As a point of departure, it is important to note that the Need and Desirability for this proposed access road cannot be considered in isolation and must be considered along with the associated PV Facilities as it is directly associated with and inseverable from the PV Facilities[1].

Guidelines on need and desirability were published in the government gazette of 20 October 2014.

These guidelines list specific questions to determine need and desirability of proposed developments.

Question	Response
1. How will this development (and its separate elements/aspects) impact on the ecological integrity of the area)?	
1.1. How were the following ecological integrity considerations taken into account? 1.1.1. Threatened Ecosystems, 1.1.2. Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure, 1.1.3. Critical Biodiversity Areas ("CBAs") and Ecological Support Areas("ESAs"), 1.1.4. Conservation targets, 1.1.5. Ecological drivers of the ecosystem, 1.1.6. Environmental Management Framework, 1.1.7. Spatial Development Framework, and 1.1.8 Global and international responsibilities relating to the environment (e.g.RAMSAR sites, Climate Change, etc.).	The environmental sensitivities present on site and ecological integrity considerations were addressed within the Terrestrial Biodiversity and Species Assessment and the Aquatic Biodiversity and Species Assessment undertaken as part of this and the preceding environmental process. The specialist studies explain that there are no Critically Endangered and Threatened Ecosystems on the study site. The 'endangered' and 'threatened' eco-systems identified within the Cape Winelands District Municipal region are not located within the study areas (they are located some 40 km to the east and the west of the site). According to the Western Cape Biodiversity Spatial Plan (WCBSP) (2017), the proposed access road is not situated within a Critical Biodiversity area or an Ecological Support Area. It is understood that the Environmental Management Framework (EMF) for the Cape Winelands District Municipality is in draft form and has not been gazetted. The Screening Tool also notes that no intersections with EMF areas have been found.
1.2. How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity? What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The specialists identified all ecological sensitive areas on site that would need to be avoided by the proposed development (e.g. scarps, ridges, slopes, riparian environments and riverine rabbit habitat). The sensitive features and buffer areas recommended by the specialists have been avoided in the layout of the proposed PV Facilities as well as this proposed access road..
1.3. How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The proposed access road is expected to result in an overall "low" ecological significance if suitable mitigation measures are employed. Measures to avoid, remedy, mitigate and manage impacts are included within the EMPr appended to this basic assessment report.

[1] Input regarding the need and desirability of the PV projects was obtained from the Final Basic Assessment Report for the PV Facilities (CSIR, 2021)

Question	Response
1.4. What waste will be generated by this development? What measures were exploredto firstly avoid waste, and where waste could not be avoided altogether; what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?	The description of the potential waste generation associated with the PV development is included in Section A of the Final Basic Assessment for the PV Facilities (CSIR,2021). This proposed access road will not generate any waste during construction or operations.
1.5. How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? Whatmeasures were explored to enhance positive impacts?	The impact on cultural heritage landscapes was assessed by a heritage specialist. The project has been approved in terms of Section 38(8) if the National Heritage Resources Act by Heritage Western Cape.
1.6. How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?	The access road requires a minimal amount of water during the construction phase, but will not use any water during operations. The Geohydrology Assessment that formed part of the Environmental process for the PV facilities explains that the water requirements can be met via existing boreholes on site. Management actions to ensure the responsible and equitable use of water during the construction phase is provided in the EMPr.
1.7. How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts? 1.7.1. Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life) 1.7.2. Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerationalequity, and are there more important priorities for which the resources	The associated PV developments will utilise solar energy for the generation of electricity. The greater project for which this proposed road will provide access is seen as a source of 'clean energy' and reduces the dependence on non-renewable energy sources, such as coal fired power plants. The proposed development is located in the Komsberg REDZ. The REDZs represent areas where wind and solar PV energy development is being incentivized from resource, socio-economic and environmental perspectives. The environmental sensitivities present on site and ecological integrity considerations have been utilized to inform the position of the PV facilities and the alignment of this proposed access road.

Question	Response
should be used (i.e. what are the opportunity costs of using these resources of the proposed development alternative?) 1.7.3. Do the proposed location, type and scale of development promote a reduced dependency on resources?	
1.8. How were a risk-averse and cautious approach applied in terms of ecological impacts?: 1.8.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? 1.8.2. What is the level of risk associated with the limits of current knowledge? 1.8.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	The environmental sensitivities present on site and ecological integrity considerations were determined in the Terrestrial Biodiversity and Species Assessment and the Aquatic Biodiversity and Species Assessment (That was undertaken as part of the Environmental Process for the PV projects. The sensitive areas identified by all the participating specialists were explicitly utilized to determine the alignment of this proposed access road, which avoids all sensitive features and buffers identified by these specialists.
1.9. How will the ecological impacts resulting from this development impact on people's environmental right in terms following: 1.9.1. Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts? 1.9.2. Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?	The Socio-Economic Assessment undertaken for the greater PV development notes that overall the potential negative impacts are rated with a very low to low significance, whilst the positive impacts are rated with an overall very low to high significance. The Socio-Economic Assessment further notes that it can be concluded that the prospective socio-economic benefits of the proposed projects outweigh the socio-economic losses or impacts. Creation of temporary employment, increased household income attainment and standard of living, and the development and/or growth of locally-owned industries were identified as some of the positive socio-economic impacts during the construction phase of the proposed projects. With regards to the Visual Impact Assessment, the visual impact significance was considered to be low before and after mitigation. This is as a result of the relatively low structures and the local scale of the proposed solar facilities and related infrastructure located in a fairly remote area. The visual landscape could be restored after potential decommissioning which means that the visual significance would be very low with mitigation for this phase. Therefore, the overall negative impact to the environmental right of people in terms of social and visual impacts are considered to be very low to low.

Question	Response
1.10. Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	This is considered and addressed as part of the Socio-Economic Assessment undertaken for the PV project and associated infrastructure. The study confirmed that it should be accepted that the development of the proposed projects is likely to result in some form of negative social impact to the local community. However, such a negative impact needs to be weighed against the potential benefit likely to result from the same development. Given the overall very low to low significance of potential negative impacts associated with the project, as compared to the overall very low to high significance of potential positive impact of the project; it can be concluded thatthe prospective socio-economic benefits of the proposed project outweigh the socio-economic losses or impacts. The above is also supported in terms of the status quo of the socio-economic conditions present in the Witzenberg Local Municipality.
1.12. Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the differentelements of the development and all the different impacts being proposed), resulted in the selection of the "best practicable environmental option" in terms of ecological considerations?	Refer to sectionH1 of this Report, which deals with Alternatives. Thissection outlines the suitability of the proposed activity.
2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?	
2.1.1. The IDP (and its sector plans' vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks of policies applicable to the area	The proposed projects support the objectives of the Witzenberg Local Municipality's Integrated Development Plan (IDP) (2017-2022) [Amended IDP (2020 – 2021)] which identifies renewable energy as a key economic sector. The Witzenberg Local Municipality IDP promotes the creation of an enabling environment to attract investment and support local economy. The third review of the 2017-2022 Cape Winelands District Municipality IDP (2020-2021; Page 49 and 51) also promotes renewable energy development as it states: ▪ "The provincial energy focus is on lowering carbon emissions and localgeneration (e.g. renewable and greater use of gas). ▪ As a principle-led (and policy) response, authorities to consider andpromote the development of renewable energy power generation capacity subject to appropriate scale, form and location". The inclusion of renewable energy not only plays to the natural strengths of the area (i.e. good solar irradiation levels), but also appears to be aimed at bringing parity between the existing employment sectors by providing much needed growth within the local construction and electricity employment sectors. The proposed activity therefore does

Question		Response
		not compromise any of the objectives set within IDP (2017-2022). The proposed projects will also be supportive of the IDP's objective of creating more job opportunities. One of the Strategic Objectives of the IDP of the Cape Winelands District Municipality (2020-2021; Page 20) is "creating an environment and forging partnerships thatensure social and economic development of all communities, including the empowerment of the poor in the Cape Winelands District". The Witzenberg Local Municipality IDP also promotes the creation of an enabling environment to attract investment and support local economy. The proposed projects are also located in REDZ 2 (Komsberg) which is a geographical area that has been identified on a strategic planning level to have reduced negative environmental impacts but high commercial attractiveness (due to its proximity to, inter alia, the national grid) and socio-economic benefit to the country. The development of solar energy is therefore important for South Africa to reduce its overall environmental footprint from power generation (including externality costs), and thereby to steer the country on a pathway towards sustainability. Therefore, the proposed project is in line with strategic plans and national policy.
2.1.2.	Spatial priorities and desired spatial patterns (e.g. need for integration of segregated communities, need to upgrade informal settlements, need for densification, etc.)	This is not applicable, as the proposed project is located within a rural areaand the site is zoned for agricultural use with consent for renewable energy structures.
2.1.3.	Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.)	Refer to section G of this report for a description of the receiving environment and impact assessment, respectively. The impact of the proposed project on heritage features, including archaeology, cultural landscape, and palaeontology has been assessed.

Question	Response
2.1.4. Municipal Economic Development Strategy ("LED Strategy").	The proposed projects support the objectives of the Witzenberg Local Municipality's Integrated Development Plan (IDP) (2017-2022) [Amended IDP (2020 – 2021)] which identifies renewable energy as a key economic sector. The Witzenberg Local Municipality IDP promotes the creation of an enabling environment to attract investment and support local economy. The third review of the 2017-2022 Cape Winelands District Municipality IDP (2020-2021; Page 49 and 51) also promotes renewable energy development as it states: ▪ "The provincial energy focus is on lowering carbon emissions and local generation (e.g. renewable and greater use of gas). ▪ As a principle-led (and policy) response, authorities to consider and promote the development of renewable energy power generation capacity subject to appropriate scale, form and location". The Witzenberg Local Municipality's IDP (2017-2022) [Amended IDP (2020 – 2021)] and SDF (2020; Page 65) states that any renewable energy developments in the municipal area should preferably be located inside of the Komsberg REDZ, however, proposals for such development outside of this boundary will be considered on a case by case basis based on its own merits. The proposed projects are located within the boundary of the Komsberg REDZs, therefore is in line with the IDP and SDF of the Witzenberg Local Municipality. Even though the proposed solar facilities will not provide the municipality directly with electricity, the energy produced by the facility will feed into the national grid. The proposed project would also provide advanced skills transfer and training to the local communities and creating contractual and permanent employment in the area.
2.5. In terms of location, describe how the placement of the proposed development will:	
2.5.1. result in the creation of residential and employment opportunities in closeproximity to or integrated with each other,	Refer to the Socio-Economic Assessment attached in appendix G, for an outline of the socio- economic impacts that could occur due to the proposed development of the solar PV facilities and associated infrastructure (including this proposed access road). The Socio-Economic Assessment notes that overall the potential negative impacts are rated with a very low to low significance, whilst the positive impacts are rated with an overall very low to high significance.
2.5.2. reduce the need for transport of people and goods,	Not applicable. This is associated with a renewable energy project within a remote rural area.
2.5.3. result in access to public transport or enable non-motorised andpedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public	Not applicable. This is associated with a renewable energy project within a remote rural area.

Question	Response
transport),	
2.5.6. for urban related development, make use of underutilised land available with the urban edge,	Not applicable. The proposed projects are located within a rural area and the site is zoned for agricultural use with consent for renewable energy structures.
2.5.7. optimise the use of existing resources and infrastructure,	The PV proposed projects will connect to the existing Eskom Kappa Substation. This proposed access road provides a single access to serve 3 approved PV developments, thus optimizing the access requirements for the three facilities.
2.5.8. opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement),	These projects are a renewable energy project and not related to bulkinfrastructure expansion.
2.5.9. discourage "urban sprawl" and contribute to compaction/densification,	This project is not related to any Urban land use.
2.5.10. contribute to the correction of the historically distorted spatial patterns ofsettlements and to the optimum use of existing infrastructure in excess of current needs,	This is not applicable as the proposed project is located within a rural areaand the sites are zoned for agricultural use with consent for renewable energy structures.
2.5.11. encourage environmentally sustainable land development practices andprocesses,	Based on the findings of this BA, the proposed projects would not have a significant (“high”) negative impact on the receiving environment, with the implementation of suitable mitigation measures and will therefore not go against sustainable land development practices and processes. In addition, the proposed projects are located in a REDZ and the development proposal will therefore be aligned with national planning priorities.