

## PROJECT IMPACT ASSESSMENT, SIGNIFICANCE AND MITIGATION MEASURES SUMMARY

The following impact rating approach used by EnviroAfrica CC is a basic exponential rating system to assess actual and potential negative and positive environmental impacts.

Environmental activities or aspects are identified, based on:

- the phases of the project,
- the nature (or description) of the actual and potential impacts of the activities.

For every project activity or aspect, various environmental impacts are listed. Every negative impact is allocated a -value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Consequence (Receiving Environment)
- Magnitude (Intensity/severity)

Every positive impact is allocated a +value as per each of the following criteria:

- Probability (Likelihood)
- Extent
- Duration (Frequency)
- Magnitude (Intensity/severity)

Once a value is allocated for each of the criterion, the scores are averaged to determine the final impact rating see Table 1 below.

EnviroAfrica then further assesses environmental significance, based on the nature of the impact, as per the score and colour key which forms part of Table 1 below. This results in impacts having either a low (indicated in green), medium (indicated in yellow) or high (indicated in orange and red) negative significance, and a low (light blue), medium (blue) or a high (dark blue) positive significance

**Note:** i. As a baseline, impact rating values/scores are allocated taking the **worst-case** scenario into account i.e. with no mitigation. The baseline rating is compared with those after mitigation has been taken into account i.e. the post-mitigation rating. Post mitigation rating is used for the actual impact assessment.

APPENDIX J – IMPACT ASSESSMENT



SIGNIFICANCE CRITERIA	Very High	High	Medium	Low	Negligible (very low)
<b>Value</b>	<b>16</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>1</b>
<b>Probability (likelihood) (P)</b>		Definite. Impact will definitely occur (impact will occur regardless of any prevention measures)	Highly probable. Very likely for impact to occur.	Probable. Impact may likely occur.	Improbable. Low likelihood/unlikely for impact to occur.
<b>Extent (E)</b>	Impact potentially reaches beyond national boundaries	Impact has definite provincial/potential national consequences	Impact confined to regional area/ town	Impact confined to local region and impact on neighbouring properties	Impact confined to project property / site
<b>Duration (D)</b>		Permanent The impact is expected to have a permanent impact, with very little to no rehabilitation possible	Long-Term The impact is expected to last for a long time after construction with rehabilitation expected to be 15-50 years. Impact is reversible but only with long-term mitigation	Medium-term The impact is expected to last for some time after construction with rehabilitation expected to be 2 - 15 years. Impact is reversible but only with on-going mitigation	Short-term / temporary The impact is expected to be temporary or last for a relatively short time with rehabilitation expected to be <2years. The impact is reversible through natural process and/or some mitigation.
<b>Magnitude (Intensity/ Severity) (M)</b>	It is expected that the activity will have a very severe to permanent impact on the surrounding environment. Functioning irreversibly impaired. Rehabilitation often impossible or unfeasible	It is expected that the activity will have a severe impact on the surrounding environment. Functioning may be severely impaired and may be temporarily cease. Rehabilitation will be needed to restore system integrity	It is expected that the activity will have an impact on the surrounding environment, but it will maintain its function, even if moderately modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the activity will have a perceptible impact on the surrounding environment, but it will maintain its function, even if slightly modified (overall integrity not compromised). Rehabilitation easily achieved	It is expected that the impact will have little or no effect on the integrity of the surrounding environment
<b>Receiving environment (Consequence): (RE)</b>	Very sensitive, pristine area – protected site or species permanently or seasonally present	Unused area containing only indigenous fauna / flora species	Unused area containing indigenous and alien fauna / flora species	Semi-disturbed area already rehabilitated / recovered from prior impact, or with moderate alien vegetation	Disturbed area/ transformed/ heavy alien vegetation

**ENVIRONMENTAL RATING SIGNIFICANCE KEY:**

**Negative Impacts**

SIGNIFICANCE	RATING	Final rating score / value range
Very Significant	Very High	-11 to -16
Significant	High	-7 to <-11
Increasing Significance	Medium	-4 to <-7
	Low	-2 to <-4
Insignificant	Very Low	-1 to <-2

**Positive Impacts**

SIGNIFICANCE	RATING	Final rating score / value range
Significant	High	10 to 16
Increasing Significance	Medium	4 to <10
	Low	1 to <4

Table 1: Environmental Significance Rating Methodology (rating criteria and significance key)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
<b>CONSTRUCTION PHASE</b>					
1	Biodiversity	Potential impact on special habitats (e.g. true quartz or "heuweltjies")	Very Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Very Low (Negative)
2		Loss of vulnerable or endangered vegetation and associated habitat.	Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Low (Negative)
3		Potential impact on protected areas, CBA's, ESA's or Centre's of Endemism.	Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Low (Negative)
4		Potential loss of ecological migration corridors.	Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Low (Negative)
5		Potential impact on threatened or protected plant species.	Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Low (Negative)
6		Potential impact on mammals, reptiles, amphibians	Low (Negative)	The sensitivity assessment suggests that it is highly unlikely that any of these species will be encountered or frequent the study area.	Low (Negative)
7		Potential impact on AviFauna	Low (Negative)	The sensitivity assessment suggests that it is highly unlikely that this species will be encountered or frequent the study area.	Low (Negative)
8		Cumulative impact associated with proposed activity.	Low (Negative)	Ensure that the solar facility does not have any additional impact on the watercourse (to the north of the site).	Low (Negative)
9	Freshwater Resources	Clearance and preparation of the site. Construction of the PV installation. Construction of access road	Low (Negative)	<ul style="list-style-type: none"> <li>- Prevent loose soil and sediments from moving down the drainage line along with stormwater.</li> <li>- Prevent litter and rubbish entering the drainage line</li> </ul>	Low (Negative)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
10	Heritage	No impacts expected		No further mitigation is recommended concerning these resources.	
11	Palaeontology	No impacts expected		<p>The following recommendations pertain to the palaeontological significance of the site:</p> <ul style="list-style-type: none"> <li>- This project's Environmental Control Officer (ECO) must be informed that the Adelaide Subgroup (Beaufort Group, Karoo Supergroup) sediments have a Very High Palaeontological Sensitivity.</li> <li>- Training of accountable supervisory personnel by a qualified palaeontologist in the recognition of fossil heritage is necessary.</li> <li>- If Palaeontological Heritage is uncovered during surface clearing and excavations, the Chance Find Protocol attached should be implemented immediately. Fossil discoveries ought to be protected and the ECO/site manager must report to South African Heritage Resources Agency (SAHRA) so that mitigation (recording and collection) can be carried out.</li> <li>- Before any fossil material can be collected from the development site, the specialist would need to apply for a collection permit from SAHRA. Fossil material must be housed in an official collection (museum or university), while all reports and fieldwork should meet the minimum standards for palaeontological impact studies proposed by SAHRA (2012).</li> <li>- These recommendations should be incorporated into the Environmental Management Plan for the proposed development.</li> </ul>	
12	Agriculture	No loss of potential cropland and minimal loss of future agricultural production potential.	Low (Negative)	No mitigation measures are required for the protection of agricultural production potential on the site because the site is highly unlikely to be utilised for agricultural production in future.	Low (Negative)
13	Visual	Visual impact of development on surrounding landscape	High (Negative)	1. <b>Site Vegetation and Gum Trees:</b> excessive clearance of perimeter areas and even areas in-between the solar panels should be avoided. Furthermore, no interference with the historic gum tree avenue on the southern boundary or anywhere else should be allowed. An Arborist must do any tree pruning. This will help conserve the valuable landscape heritage of the area	Medium-High (Negative)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<p>and its essential screening and contextual character.</p> <p>2. <b>Screening:</b> where possible, the scheme should be screened at ground level with shrubs that will screen off views of the 2.5m high PV panel rows. These should preferably be endemic from the natural vegetation occurring on site or in the area (FRg 2 Swartland Granite Renosterveld). This screening can either be done on site or on the boundary using natural hedging species like <i>Searsia spp.</i> and others.</p> <p>3. <b>Planting:</b> the scheme intention should be to maintain the natural vegetation and/or underplanted with <i>Carpobrotus</i> species (<i>suurvy</i>), the range of plants could be broadened to include endemic FRg 2 Swartland Granite Renosterveld species as well. Alternatively, the agro-photovoltaic option of interplanting with some crop species is also good. The planting of small trees in the any leftover areas will help break the monotony of the facility and provide shade to any associated buildings.</p> <p>4. <b>Fencing:</b> an intention of using Clear-View to secure the site perimeter is advisable as it is neat, strong and semi-permeable. Colouration should be a dull natural colour like a sage/khaki that will blend into both the summer and winter landscape.</p> <p>5. <b>Structures:</b> the likely container style facility structures is low key and should likewise be coloured a dull natural colour like a sage/khaki that will blend into both the summer and winter landscape. The support structures of the PV panels could likewise be coloured naturally.</p> <p>6. <b>Maintenance:</b> Planting maintenance covering the proposed screening and under-planting or intercropping will be needed to ensure the establishment of the screening vegetation and an ongoing maintenance programme for any other vegetation.</p> <p>Construction phase:</p> <p>1. <b>Damage Control:</b> All parties must make every effort to control the destruction of soils and vegetation on site, especially any remnants of natural vegetation. These must not be damaged under any</p>	

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<p>circumstances.</p> <p>2. <b>Pollution:</b> Chemical damage by cement mixing directly on the ground and by diesel, etc spills must also be prevented at all costs, as should vandalism of the plants and accidental damage to limbs by workers and machinery. Fires must be prevented also at all costs in all areas. Penalties and incentives should be implemented as can fencing off areas.</p> <p>3. <b>Monitoring:</b> Monitoring of the landscape, soils and vegetation during construction is very important and must be attended to regularly. Damage to some is all too inevitable and of- ten irreversible. Adequate indigenous (preferably endemic) vegetation must be planted.</p>	
14	Socio-economic	Increase employment opportunities	Low (Positive)	<ul style="list-style-type: none"> <li>- Contractors, employing or seeking to employ local HDIs who are suitably qualified, should get preference;</li> <li>- The municipality, local community and local community organizations should be informed of the project and potential job opportunities by the developer;</li> <li>- The developer should, where necessary, assist local HDI owned firms to complete and submit the required tender forms on condition that local labour is used;</li> <li>- Reserve a number of jobs for women.</li> <li>- Facilitate mechanisms to enable women to access employment.</li> <li>- Pay men and women doing the same job, equally.</li> <li>- Ensure that women gain equal access to training and education opportunities than men do.</li> <li>- A database of locally based firms, including SMME’s owned and run by HDIs that qualify as service providers (construction companies, catering companies, waste collection companies, site cleaning companies etc.) should be compiled by the developer prior to the commencement of the tender process. These firms should be invited to bid for tenders;</li> </ul>	Low (Positive)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- Establish a Monitoring Committee for the construction and decommissioning phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the EMPr is implemented and that any problems that arise which are associated with the construction and decommissioning phase, are addressed.</li> <li>- Developer and contractor to act as reference for locals employed.</li> <li>- Developer and contractor to liaise with existing or future projects to access employment for locals.</li> <li>- Reserve a number of jobs (80%) for local labour (un- &amp; semi-skilled labour).</li> <li>- Facilitate mechanisms to enable locals to access employment and learning opportunities offered by the proposed solar facility.</li> </ul>	
15		Increased income	Low (Positive)	None	Low (Positive)
16		Increased skill levels of working age population	Low (Positive)	<ul style="list-style-type: none"> <li>- The proposed development should enhance formal and informal skills transfer:                             <ul style="list-style-type: none"> <li>o Should skilled persons from outside the community be employed, the developer should consider implementing a training and skills development programme to enhance the opportunities for local historically disadvantaged individuals in the construction and maintenance industry. Measures should be put in place to ensure successful training and development i.e. structured job shadowing and learnerships. Such a programme should be offered in liaison with an accredited Further Education and Training College or University of Technology;</li> <li>o Some basic skills can be tutored at school level in a joint venture established by the developer between the primary schools in Malmesbury and the schools or education and skills training providers. In the long-term (generationally) the improved skills level will ultimately lead to improved levels of education.</li> <li>o An “access to education support service” assisting future students should be considered attending to application fees for</li> </ul> </li> </ul>	Low (Positive)



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<p>bursaries, career and financial planning and strategies for the period of studying.</p> <ul style="list-style-type: none"> <li>- The proposed development should invest in teacher training to offer scarce subjects such as mathematics, science and physical science. Besides investing in teacher training the proposed development should fund the tuition of the scarce subjects.</li> </ul>	
17		Increased local sales and GGP	Low (Positive)	<ul style="list-style-type: none"> <li>- Contractors should be directed by tender criteria to purchase locally and to make use of local service providers.</li> <li>- Spending money locally purchasing from locals and South African should benefit employees. The proposed development should leverage discount in the local economy of the municipal area and employees should be made aware of it.</li> <li>- Small businesses should be supported (i.e. skills training, assistance and guidance to set up small businesses) and joint ventures with previously disadvantaged persons should be promoted.</li> <li>- The promotion of joint ventures between small businesses (owned by previously disadvantaged persons) and more established businesses should be encouraged.</li> </ul>	Low (Positive)
18		Increased use of social amenities and services	Low (Negative)	No mitigation	Unlikely/negligible
19		Increased motorised and non-motorised traffic levels	Low (Negative)	<ul style="list-style-type: none"> <li>- Rehabilitate the gravel road during and particularly after construction and decommissioning to at least the same standard as is currently.</li> <li>- Upgrade road signs to address the movement conflict at the intersection.</li> <li>- Road signs for protecting pedestrians crossing and accessing the road should be displayed.</li> <li>- Provide transport to decrease pedestrian traffic.</li> <li>- Restrict heavy vehicles to specific hours.</li> <li>- Erect road signs signal times when heavy vehicles will make use of the road.</li> <li>- Adhere to national traffic safety standards and precaution measures.</li> </ul>	Low (Negative)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
20		Increased noise and dust	Low (Negative)	<ul style="list-style-type: none"> <li>- Provide traffic safety awareness amongst the project team and the community.</li> <li>- Dust creation must be controlled as per construction and demolition management and control code.</li> <li>- Noise creation should be controlled as per construction and demolition management and control code.</li> <li>- Appoint an Environmental Control Officer to supervise construction and building and demolition.</li> <li>- Adhere to the Environmental Management Plan (EMPr) for the Construction and Decommissioning Phase.</li> <li>- All workers and management must undergo an induction course.</li> <li>- Any natural habitat destroyed by constructing infrastructure should be rehabilitated.</li> <li>- Enforce strict operating hours for heavy vehicles and construction activities on site to reduce noise and dust impacts on adjacent landowners.</li> <li>- Implementation dust suppression measures;</li> <li>- Access must be on recognized routes.</li> <li>- Litter and littering must be strictly controlled.</li> <li>- All construction waste and building rubble and demolition waste and rubble must be removed off site.</li> <li>- All road construction must be limited to the road reserve.</li> <li>- Cut and fill should be kept to a minimum and should be rehabilitated immediately.</li> </ul>	Low (Negative)
		Change in sense of place	Low (Negative)	<ul style="list-style-type: none"> <li>- An Environmental Control Officer (ECO) must be appointed to oversee the construction process and ensure compliance with conditions of approval.</li> <li>- Contractor to sign and undertake to comply with Environmental Specifications.</li> <li>- Demarcate sensitive areas and no-go areas with danger tape to prevent disturbance during construction.</li> </ul>	Low (Negative)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- Pre-construction, keep disturbed areas to a minimum. No clearing of land to take place outside the demarcated footprint.</li> <li>- Throughout construction, identify suitable areas within the construction site for fuel storage, temporary workshops, eating areas, ablution facilities and washing areas.</li> <li>- Throughout construction institute a solid waste management programme to minimize waste generated on the construction site and recycle where possible.</li> <li>- Throughout construction reduce and control dust using approved dust suspension techniques as and when required.</li> <li>- Throughout construction to occur only during daytime. Should the ECO authorize night work, low flux and frequency lighting shall be used.</li> <li>- Throughout construction, rehabilitate all disturbed areas in accordance with the development plan.</li> <li>- A photographic record of the site and its immediate surrounding area must be kept as part of the EMPr to serve as a baseline for measurement of all future visual impacts and as an aid to the full rehabilitation of the site should the facility be decommissioned in future.</li> <li>- Excavation on the site is to be kept to the absolute minimum required for the successful implementation of the project.</li> <li>- The fencing design is to imitate the agricultural fencing in the area while at the same time providing the security. It is to be visually permeable. No barbed wire is to be used.</li> <li>- Any necessary lighting must be shielded in such a way that no direct light is allowed to escape into the surrounding terrain or up into the sky. Only the areas that are necessary to be lit must be lit with the surrounding.</li> </ul>	
22		Community stability and homogeneity	Low (Negative)	<ul style="list-style-type: none"> <li>- Adhere to international construction health and safety standards and precaution measures.</li> <li>- Provide health and social training amongst the project team and in the community.</li> <li>- Make effort to ensure that the construction team and their families meet regularly (monthly).</li> </ul>	Low (Negative)

APPENDIX J – IMPACT ASSESSMENT



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
23		Increased offences and incidences of crime	Low (Negative)	<ul style="list-style-type: none"> <li>- Regularly alternated twenty four hour security to guard the development.</li> <li>- Documentation of all movement and vehicles entering and leaving the premises.</li> <li>- Regular searching of all vehicles entering and leaving the premises.</li> <li>- No persons not concerned with the development to enter on the premises.</li> <li>- Limit access points to one point.</li> </ul>	Low (Negative)
24		Youth's self-esteem development	Low (Positive)	<ul style="list-style-type: none"> <li>- Reserve a number of jobs for women.</li> <li>- Facilitate mechanisms to enable women to access employment.</li> <li>- Pay men and women doing the same job, equally.</li> <li>- Ensure that women gain equal access to training and education opportunities than men do.</li> </ul>	Low (Positive)
25		Diversification of culture	Low (Negative)	No Mitigation	Low (Negative)
26		Employment equity of vulnerable groups	Low (Positive)	<ul style="list-style-type: none"> <li>- Reserve a number of jobs for women.</li> <li>- Facilitate mechanisms to enable women to access employment.</li> <li>- Pay men and women doing the same job, equally.</li> <li>- Ensure that women gain equal access to training and education opportunities than men do.</li> <li>- A database of locally based firms, including SMME's owned and run by HDIs that qualify as service providers (construction companies, catering companies, waste collection companies, site cleaning companies etc.) should be compiled by the developer prior to the commencement of the tender process. These firms should be invited to bid for tenders;</li> <li>- Establish a Monitoring Committee for the construction and decommissioning phase in collaboration with representatives of the local community. The Monitoring Committee has to ensure that the EMPr is implemented and that any problems that arise which are associated with the construction and decommissioning phase, are addressed.</li> </ul>	Low (Positive Impact)

APPENDIX J – IMPACT ASSESSMENT



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- Developer and contractor to act as reference for locals employed.</li> <li>- Developer and contractor to liaise with existing or future projects to access employment for locals.</li> <li>- Reserve a number of jobs (80%) for local labour (un- &amp; semi-skilled labour).</li> <li>- Facilitate mechanisms to enable locals to access employment and learning opportunities offered by the proposed solar facility.</li> </ul>	

APPENDIX J – IMPACT ASSESSMENT



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
<b>OPERATIONAL PHASE</b>					
1	Freshwater	Runoff and wash water leaving the site	Medium (Negative)	<ul style="list-style-type: none"> <li>- Maintain stormwater management infrastructure.</li> <li>- Prevent wash water from leaving the site.</li> </ul>	Low (Negative)
2	Visual	Visual impact of development on surrounding landscape	High (Negative)	<p>Operational phase:</p> <ul style="list-style-type: none"> <li>- <b>Lighting:</b> Lighting should be minimised and carefully controlled as part of the project's management plan. The use of green energy fittings and concepts should be encouraged and lighting developed with sensitivity to the rural landscape.</li> <li>- Waterwise landscaping should be used wherever possible and green star building practices.</li> <li>- <b>Landscape Maintenance:</b> must be carried out at all times in line with these recommendations to help keep the scheme green and encouraging local biodiversity.</li> </ul>	Medium-High (Negative)
3	Socio-economic	Increase employment opportunities	Medium (Positive)	<ul style="list-style-type: none"> <li>- Developer and contractor to act as reference for locals employed.</li> <li>- Developer and contractor to liaise with existing or future projects to enhance employment opportunities for locals.</li> </ul>	Medium (Positive)
4		Increased income	Medium (Positive)	No mitigation	Medium (Positive)
5		Increased skill levels	Medium (Positive)	<ul style="list-style-type: none"> <li>- Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).</li> <li>- Facilitate mechanisms to enable local young people to access the educational opportunities to attend courses in scarce subjects.</li> <li>- Ensure local employees do benefit from on the job training.</li> <li>- The educational opportunities should include formal and informal education:</li> <li>- On successful completion of subjects and courses, opportunities to access further education should be made accessible.</li> <li>- Facilitate mechanisms to enable local young people (who are not necessarily employed) to access the skills training opportunities.</li> </ul>	Medium (Positive)

APPENDIX J – IMPACT ASSESSMENT



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
6		Increased local sales and GGP	Medium (Positive)	<ul style="list-style-type: none"> <li>- On the job training should include formal and informal opportunities.</li> <li>- Market the photovoltaic electricity generation facility as a tourist destination.</li> <li>- Create links with other tourism activities in Malmesbury through a website and the local tourism office.</li> <li>- The promotion of joint ventures between small businesses (owned by previously disadvantaged persons) and more established businesses.</li> <li>- Implement formal small business training and mentoring programmes.</li> </ul>	Medium (Positive)
		Proximity to work	Medium (Positive)	No mitigation	Medium (Positive)
		Enhanced supply of bulk services	Medium (Positive)	No mitigation	Medium (Positive)
		Changed sense of place	Medium (Negative)	<ul style="list-style-type: none"> <li>- Maintain the general appearance of the facility as a whole (i.e. the PV panels, buildings and associated infrastructure, roads and natural environment).</li> <li>- Littering is to be strictly controlled over the entire life of the project.</li> <li>- All waste is to be regularly removed from the facility to a recognized transfer or dumping site. Waste, in any form, should not be allowed to be collected on the site.</li> <li>- Monitor land surface below PV 'strings' to prevent loss of vegetation and first signs of desertification.</li> <li>- The use of any cleaning materials or defoliants to aid in the control of vegetation is to be strictly monitored so that their long-term use does not cause future problems should the site be decommissioned.</li> <li>- Maintain access roads to prevent scouring and erosion, especially after rains.</li> <li>- Monitor the use of lighting over the entire life of the project to minimize light pollution.</li> <li>- Strictly control outdoor lighting to prevent light pollution.</li> <li>- All lighting must be installed at downward angles.</li> <li>- Sources of light must as far as possible be shielded by physical barriers such as planted trees and shrubs or built structures.</li> </ul>	Medium (Negative)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- Consider the application of motion detectors to allow the application of lighting only where and when it is required.</li> <li>- Only minimum wattage light fixtures must be used.</li> <li>- A strict fire prevention policy must be implemented and monitored.</li> <li>- <u>Screen the site with endemic vegetation to minimize the visual impact.</u></li> </ul>	
10		Loss of agricultural land (food security potential)	Low (Negative)	<ul style="list-style-type: none"> <li>- Promotes strict stormwater management and erosion control: Implementation of an effective system of stormwater run-off control; maintenance of vegetation cover; and stripping, stockpiling and re-spreading of topsoil.</li> <li>- Implement an effective system of run-off control which collects and disseminates run-off water from hardened surfaces and prevents potential down slope erosion (all phases).</li> </ul>	Low (Negative)
11		Loss of biodiversity	Low (Negative)		Low (Negative)
12		Loss of ecological infrastructure	Low (Negative)	<ul style="list-style-type: none"> <li>- Proper drainage infrastructure around the roads in and around the PV units to prohibit preferential flow paths.</li> <li>- Immediate stabilisation and rehabilitation of disturbed areas during the construction phase as stormwater can wash sand and mud into small wetlands, trenches and streams (towards the north of the sub-catchment).</li> <li>- Keep solar energy panels 32m away not to disturb vegetation in and around the drainage lines</li> <li>- Controlling invasive vegetation on the PV installation site as an ongoing standard operating procedure.</li> <li>- Livestock should and will not be permitted to graze on the site of the PV installation. Over utilization will cease.</li> <li>- Groundwater table will be kept stable as no water will be required and subsequently less dehydration of waterways than the current farming operation.</li> <li>- Conservancy tanks will be installed that will be emptied by tanker trucks.</li> </ul>	Low (Negative)



Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- The proposed development has no direct impact (low negative) on the ecological infrastructure and mitigation measures will enhance the ecological support areas supporting the stream in the north (low positive).</li> <li>- Prevent the loss of biodiversity and the protection of seasonal watercourse:                             <ul style="list-style-type: none"> <li>o Consider the aquatic CBA area as a no-go area (to be protected).</li> <li>o Indiscriminate clearing of any area outside of the footprint must be avoided.</li> </ul> </li> </ul>	
13		Increased levels of education (individual development)	Medium (Positive)	<ul style="list-style-type: none"> <li>- Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).</li> <li>- Facilitate mechanisms to enable local young people to access the educational opportunities to attend courses in scarce subjects.</li> <li>- Ensure local employees do benefit from on the job training.</li> <li>- The educational opportunities should include formal and informal education:</li> <li>- On successful completion of subjects and courses, opportunities to access further education should be made accessible.</li> <li>- Facilitate mechanisms to enable local young people (who are not necessarily employed) to access the skills training opportunities.</li> <li>- On the job training should include formal and informal opportunities.</li> </ul>	Medium (Positive)
14		Increased participation SMME	Low (Positive)	No mitigation	Low (Positive)
15		Youth's self-esteem development	Low (Positive)	<ul style="list-style-type: none"> <li>- Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).</li> <li>- Facilitate mechanisms to enable local young people to access the educational opportunities to attend courses in scarce subjects.</li> <li>- Ensure local employees do benefit from on the job training.</li> </ul>	Low (Positive)

Nature of Impact			Impact Assessment Ranking and Proposed Mitigation		
No.	Aspect	Impact	Environmental Significance (without Mitigation)	Proposed Mitigation (i.e. Proposed mitigation to reverse/ avoid, manage or mitigate identified impacts associated with construction, operation, and decommissioning/ closure phases)	Environmental Significance (After Mitigation)
				<ul style="list-style-type: none"> <li>- The educational opportunities should include formal and informal education:</li> <li>- On successful completion of subjects and courses, opportunities to access further education should be made accessible.</li> <li>- Facilitate mechanisms to enable local young people (who are not necessarily employed) to access the skills training opportunities.</li> <li>- On the job training should include formal and informal opportunities.</li> </ul>	
16		Employment equity of vulnerable groups	Medium (Positive)	<ul style="list-style-type: none"> <li>- Skills transfer and development, formally and informally, should be implemented together with local education and skills training providers (e.g. job shadowing).</li> <li>- Facilitate mechanisms to enable local young people to access the educational opportunities to attend courses in scarce subjects.</li> <li>- Ensure local employees do benefit from on the job training.</li> <li>- The educational opportunities should include formal and informal education:</li> <li>- On successful completion of subjects and courses, opportunities to access further education should be made accessible.</li> <li>- Facilitate mechanisms to enable local young people (who are not necessarily employed) to access the skills training opportunities.</li> <li>- On the job training should include formal and informal opportunities.</li> </ul>	Medium (Positive)
17		Family structure change	Medium (Positive)	No mitigation	Medium (Positive)
18		Diversification of culture	Low (Negative)	No mitigation	Low (Negative)