

Appendix K: Need and desirability for the proposed activity or development

In terms of this Department's guideline on Need and Desirability (March 2013)

Question	Answer
<p>1. How will this development (and its separate elements/aspects) impact on the ecological integrity of the area?</p> <p>1.1. How were the following ecological integrity considerations taken into account:</p> <p>1.1.1. Threatened Ecosystems,</p> <p>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,</p> <p>1.1.3. Critical Biodiversity Areas ("CBAs") and Ecological Support Areas ("ESAs"),</p> <p>1.1.4. Conservation targets,</p> <p>1.1.5. Ecological drivers of the ecosystem,</p> <p>1.1.6. Environmental Management Framework,</p> <p>1.1.7. Spatial Development Framework, and</p> <p>1.1.8. Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.).</p>	<p>The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area.</p> <p>1.1.1 The proposed development area initially consisted of Swartland Granite Renosterveld, which is classified as an endangered ecosystem. However, the site has been transformed and does not support the vegetation type anymore.</p> <p>1.1.2 The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area and provided the best environmental location. No watercourses are located within 32m of the proposed development area.</p> <p>1.1.3 The proposed development area is identified as a CBA: Terrestrial. However, the botanical specialist stated that the CBA classification "is exaggerated and at best this area should be mapped as an Ecological Support Area 1 (ESA1)."</p> <p>1.1.4 The Developer has endeavoured to ensure that the development is as sustainable as possible.</p> <p>1.1.5 No ecological drivers were identified.</p> <p>1.1.6 The proposed development will be occurring on private property and will not impact the EMF.</p> <p>1.1.7 N/A, the proposed development will occur on private land and is in line with the zoning of the property.</p> <p>1.1.8 No RAMSAR site.</p>
<p>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</p>	<p>The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area. No watercourses are located within 32m of proposed development.</p>

<p>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?</p>	
<p>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?</p>	<p>This development will not pollute or degrade the biophysical environment. Care will be taken during construction to prevent any pollution or degradation.</p> <p>In the event of a significant spill or leak of hazardous substances (e.g., petrol, diesel, etc.) used during the proposed activities, such an incident(s) must be reported to the relevant authorities, including this Directorate (Directorate: Pollution and Chemicals), in accordance with section 30 of the NEMA.</p>
<p>1.4. What waste will be generated by this development? What measures were explored to 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?</p>	<p>A small amount of construction waste may be generated during construction phase which will be taken to the local landfill.</p>
<p>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? What measures were explored to enhance positive impacts?</p>	<p>The proposed development will be on privately owned land and will be in line with the zoning of the property.</p> <p>In addition, a Record of Decision (ROD) (refer to Error! Reference source not found., page Error! Bookmark not defined.) was obtained from Heritage Western Cape (HWC). The ROD (dated 07 August 2024) states the following: <i>"You are hereby notified that, since there is no reason to believe that the proposed installation of solar panels and associated infrastructure on Portion 10 of Farm 502, Annandale Road, Stellenbosch, will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required. HWC chance finds procedure to be included in the environmental authorization."</i></p>
<p>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 non-renewable natural resources been considered? What measures were explored to firstly avoid</p>	<p>During construction water-saving measures (such as using non-potable water where possible) will be put into place.</p> <p>During the operational phase should water be required, non-potable water will be used.</p>

<p>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?</p>	
<p>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?</p> <p>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?</p> <p>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)</p> <p>1.7.2. Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources for the proposed development alternative?)</p> <p>1.7.3. Do the proposed location, type, and scale of development</p>	<p>During construction water-saving measures (such as using non-potable water where possible) will be implemented.</p> <p>During the operational phase should water be required, non-potable water will be used.</p> <p>All mitigation as prescribed by the specialist has been included in the EMPr.</p> <ol style="list-style-type: none"> 1. The proposed development will use an existing resource (non-potable water). The proposed development will produce electricity. 2. The proposed development is for installing solar panels on privately owned land and will produce electricity. 3. The proposed development is for installing solar panels on privately owned land and will produce electricity.

<p>promote a reduced dependency on resources?</p>	
<p>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?</p>	<p>1.8 the following is taken from the Botanical and Biodiversity Assessment: <i>“Limitations and Assumptions</i> <i>The weather at the time of the survey was fine. As noted above, the season of the survey was ideal since it was well into spring and winter, with spring-flowering geophytes and annuals, where found, being easily identifiable. The vegetation varied in density but where dense, it did not limit access.”</i></p>
<p>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?</p>	<p>The proposed development will not impact the rights of other people.</p> <ol style="list-style-type: none"> The proposed development might have a small impact on air quality as during construction dust may be generated. This will, however, be mitigated and is temporary. Visually there is little impact on surrounding areas because the activity is in line with its zoning. Positive impacts are socio-economically creation of temporary job opportunities, and improvement in quality of life for locals, during the construction phase.
<p>1.10. Describe the linkages and dependencies between human well-being, 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.)?</p>	<p>The proposed development will not negatively impact livelihoods. It will, however, create new temporary jobs (during the construction phase).</p>

<p>1.11. Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?</p>	<p>The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area. Mitigation as per specialist recommendation has also been included in the EMPr.</p>
<p>1.12. Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements 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?</p>	<p>The proposed development will be located on privately owned land located within a rural area. The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area and provided the best environmental location as well as mitigation measures. Furthermore, appropriate mitigation measures have been recommended by the relevant specialist.</p>
<p>1.13. Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope, and nature of the project in relation to its location and existing and other planned developments in the area?</p>	<p>The proposed development will be located on privately owned land located within a rural area. The proposed development will have a very low impact on the ecological integrity of the area since the specialists conducted an extensive assessment of the area.</p>
<p>2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations:</p> <p>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,</p> <p>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.),</p> <p>2.1.3. Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and</p> <p>2.1.4. Municipal Economic Development Strategy ("LED Strategy").</p>	<p>The closest community is that of Stellenbosch. People working at the development (during the construction phase) will be sourced locally where possible.</p>
<p>2.2. Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-</p>	<p>The application will have no negative economic impact whatsoever but will contribute to job creation, during the construction phase.</p>

<p>economic objectives of the area?</p> <p>2.2.1. Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?</p>	
<p>2.3. How will this development address the specific physical, psychological, developmental, cultural, and social needs and interests of the relevant communities?</p>	<p>The proposed development will positively impact skills development in the area.</p> <p>With a high unemployment rate, any new employment positions (temporary) have a huge positive impact on the immediate and extended families of such new employees.</p>
<p>2.4. Will the development result inequitable (intra- and inter-generational) impact distribution, in the short- and long-term? Will the impact be socially and economically sustainable in the short- and long-term?</p>	<p>Yes. Both the current and future generations will benefit. The impacts are also sustainable as long as the development is managed properly.</p>
<p>2.5. In terms of location describe how the placement of the proposed development will:</p> <p>2.5.1. result in the creation of residential and employment opportunities in close proximity to or integrated with each other,</p> <p>2.5.2. reduce the need for transport of people and goods,</p> <p>2.5.3. result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms of public transport),</p> <p>2.5.4. compliment other uses in the area,</p> <p>2.5.5. be in line with the planning for the area,</p> <p>2.5.6. for urban-related development, make use of underutilised land available with the urban edge,</p> <p>2.5.7. optimise the use of existing resources and infrastructure,</p> <p>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</p>	<p>Workers residing in the surrounding areas will be provided with transport to and from the site.</p> <p>The development will not negatively affect the sense of history or heritage/archaeological indicators.</p>

<p>settlement that reflects the spatial reconstruction priorities of the settlement),</p> <p>2.5.9. discourage "urban sprawl" and contribute to compaction/densification,</p> <p>2.5.10. contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,</p> <p>2.5.11. encourage environmentally sustainable land development practices and processes,</p> <p>2.5.12. Take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.),</p> <p>2.5.13. the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential),</p> <p>2.5.14. impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and</p> <p>2.5.15. In terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?</p>	
<p>2.6. How were a risk-averse and cautious approach applied in terms of socio-economic impacts:</p> <p>2.6.1. What are the limits of current knowledge (note: the gaps, uncertainties, and assumptions must be clearly stated)?</p> <p>2.6.2. What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable</p>	<p>Specialist input relating botanical and agricultural matters were obtained, in order to get the best practicable environmental option.</p> <p>No freshwater features are located within 32m of the proposed development area.</p> <p>Accordingly, when assessing the significance of possible biophysical impacts the assessment is not made relative to a pristine state of the environment but rather relative to the current status of the environment.</p>

<p>communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge?</p> <p>2.6.3. 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?</p>	
<p>2.7. How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following:</p> <p>2.7.1. Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?</p> <p>2.7.2. Positive impacts. What measures were taken to enhance positive impacts?</p>	<p>The development will not impact on people's health. Local workforce will be sourced, as far as possible. The proposed development will positively impact on skills development.</p> <p>In a rural area such as this with a high unemployment rate, any new employment positions have a huge impact on the immediate and extended families of such new workers.</p>
<p>2.8. Considering the linkages and dependencies between human well-being, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)?</p>	<p>The proposed development is for the installation of solar panels in an area confirmed appropriate by the botanical specialist with positive socio-economic impacts on the local community (during the construction phase).</p>
<p>2.9. What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?</p>	<p>Location and environmental impacts were considered to determine the best option.</p>
<p>2.10. What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice,</p>	<p>The proposed development will be located on privately owned land located within a rural area. No discrimination will, therefore, take place.</p>

<p>do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?</p>	
<p>2.11. What measures were taken to pursue equitable access to environmental resources, benefits, and services to meet basic human needs and ensure human well-being, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?</p>	<p>Specialist input relating to botanical and agriculture matters was obtained, to get the best practicable environmental option.</p> <p>Furthermore, the development will not negatively impact surrounding residents' basic human needs and well-being.</p>
<p>2.12. What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?</p>	<p>Where local communities are employed, it will be the responsibility of the applicant to ensure their safety and to provide the relevant training for the execution of their tasks.</p>
<p>2.13. What measures were taken to:</p> <p>2.13.1. ensure the participation of all interested and affected parties,</p> <p>2.13.2. provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,</p> <p>2.13.3. ensure participation by vulnerable and disadvantaged persons,</p> <p>2.13.4. promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means,</p> <p>2.13.5. ensure openness and transparency, and access to information in terms of the process,</p> <p>2.13.6. ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition was given to all forms of knowledge, including traditional and ordinary knowledge, and</p>	<p>Public participation will be done in accordance with the NEMA 2014 Regulations as amended.</p> <p>The neighbouring owners will be informed. In addition, all relevant authorities will be informed.</p> <p>An advertisement will be placed to ensure that the wider community is aware of the proposal.</p> <p>A notice on the property boundary will inform all locals passing the property.</p> <p>The locals in the surrounding residential areas include women and children and they will benefit directly from the employment opportunities and housing opportunities.</p>

<p>2.13.7. Ensure that the vital role of women and youth in environmental management and development was recognised and their full participation therein was promoted?</p>	
<p>2.14. Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?</p>	<p>The proposed development will provide some job opportunities during the construction phase.</p>
<p>2.15. What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?</p>	<p>The proposed project is for the installation of solar panels on private property and will therefore not be harmful to the human health of anybody.</p> <p>Where local communities are employed, it will be the responsibility of the applicant to ensure their safety and to provide the relevant training for the execution of their tasks.</p>
<p>2.16. Describe how the development will impact on job creation in terms of, amongst other aspects:</p> <p>2.16.1. the number of temporary versus permanent jobs that will be created,</p> <p>2.16.2. whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area),</p> <p>2.16.3. the distance from where labourers will have to travel,</p> <p>2.16.4. the location of jobs opportunities versus the location of impacts (i.e. the equitable distribution of costs and benefits), and</p> <p>2.16.5. The opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but the impact on 1000 agricultural jobs, etc.).</p>	<p>2.16.1 With this development, there will be an increase in temporary jobs during construction.</p> <p>2.16.2 Where employees do not have the skills they will be taught, where relevant.</p> <p>2.16.3 The development is close to Stellenbosch. When required transport will be provided by the contractor.</p> <p>2.16.4 The job opportunities will be afforded to nearby local towns (as far as possible).</p> <p>2.16.5 Opportunity cost does not translate negatively in terms of job loss.</p>

<p>2.17. What measures were taken to ensure:</p> <p>2.17.1. that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and</p> <p>2.17.2. That actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?</p>	<p>All relevant authorities are provided time to comment on the BAR.</p> <p>This ensures intergovernmental coordination and is used to identify any conflict of interest between organs of state.</p>
<p>2.18. What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?</p>	<p>By applying for environmental authorisation it is ensured that the public's environmental interest is protected.</p>
<p>2.19. Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?</p>	<p>The mitigation measures are based on industry, specialist and environmental requirements and are, therefore, realistic.</p>
<p>2.20. What measures were taken to ensure that the costs of remedying pollution, environmental degradation, and consequent adverse health effects and of preventing, controlling, or minimising further pollution, environmental damage, or adverse health effects will be paid for by those responsible for harming the environment?</p>	<p>The development has an EMPr to ensure pollution, degradation, etc is minimised, managed and mitigated where required. Specialist recommendations and mitigation have been included in the EMPr and comments from the commenting authorities will also be included once received.</p>
<p>2.21. Considering the need to secure ecological integrity and a healthy, biophysical, environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?</p>	<p>Ecological integrity and a healthy, biophysical, environment were maintained due to the placement which resulted in the selection of the best practicable environmental option in terms of socio-economic considerations.</p>
<p>2.22. Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope, and nature of the project in relation to its location and other planned developments in the area?</p>	<p>Only a positive cumulative socio-economic impact in the form of job creation during the construction phase.</p>