:

The nature of the receiving environment:

- Areas with proclaimed heritage sites or scenic routes;
- Areas with intact or outstanding rural or townscape qualities;
- Areas with a recognised special character or sense of place;
- Areas of important tourism or recreation value;
- Areas with important vistas or scenic corridors;

The nature of the project (type and scale):

- A change in land use from the prevailing use;
- A significant change to the fabric and character of the area;
- Possible visual intrusion in the landscape;

The guideline document goes on to correlate two aspects, environment types and development types, to determine the varying levels of visual impact that can be expected, i.e. from little or no impact, to very high visual impact potential.

We believe the “Type of environment” is “Areas or routes of high scenic, cultural or historic significance” and the “Type of Development” is a Category 4 development as defined below:

Category 4 development:

e.g. light industry, medium-scale infrastructure. The expected visual impact is high, namely:

Table 1: Categorisation of issues to be addressed by the visual assessment

Type of environment	Type of development (see Box 3) Low to high intensity				
	Category 1 development	Category 2 development	Category 3 development	Category 4 development	Category 5 development
Protected/wild areas of international, national, or regional significance	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected	Very high visual impact expected
Areas or routes of high scenic, cultural, historical significance	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected	Very high visual impact expected
Areas or routes of medium scenic, cultural or historical significance	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected	High visual impact expected
Areas or routes of low scenic, cultural, historical significance / disturbed	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected	High visual impact expected
Disturbed or degraded sites / run-down urban areas / wasteland	Little or no visual impact expected. Possible benefits	Little or no visual impact expected. Possible benefits	Little or no visual impact expected	Minimal visual impact expected	Moderate visual impact expected

High visual impact expected:

- Potential intrusion on protected landscapes or scenic resources;
- Noticeable change in visual character of the area;
- Establishes a new precedent for development in the area.

Explanation of terms used:

Noticeable change – clearly visible within the view frame and experience of the receptor

The suggested level of visual impact assessment for expected high visual impacts will be a level 4 to 4 study.

2.3 Methodology

The Visual Study aims to identify the visual impact on the landscape.

The methodology was to:

- undertake a site inspection (7 February 2024) with a drive past on 11 January 2024;
- undertake a photographic survey, (using an I-phone 13) of the site from within the View Catchment and from Receptors;

- review relevant literature;
- describe, quantify and assess the scenic and visual resources of the area and site;
- establish the view catchment and zone of visual influence of the site;
- establish receptors;
- establish the visual sensitivity of site resulting from topography, slope grades, landforms, vegetation, special features and land use; and
- Identify and assess the potential visual impacts.

2.4 Limitations and assumptions

This study does not include a Glint and Glare study.

The development information provided is at Concept Stage. No details provided for earthworks visual impacts.

3. Proposed Development

3.1 Location

The proposed site of the Riversdale PV Solar Plant and BESS is on the Remainder of Erf 2018 in Riverdale. This is in the Hessequa Municipality of the Eden District of the Western Cape. The site is located east, south and west of the N2 and south west of Riversdale.



Figure 1: Location of the site south of Riversdale and N2 on 1:250 000 Topographical map

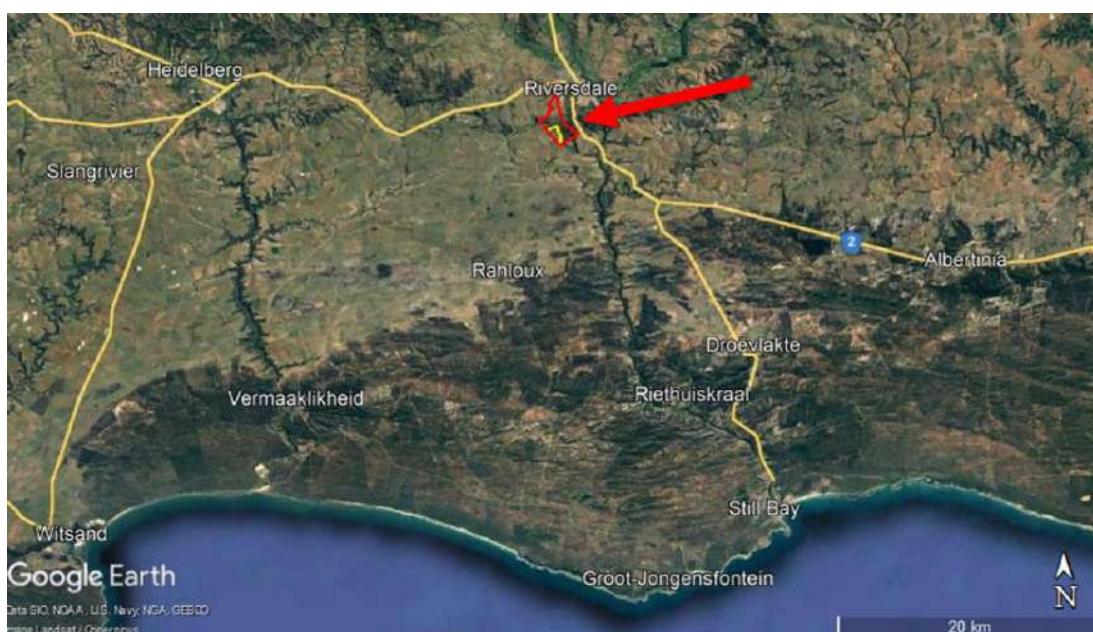


Figure 2: Location of the site south of the Riversdale and the N2 on an aerial photo (Source: SES)

3.2 Description of the Development

The Riversdale PV Solar Plant and BESS has been identified for implementation on. On the Figure below, the yellow polygon shows Erf 2018 with the preferred site location indicated by the red polygon is the preferred site, with the red crosses showing other potential alternative positions of the site.

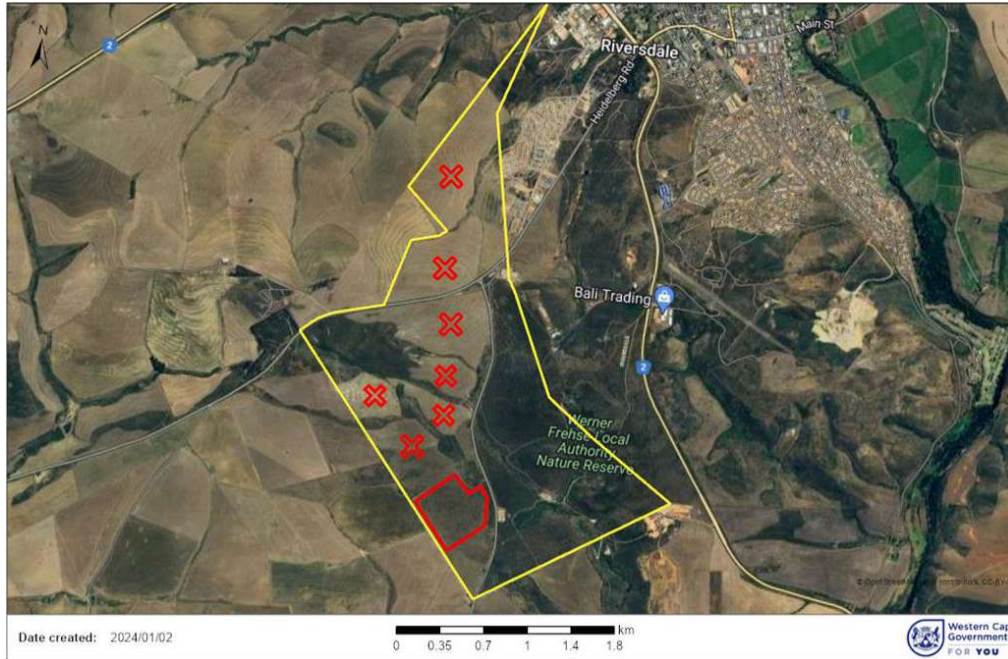


Figure 3: The proposed site of development showing the preferred and alternative sites (Source: SES)

The Proposed Layout for the Preferred site is indicated in the figure below. The powerlines may traverse the local nature reserve

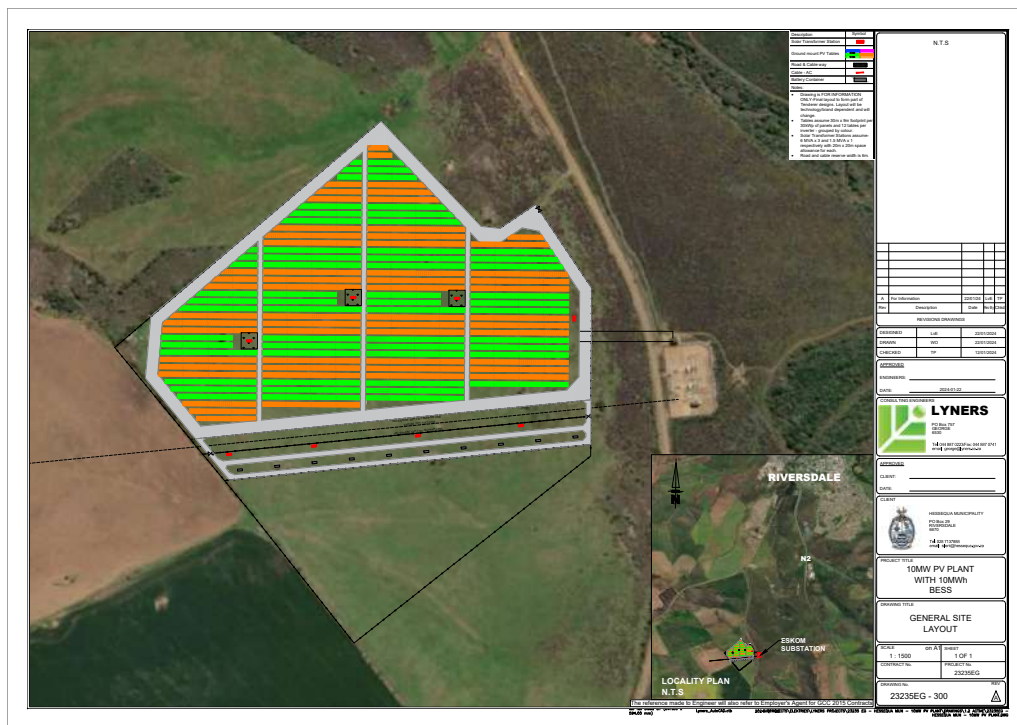


Figure 4: The proposed Preliminary Site Development Plan(Source: Element Consulting Engineers)

The full development to be constructed will consist of the following:

- A 10MW (up to 11MWp) Solar PV Plant.
- A Battery Energy Storage System with a usable (at least 4000 cycles) capacity of 10MWh consisting of containerised Lithium Ion or Redox Flow type batteries.
- LV/MV Transformer stations
- An access road and internal roads that will have a width of up to 8m including drainage on both sides of the road.
- MV cabling operating at 11kV between Substation tie-in point and plant as well as internal cabling.
- Indoor and Outdoor MV switchgear for grid tie-in point
- Fencing and Security

This solar PV plant will consist mostly of solar PV panels mounted on either fixed axis structures or single axis tracking structures.

Access roads will be up to 8m in width with wide bellmouths for vehicles to turn onto the various access and service roads. Although service roads are indicated on the drawings, the final position will be determined by the EPC contractor.

Part of the 8m road width will be stormwater drainage on each side of the road that will tie into the EPC contractor's stormwater management plan.

A Clearvu or similar approved or steel palisade fence with a minimum height of 2.4m is proposed for this facility, with additional electric fencing, barbed wires or spikes if necessary.

It is not known if the site will be cleared of vegetation, debris, and obstacles or if there will be mass earthworks (cut and fill) to obtain a uniform and workable platform for the installation.

4. Visual Framework Study

The following criteria (4.1 - 4.6) relate specifically to visual impact assessments. Proposed projects are assessed against these criteria

4.1 Scenic Resources

The proposed PV Plant site is in the Goukou Valley, in the Riversdale Municipality which is within the the Eden Region of the Western Cape.

Oberholzer and Winter describe the Eden Region in which the site is situated, as follows:

2.7 Eden

The Cape Fold Mountains, predominantly the Langeberg and Outeniqua ranges, continue east from the Overberg as far as Plettenberg Bay (and even further to Port Elizabeth). Between the mountains and the coast, the well known „Garden Route“ traverses a series of estuaries, lakes and forests of scenic value between Mossel Bay and Plettenberg Bay. The northern boundary of the Eden District is defined by the impressive Swartberg Mountains, a range consisting of the same Table Mountain Group sandstones, reaching over 2100m in places, and often covered by snow in winter.

The Little karoo is generally of geological and palaeontological significance, while the coast in particular has a number of important archaeological sites, such as at Pinnacle Point (Provincial Heritage Site), Robberg Peninsula, Blombos Cave and Matjies River Cave (Keurboomstrand).

Agricultural towns were established at Heidelberg, Riversdale, Calitzdorp, Ladismith, Uniondale and Oudtshoorn in the 1800s, usually based on a grid pattern, and often with allotment gardens. The late 1900s saw the rapid growth of a number of coastal towns, such as Still Bay, Mossel Bay, Wilderness, Sedgefield, Knysna and Plettenberg Bay.

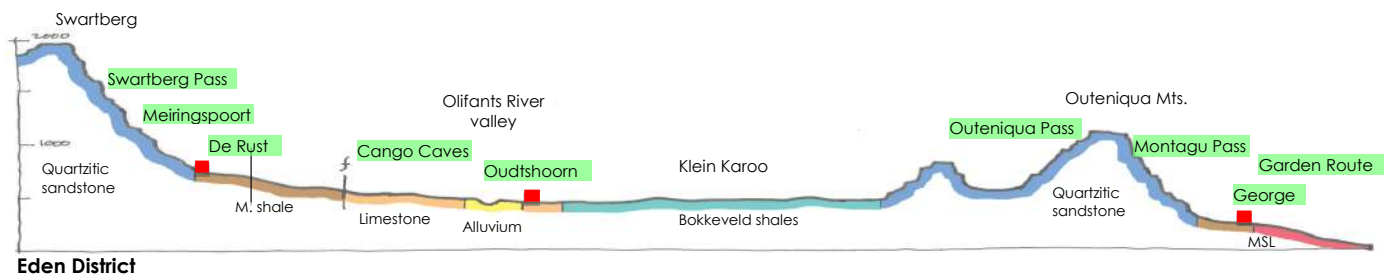


Figure 5 : Section through the Eden Region illustrating the pronounced topography of quartzitic sandstone (blue) as well as the location of settlements on the footslopes with access to water and productive soils of the granites, shales and alluvial valleys.

The landscape types which characterise the site and surrounds of the proposed Riversdale Solar Plant development include:

- Sandstone Mountains to the north
- Rolling Bedasdorp Bokkeveld Shale Hills, cultivated for agriculture and with the settlement of Riversdale
- Coastal Plains of tertiary and quaternary soils, also cultivated

The area is predominantly rural with the natural mountain backdrops and rivers winding through the rolling rural landscape.

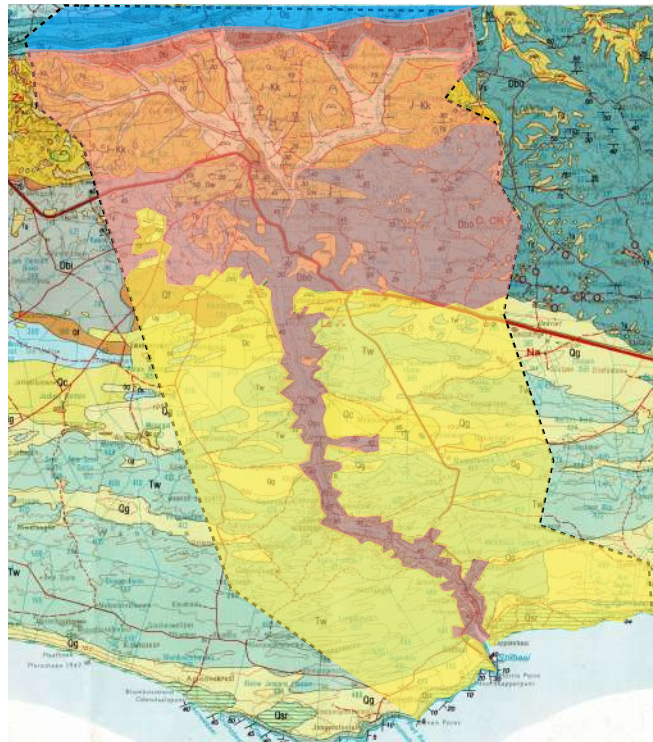


Figure 6: Underlying geology of the Riversdale area which through weathering results in the massive sandstone mountain backdrop (blue), the fertile rolling shale hills (orange) and the cultivated coastal plain (yellow).



Figure 7: Views across the rolling rural hills towards the massive sandstone mountain backdrop with the town of Riversdale tucked behind foreground hills.



Figure 8: View south across cultivated coastal plains

The proposed site of the PV Solar Plant, Erf 2018, consists of a Nature Reserve in the south western corner of the site, namely the Werner Frehse Nature Reserve while the remains is predominantly rural, cultivated or grazed with some stock pens, and with remnants of indigenous vegetation left on steeper slopes next to dry water courses. The Riversdale Main Intake Substation is nestled at the toe of the Nature Reserve. Power lines run northwards along the gravel road to Riversdale and south westwards across the preferred site to Vermaaklikheid.



Figure 9: Looking south east across the proposed site which is predominantly cultivated with a corner of the Werner Frehse Nature Reserve in the centre left of the photo



Figure 10: View of the Werner Frehse Nature Reserve which is north of the proposed sites



Figure 11: The Riversdale Main Intake Station is on the greater site next to a gravel road that separates the rural section of the site from the nature reserve. Powerlines run from or to here from the north and south west.

The Preferred site is grazed and looks to once have been cultivated with piles of rocks stacked on site now forming visual interest, covered in lichen and with predominantly natural, a little alien, vegetation growing within the the rock piles. Natural vegetation is generally returning to this site as it is no longer cultivated.



Figure 12: Cattle pens and rocky outcrops provide visual interest on the Preferred Site.

The Scenic resources of the site and area can be described as natural and rural with. These visual resources are Moderately to Highly rated.

4.2 Viewshed and Zone of Visual Influence(ZVI) - Visibility of the Project

Visibility of the project – the geographic area from which the project will be visible, or view catchment area. (The actual zone of visual influence of the project may be smaller because of screening by existing trees and buildings). This also relates to the number of receptors affected.

- *High visibility* – visible from a large area (e.g. several square kilometres).
- *Moderate visibility* – visible from an intermediate area (e.g. several hectares).
- *Low visibility* – visible from a small area around the project site.

4.2.1

Viewshed

The geographical area from which the project will theoretically be visible, or view catchment area, is dictated primarily by topography.

The PV Solar Plant site (preferred site indicated by the red polygon on figure below), is on north east, east and south east facing gently sloping foothill slopes. The viewshed of the site with is the green highlighted areas in the google generated figure below.

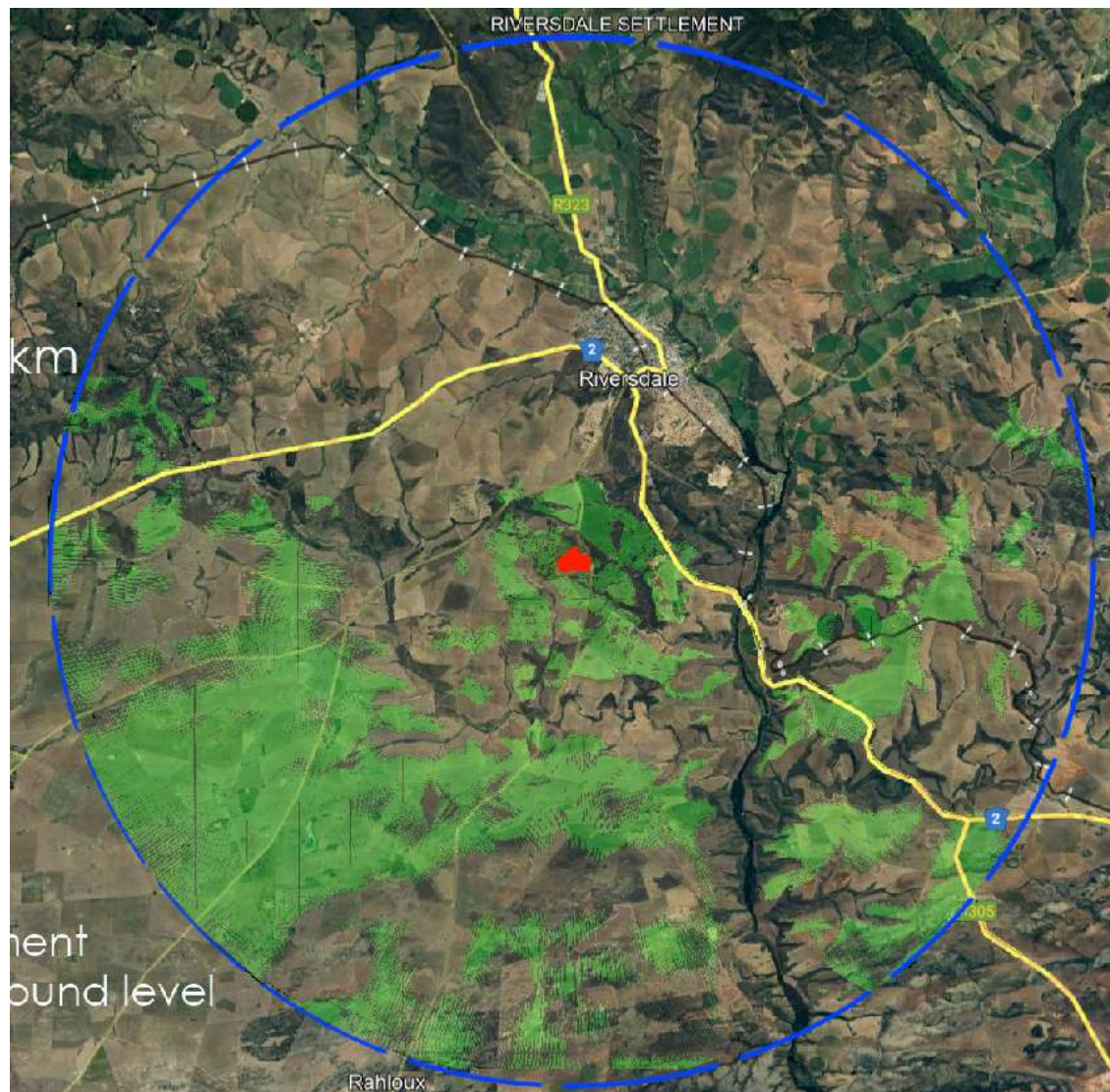


Figure 13: Viewshed of the proposed Hartenbos PV Solar Plant site of development

4.2.2 Zone of Visual Influence

Local features such as landforms and vegetation will reduce the extent of the area from which the site and proposed development will be seen, to an area known as the Zone of Visual Influence (ZVI) of the site. Furthermore the visibility of solar panels in the landscape is limited to 5kms which is indicated by the red circle. It is some areas predominantly south of the site, which may see the development.

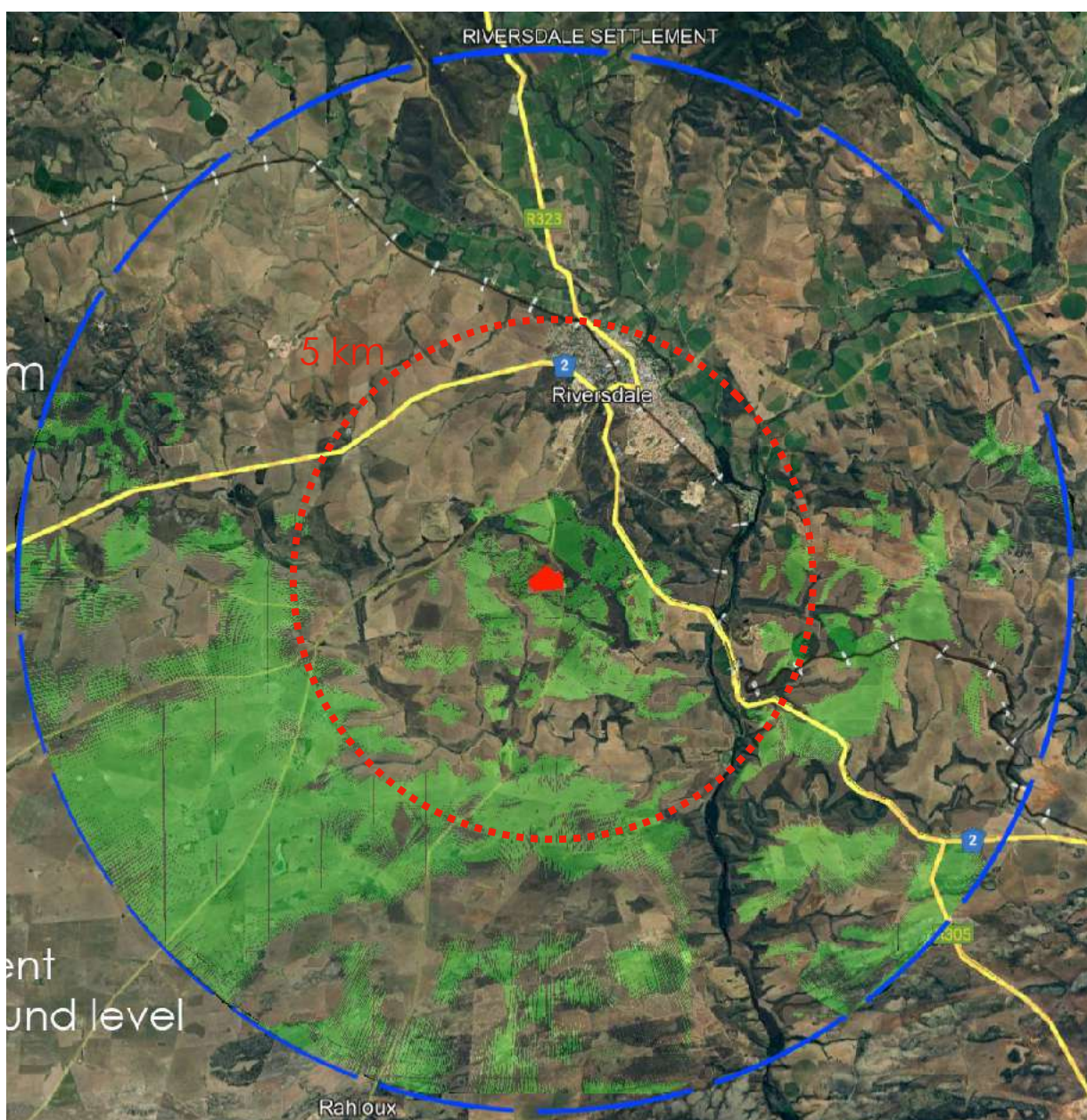


Figure 14: ZVI of the proposed Hartenbos WWTW PV Solar development

4.3 Receptors

Visual sensitivity of Receptors – The level of visual impact considered acceptable is dependent on the type of receptors.

- *High sensitivity* – e.g. residential areas, nature reserves and scenic routes or trails;
- *Moderate sensitivity* – e.g. sporting or recreational areas, or places of work;
- *Low sensitivity* – e.g. industrial, mining or degraded areas.

4.3.1 Highly sensitive receptors include:

- A very short strip of the N2, less than 500m in length, which is 1,9kms from the site, will be exposed to the preferred site and it is higher vehicles such as busses and trucks that will see the site over the roadside vegetation.
- The southern area of the local municipalities Werner Frehse Nature Reserves

4.3.2 Moderately sensitive receptors include:

- Adjacent work areas on farms

4.3.3 Low sensitivity receptors include:

- NA

*The receptors within the ZVI are inclusive of those rated as **moderately to highly sensitive**.*

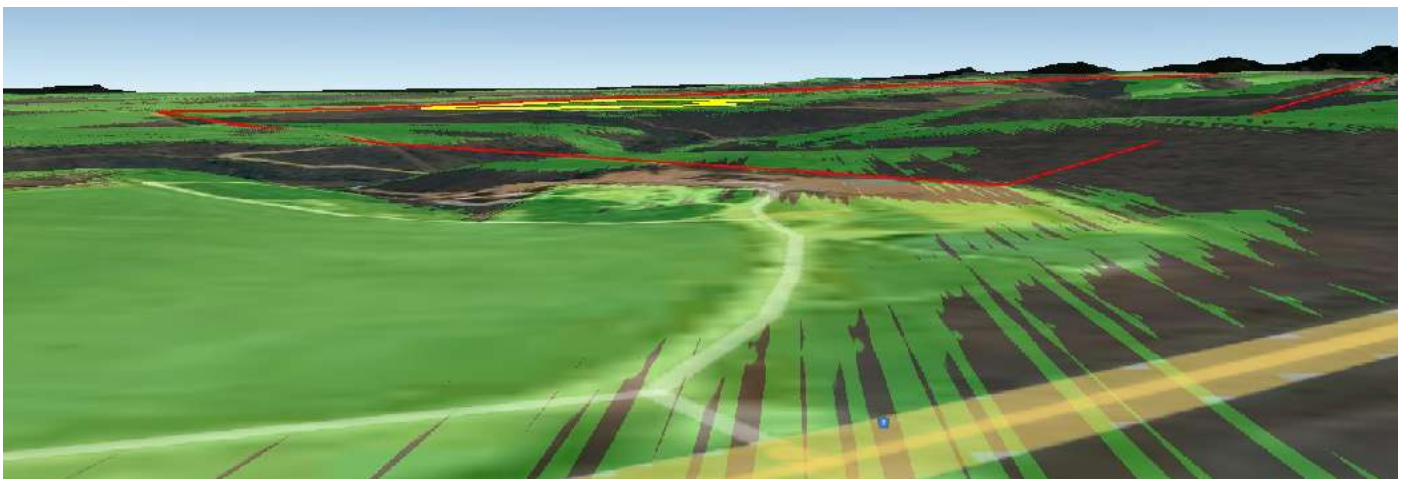


Figure 15: View from N2 of the preferred site (yellow polygon)

Visual sensitivity of the area – the inherent visibility of the landscape, usually determined by a combination of topography, landform, vegetation cover and settlement pattern. This translates into visual sensitivity.

- *High visual sensitivity* – highly visible and potentially sensitive areas in the landscape.
- *Moderate visual sensitivity* – moderately visible areas in the landscape.
- *Low visual sensitivity* – minimally visible areas in the landscape.

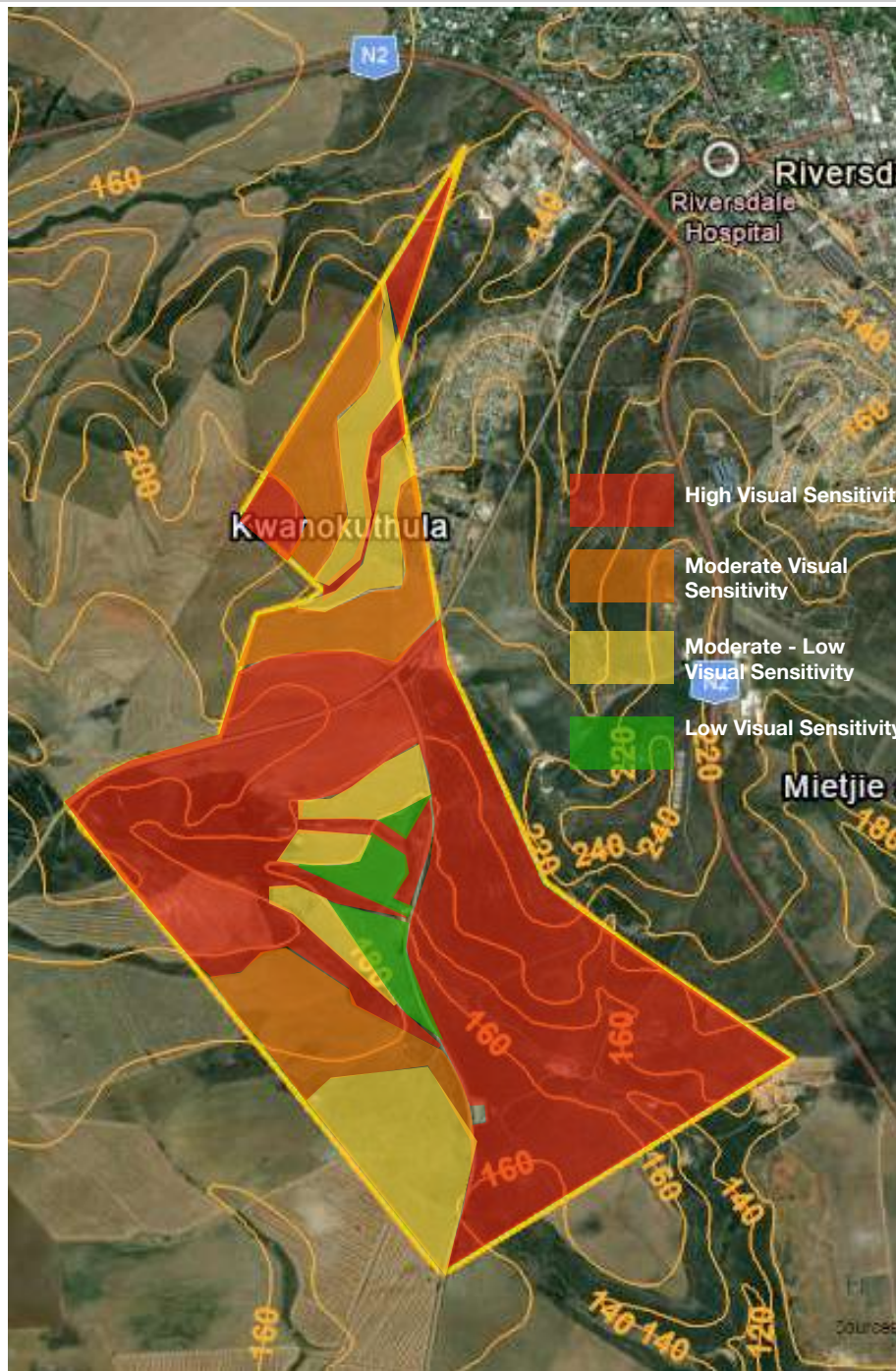


Figure 16: Visual Sensitivity of the site

The combined natural and built aspects of the site and surrounds - topography, landform, landuse and vegetation - render the site to have a High to low visual sensitivity.

By overlaying the proposed site locations on the Site Sensitivity plan one can compare the visual sensitivity of the various sites.

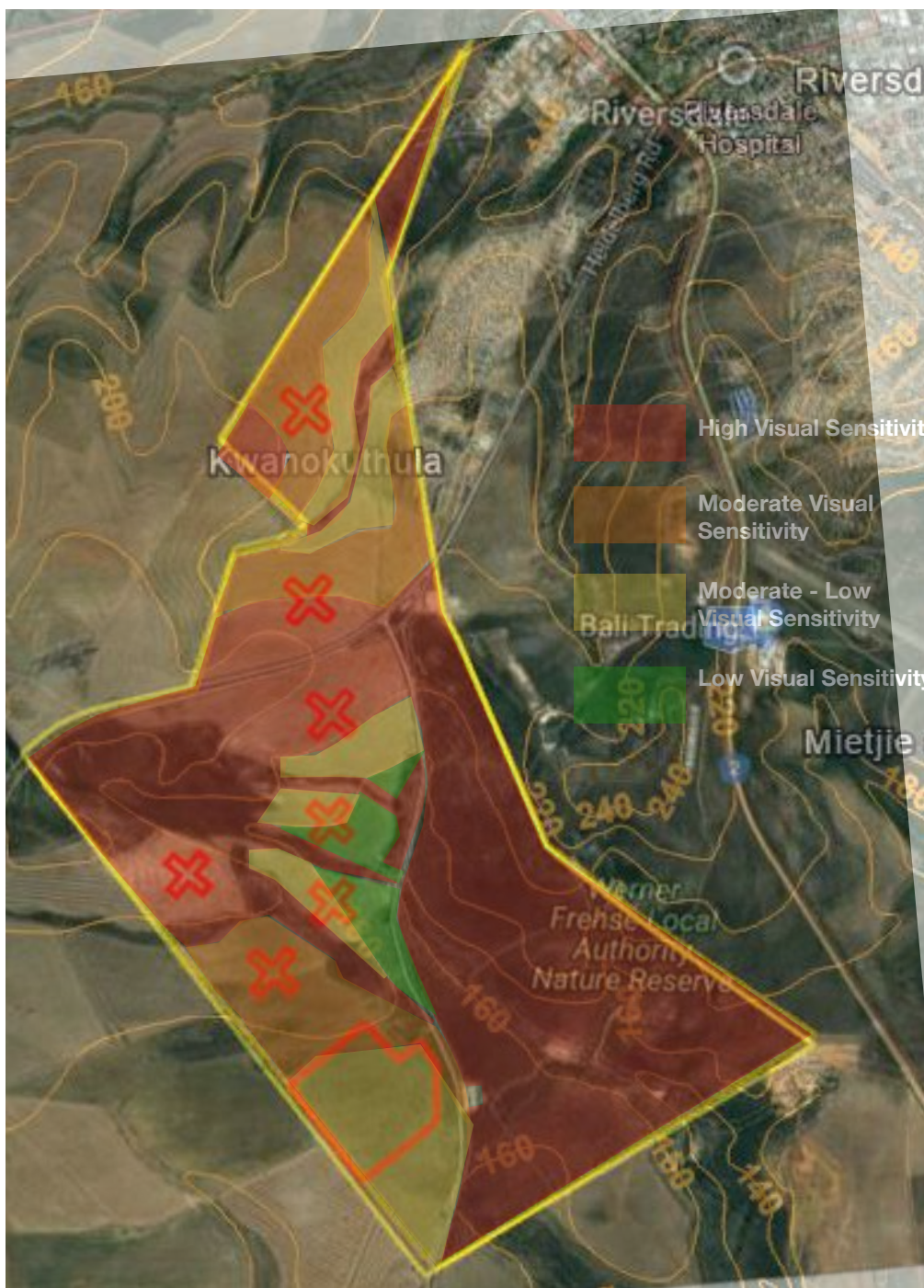


Figure 15: Site sensitivity overlaid on the proposed options

The Preferred site has a moderate to low sensitivity. The two sites centrally situated have a Moderate to low/Low visual sensitivity. Three sites are on areas of high visual sensitivity and the northern most is on an area of moderate sensitivity.

Visual absorption capacity (VAC) - the potential of the landscape to conceal the proposed project, i.e.

- *High VAC* – e.g. effective screening by topography and vegetation;
- *Moderate VAC* - e.g. partial screening by topography and vegetation;
- *Low VAC* - e.g. little screening by topography or vegetation.

The proposed site of development is on gently sloping foothills which provide partial screening. Ridgelines to the north, east and south provide screening from areas beyond.

The **VAC** of the preferred site is **moderate to high**, there is partial to effective screening by topography and vegetation.

The VAC on the other areas will vary from Low to High.

4.6 Visual Intrusion

Visual intrusion – the level of compatibility or congruence of the project with the particular qualities of the area, or its 'sense of place'. This is related to the idea of context and maintaining the integrity of the landscape or townscape.

- *High visual intrusion* – results in a noticeable change or is discordant with the surroundings;
- *Moderate visual intrusion* – partially fits into the surroundings, but clearly noticeable;
- *Low visual intrusion* – minimal change or blends in well with the surroundings.

The proposed development will partially fit into the surroundings although it will be clearly noticeable. The **visual intrusion** of the Riversdale PV Solar development on the preferred site will be **moderate**.

The Visual Intrusion on the other areas will vary from Low to High.

5. POTENTIAL VISUAL IMPACTS OF THE PROPOSED DEVELOPMENT

The methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives is as prescribed by SES.

The assessment criteria utilised in the Basic Assessment Report is based on, and adapted from, the Guideline on Impact Significance, Integrated Environmental Management Information Series 5 (Department of Environmental Affairs and Tourism (DEAT), 2002) and the Guideline 5: Assessment of Alternatives and Impacts in Support of the Environmental Impact Assessment Regulations (DEAT, 2006). See Appendix !

The nature of the visual impacts will be the visual effect the activity would have on the receiving environment, namely the visual effects the PV Solar Power Plant has on the rural, residential, industrial and urban landscape.

The development could have the following potentially negative visual impact:

Construction Phase - Visual scaring as a result of vegetation clearance and earthworks

Operation Phase - Visibility of the PV Solar Power Plant from the Werner Frehse Nature Reserve and a short section of the N2.

5.1 Construction Phase - Visual scarring as a result of vegetation clearance and earthworks

During the construction phase of development, the vegetation will be cleared from the site and earthworks will result in visual scarring - subsoil being visible.

	Alternative A Preferred Site Alternative	Alternative B (2 Sites in valley)	Alternative C (Other 5 Sites)	No-Go Alternative
PHASE: CONSTRUCTION				
Nature of impact:	Visual scarring as a result of clearing vegetation and earth-works			Stays as is
Extent: of Impact	Local – limited to the site and surrounding municipal area			N/A
Duration of impact	Temporary			N/A
Probability of occurrence:	Definite			N/A
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium	Medium - low	Medium - High	N/A
Degree to which the impact may cause irreplaceable loss of resources	Marginal			N/A
Degree to which the impact can be reversed:	Partly			N/A
Degree to which the impact can be mitigated:	Can be mitigated			N/A
Proposed mitigation:	Minimise disturbance, revegetate edges of site with indigenous shrubs and trees and the PV areas with low growing indigenous lawn grass and groundcovers			N/A
Significance rating of impact after mitigation	Medium - low	Low	Medium	N/A
Cumulative impact	Low	Low	Low	N/A
Consequence Significance	Insignificant	Negligible	Negligible	N/A

5.2 Operation Phase - Visibility from the Nature Reserve and N2, Change of Visual Character.

The development will take place in a rural and natural landscape. The visibility from the sensitive receptors will vary for the various sites. All will be visible from the nature reserve with only the Western sites, including the Preferred site, being visible from the short section of the N2 and then from only some higher vehicles. The two most northern sites will be visible from the most western extent of Kwanokuthula. These two sites and the two higher lying sites will be visible from the road to Vermaakliheid.

	Alternative A (Option 1 Full Site)	Alternative B (2 Sites in valley)	Alternative C (Other 5 Sites)	No-Go Alternative
PHASE: OPERATION				
Nature of impact:	Visibility from the Receptors namely Werner Frehse Nature Reserve, N2 500m section, Kwanokuthula and road to Vermaklikheid			Stays as is
Extent: of Impact	Local – limited to the site and surrounding municipal area			N/A
Duration of impact	Medium to Long term			N/A
Probability of occurrence:	Highly Probable			N/A
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium	Medium - Low	Medium - high	N/A
Degree to which the impact may cause irreplaceable loss of resources	Marginal			N/A
Degree to which the impact can be reversed:	Partly			N/A
Degree to which the impact can be mitigated:	Can be partially mitigated			N/A
Proposed mitigation:	Create berms for screening or hedgerows of indigenous trees and hedges			N/A
Significance rating of impact after mitigation	Low	Low	Medium	N/A
Cumulative impact	Low	Low	Low	N/A
Consequence Significance	Insignificant	Negligible	Low	N/A

6. Mitigation Measures

The Riversdale PV Solar Plant's on the preferred site will result in a low to medium visual impact, being visible from Nature Reserve and from higher vehicles on a very short section, <500 m, of the N2.

Certain mitigation measures will reduce the visual impact of the proposed development on the residents and commuters namely:

- Plant hedgerows of indigenous trees around the edges of the site
- Structures on the site should be painted recessive colours such as charcoal grey and the building materials should also be non - reflective and dark grey colours.

7. Environmental Management Plan (EMP)

The above mentioned mitigation measures should be included in the EMP and should be monitored by the ECO.

8. Conclusion

The Riversdale proposed PV Solar Plant is situated within a rural area close to a substation and adjacent to and visible from the Nature Reserve.

With the exception of the Nature Reserve, the affected receptors are at least 2kms from the sites.

The Piversdale proposed PV Solar Plant on the Preferred Site will result in a medium to low visual impact.

Mitigation measures will reduce the potential impacts and if these mitigation measures are implemented..

The Scenic Resources and Landscape Character of the area will be little impacted as the development site is relatively low lying. The proposed development is generally low, it's scale is in keeping with other rural and residential blocks.

We are of the opinion that if the mitigation measures are enforced, that the proposed Preferred Alternative 1 will have a MEDIUM TO LOW VISUAL IMPACT.

9. References

Oberholzer, B., 2005. Guidelines for involving visual and aesthetic specialists in EIA processes: Edition 1. CSIR Report No ENV-S-C 2005 053 F. Republic of South Africa, Provincial Department of the Western Cape, Department of Environmental Affairs and Development Planning, Cape Town.

Oberholzer, B. and Winter, S. 2013 (ver 5). Heritage and Scenic Resources, Inventory and Policy Framework for the Western Cape.

Western Cape Government (WCG), 2014. Provincial Spatial Development Framework.

Appendix 1: Environmental Impact Assessment Methodology

Determination of Extent (Scale):

Site specific	On site or within 100 m of the site boundary, but not beyond the property boundaries.
Local	The impacted area includes the whole or a measurable portion of the site and property, but could affect the area surrounding the development, including the neighbouring properties and wider municipal area.
Regional	The impact would affect the broader region (e.g., neighbouring towns) beyond the boundaries of the adjacent properties.
National	The impact would affect the whole country (if applicable).

Determination of Duration:

Temporary	The impact will be limited to the construction phase.
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than 8 months after the completion of the construction phase.
Medium term	The impact will last up to the end of the construction phase, where after it will be entirely negated in a period shorter than 3 years after the completion of construction activities.
Long term	The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter.
Permanent	This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied.

Determination of Probability:

Improbable	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
Probable	There is a possibility that the impact will occur to the extent that provisions must therefore be made.
Highly probable	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences.
Definite	The impact will take place regardless of any prevention plans.

Determination of Significance (without mitigation):

No significance	The impact is not substantial and does not require any mitigation action.
Low	The impact is of little importance but may require limited mitigation.

Medium	The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
Medium-High	The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels.
High	The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.
Very High	The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable.

Determination of Significance (with mitigation):

No significance	The impact will be mitigated to the point where it is regarded to be insubstantial.
Low	The impact will be mitigated to the point where it is of limited importance.
Medium	Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the project, such a persistent impact does not constitute a fatal flaw.
High	Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and taken within the overall context of the project, is considered to be a fatal flaw in the project proposal.

Determination of Reversibility:

Completely Reversible	The impact is reversible with implementation of minor mitigation measures
Partly Reversible	The impact is partly reversible but more intense mitigation measures
Barely Reversible	The impact is unlikely to be reversed even with intense mitigation measures
Irreversible	The impact is irreversible, and no mitigation measures exist

Determination of Degree to which an Impact can be Mitigated:

Can be mitigated	The impact is reversible with implementation of minor mitigation measures
Can be partly mitigated	The impact is partly reversible but more intense mitigation measures
Can be barely mitigated	The impact is unlikely to be reversed even with intense mitigation measures
Not able to mitigate	The impact is irreversible, and no mitigation measures exist

Determination of Loss of Resources:

No loss of resource	The impact will not result in the loss of any resources
Marginal loss of resource	The impact will result in marginal loss of resources
Significant loss of resources	The impact will result in significant loss of resources
Complete loss of resources	The impact will result in a complete loss of all resources

Determination of Cumulative Impact:

Negligible	The impact would result in negligible to no cumulative effects
Low	The impact would result in insignificant cumulative effects
Medium	The impact would result in minor cumulative effects
High	The impact would result in significant cumulative effects

Determination of Consequence significance:

Negligible	The impact would result in negligible to no consequences
Low	The impact would result in insignificant consequences
Medium	The impact would result in minor consequences
High	The impact would result in significant consequences