

**COMMENTS AND RESPONSE REPORT (EIA PHASE)**

**Proposed “ARIES-HELIOS” 765kV Transmission Powerline & Substations Upgrades, Northern Cape Province  
NEAS Ref: DEA/EIA/0001556/2012  
DEA Ref: 14/12/16/3/3/2/441**

I&AP	Concerns & Queries	Date	Response
<p>SKA Dr Adrian Tiplay, Site Bid Manager</p>	<p>The SKA configuration took into account existing transmission line infrastructure when optimising the location of individual stations. As a result, existing transmission and distribution infrastructure does not pose a significant risk of detrimental impact on the SKA.</p> <p>In order to accurately determine the impact the development of the transmission line could have on the SKA, Electromagnetic Interference studies are required. During the meeting that was held on 5th November 2013 between SKAPO, yourself and ESKOM, ESKOM committed to conducting these studies on already existing 756KV transmission lines. To date, ESKOM has not yet communicated these results to SKAPO.</p> <p>SKAPO did, however, receive an ESKOM report on radio interference in January 2013 where 400kV transmission lines were considered for the ESKOM Solar Park near Upington – investigations indicated that 16km buffer distances would probably be appropriate for 400kV transmission line infrastructure. However, this same assumption cannot be made for 765kV line infrastructure until a proper analysis is conducted.</p> <p>The 16 kilometre protection buffer was a tentative figure, which required further investigation as information relating to the design of the transmission line and electromagnetic emission profile of 765KV transmission line was not available. In light of these, we cannot approve the protection buffer until a more rigorous analysis is conducted, which may result in some mitigation measures that could be adopted in the line design.</p> <p>The SKAPO request that further engagement be undertaken in order to not only ascertain the potential impact the development of the transmission lines could have on the SKA but also to ensure that appropriate mitigation measures are put in place to ensure its protection from EMI.</p>	<p>28-07-14</p>	<p><b>EAP:</b> Thank you for your comments.</p> <p><b>EAP:</b> The Radio Interference Report for 765kV by KR Hubbard from Eskom has been provided to SKA.</p> <p><b>EAP:</b> The SKA buffer zone for 765kV Transmission Lines has been established to be 22km. The buffer zone has been included in the locality maps in the EIR.</p> <p><b>EAP:</b> Our Draft EIR’s stated that the proposed 765kV power lines should be aligned outside the 16km buffer. Based on your comments, the 16km buffer is more appropriate for a 400kV power line than for a 765kV line. To this regard, we will await for the approved protection buffer for 765kV power lines, which would be included in the final EIR. Thank you for your comments.</p> <p><b>EAP:</b> A meeting took place on the 12 February 2016 between the EAP, Eskom and SKA to finalise mitigation measures of the final chosen corridor based on the 22km buffer zones. Minutes to the meeting are available in Appendix K of the Final EIR.</p>

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<p>Northern Cape DENC Ms D Moleko, Assistant Director, Impact Management</p>	<p>The Department of Environmental and Nature Conservation (DENC) recommends that all the protected indigenous floral species under NCNCA may not be removed from the site without the necessary permits from DENC. This includes the removal of bird nests, especially of raptor species, no animals (including snakes) may be hunted (poached), trapped, injured or removed (transported) in any way without the necessary permits (during construction phase and thereafter). It is strongly recommended that this must be incorporated into the Environmental Management Programme (EMPr).</p> <p>It is recommended that Critical Biodiversity Areas must be avoided at all times.</p> <p>There were no indications in the Draft EIR from where the drinking water for workers and water for the dust suppression would be obtained from.</p> <p>Fire management around the tower structures must be included in the Final EIR.</p> <p>No vehicles may be allowed in the watercourse during the construction phase or thereafter.</p>	<p>06-08-14</p>	<p><b>EAP:</b> Thank you for the recommendations. Plant removal Permits, Water Use License Permits and any other required permits would be applied for, prior to construction phase during the walk-down process.</p> <p><b>EAP:</b> Your recommendations have been noted. These were also part of the Vegetation Specialist’s inputs, which are noted in the EMPr under <i>Chapter 11 Construction Phase: Access to Site: Survey Points Section</i>.</p> <p><b>EAP:</b> This is noted in the EMPr under <i>Chapter 12 Construction Phase: Dust/Air Pollution and Water Supply Sections</i>.</p> <p><b>Eskom:</b> The water is generally supplied by the municipality within the area where the route is being constructed. The process is usually via a local company that would supply Eskom with the water in tanks and the company supplying the water would need to have approved permits from the local municipality.</p> <p><b>EAP:</b> Fire management around tower structures will be the responsibility of Eskom particularly during maintenance phase. This is indicated in the EMPr under <i>Chapter 14 Operational Phase: Management of Servitudes: Fire Management</i>.</p> <p><b>EAP:</b> Your recommendations have been included in the EMPr.</p>

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	<p>It is recommended that a procedure for soil pollution and handling of oil, diesel and petrol spillages should be included in the Final EIR prior to construction phase.</p> <p>Post monitoring of the transmission line effect on bird populations must be conducted to determine the areas of high bird collisions and subsequently develop possible mitigation procedures for these areas.</p> <p>Include an alien plant control programme in the Final EIR.</p> <p>Indicate how many workers will be employed during the construction phase and the operational phase? Will the workers be local or non-local?</p> <p>SKA should be avoided by the proposed power line development.</p> <p>Include a detailed map of all the heritage no-go areas that must be avoided.</p> <p>Search and rescue of all the protected and indigenous floral species must be done prior to the commencement of the proposed development.</p>		<p><b>EAP:</b> This has been included in the EMPr under <i>Chapter 11: Pre-Construction Phase: Establishing Equipment Lay-down and Storage Areas: Hazardous Substances and Materials</i> section.</p> <p><b>EAP:</b> Prior to construction, a walk-down / ground-truthing of the chosen route alignment from tower to tower (approximately 500m apart), would be conducted for various biodiversity assessments, including avifauna assessments for recommendations. In the EIA process, the Avifauna Studies identified Important Bird Areas, which need to be avoided. These areas will be verified during the walk down assessments and appropriate mitigation measure would need to be adhered to during the construction phase.</p> <p><b>EAP:</b> Your concerns have been noted and are included in the EMPr under <i>Chapter 11 Construction Phase: Conservation of the Natural Environment: Fauna and Flora Section</i>.</p> <p><b>EAP:</b> Unfortunately at this EIA Process Stage, Eskom is not in a position to know how many workers will be employed during the construction and operational phases.</p> <p><b>EAP:</b> Meetings have been held with SKA to discuss the EMI mitigation measures required for the proposed power line.</p> <p><b>EAP:</b> A detailed map of the no-go areas with the final route alignment will be provided in the Final EIR.</p> <p><b>EAP:</b> Your recommendations are included in the EMPr.</p>

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	<p>With regards to the EMPr it must be made clear that the hunting and poaching of animals are not allowed at all and indicate how the workers will be made aware of this.</p>		<p><b>EAP:</b> Your recommendations are included in the EMPr.</p>
<p><u>Department of Agriculture, Forestry &amp; Fisheries:</u> Jacoline Mans, Chief Forester: NFA Regulator</p>	<p><u>Departmental Mandate:</u> The Forestry Management (other regions) in DAFF interest in the project relates to the potential impact on the protected tree species. See the National Forest Act, Act 84 of 1998 (NFA) as amended, sec 12(1)(d) read with c15(1) and s62(2)(c). The most recent list of protected tree species was published in GN 877 of 22 November 2013. No protected tree may be damaged, disturbed, cut or destroyed without a valid Forest Act License.</p> <p>DAFF is also responsible for the administration of the National Veld and Forest Fires Act, Act 101 of 1998 (NVFFA) as amended. Please take note of roles and responsibilities in terms of the NVFFA. Eskom should take note of the definition of ‘landowner’ in terms of the NVFFA. Where substations will be constructed, Eskom might be deemed as the ‘landowner’.</p> <p><u>Comments on Draft EIR:</u> Pg 21 explained the vegetation clearance required, that Eskom generally need to clear a 8m wide strip of all trees and shrubs. The tress falling outside the 8m strip. But inside the 80m servitude will be cut or trimmed selectively. The report indicated that vegetation clearance will be minimal due to the characteristic low-growing plant species in the study area. The DAFF fully supports this recommendation.</p> <p>Clearing all vegetation in the servitude of 80m over an area of 175 might result in serious wind and soil erosion and environmental degradation due to the aridity of the area and unpredictability of rainfall and should not be allowed.</p>	<p>25-07-14</p>	<p><b>EAP:</b> Thank you for your comments and recommendations. Plant removal Permits, Water Use License Permits and any other required permits would be applied for prior to construction phase during the walk-down process.</p> <p><b>EAP:</b> Thank you for bringing it to our attention. Roles and responsibilities would be included in the EMPr.</p> <p><b>EAP:</b> Thank you for the comments. This point will be included in the EMPr under <i>Chapter 11 Pre Construction Phase: Soil Erosion: Conservation valuable soil resources.</i></p>

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	<p>Pgs 21 &amp; 22, Table 1 stated that herbicides will be used to treat stumps. Please ensure that appointed contractors have the necessary AVCASA Registration and Pest Control Operator (POC) Certificates.</p> <p>DAFF recommends that Eskom prescribe the type of herbicides of products to be used to treat stumps if contractors are used. Not all registered herbicides are suitable for semi-arid ecosystems. If the 'wrong' products are used, it may have long-term negative effects on the non-target plant species. It is imperative that environmentally friendly products be used. The use of pellets should be prohibited.</p> <p>Pg 53 refers to plants of conservation importance and specifically Nationally Protected Plants. No reference was made to provincially protected plants or plants of conservation concern in terms of the Northern Cape Nature Conservation Act, Act 9 of 2009 (NCNCA).</p> <p>Pg 65 refers to the indication of issues and in terms of fauna and flora one activity is identification of <b>endangered</b> species and their locations. Kindly note <b>protected</b> and <b>specially protected</b> species are subjected to permit and license requirements and the location thereof is thus important to determine the localities of 'sensitive' areas to be avoided as far as possible.</p> <p>Pg 85 refers to alien invasive plants in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA). At the bottom of the page, reference is made to <i>Tamarix</i> species identified in the study area. Pg 90 &amp; 91 stated that <i>Tamarix</i> species should be removed to mitigate impacts of bush encroachment. Please ensure that the indigenous <i>T. usneoides</i> is not a declared invader or weed and should not be removed as it is</p>		<p><b>EAP:</b> This will be included in the EMPr for the Contractors responsibility.</p> <p><b>EAP:</b> We will bring this to Eskom's attention and to provide us with the type of herbicide product to be used and to include this type of information when applying for plant removal permits.</p> <p><b>Vegetation Specialist:</b> The list of plants protected under Northern Cape Nature Conservation Act, Act 9 of 2009 (NCNCA) is given in Section 3.2.2, page 21 in Table 4. This table includes the plants confirmed as well as those likely to occur. I am not sure if the I&amp;AP had access to the whole report or just the appendices.</p> <p><b>EAP:</b> Plant removal Permits, Water Use License Permits and any other required permits would be applied for prior to construction phase during the walk-down process.</p> <p><b>Vegetation Specialist:</b> Thank you for this important input. This should be included in the EMPr. In addition, the walk down prior to construction must try and identify the areas where the invasive species (<i>Tamarix aphylla</i> and <i>Tamarix gallica</i>) occur within the chosen corridor as to safeguard the indigenous specie. Also, the contractor tasked with clearing the servitude must ensure that they can distinguish between</p>

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	<p>an important species associated with dry riverbeds that has the ability to extract heavy metals and salts from the soil and water and thus improve water and soil quality, making it more suitable for other plants to tolerate local conditions.</p> <p>The report states that both Corridors 1 and 2 may traverse a portion of Critically Biodiversity Areas (CBA's) and all three corridors assessed will traverse Ecological Support Areas (ESA's). Corridor 3 was least sensitive from the point of view of impacts on vegetation. The vegetation assessment was restricted by constraints such as lack of accessible roads and locked farm gates.</p> <p>From an avifaunal perspective, Corridor 1 was found to be the only viable route. The avifauna study was based on detailed field investigations and data obtained from a PhD study where the author spent more than one month 'in the exact study area of this proposed power line'.</p> <p>According to the faunal assessment, all three corridors were found to be equally suitable. The faunal assessment report did not consult the provincial legislation (NCNCA). It only referred to Red Data Species and the presence of habitat suitable for critically endangered species such as the Riverine Rabbit. It makes it very difficult to recommend a specific corridor for the proposed development. One would have expected a better correlation between the outcomes of the different specialist studies, because fauna and flora is closely interlinked and the one depends on the other. Vegetation provides food and shelter to animals and the animals assist with seed dispersal.</p>		<p>the species or they must have a specialist available to assist.</p> <p><b>Fauna Specialist:</b> The Northern Cape Conservation Act (Act 9 of 2009), as it relates to fauna, is primarily concerned with the utilisation of fauna e.g. hunting, import/export, possession and trade of fauna, issues that are not considered to be major impacts as relating to the construction and operation phases of the proposed development.</p> <p>Three separate studies were commissioned for flora, terrestrial fauna and avifauna. While terrestrial fauna and avifauna are reliant to a degree on broad vegetation patterns and condition, priority areas, issues and presence/distribution of species of conservation concern for these three groups do not overlap completely, and it is to be expected that they would have somewhat different findings. The purpose of the overall EIA is to bring together these individual findings</p>

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	<p><u>Comments on the Draft EMPr:</u> Pg 45 refers to the landscaping and stated that disturbed areas should be rehabilitated with indigenous vegetation “which must be sources from surrounding areas where possible”. The DAFF cannot agree with this recommendation and suggests that it be amended. It would be much better to make use of rescued plants (as per recommended mitigation measures on pg 93 of the Draft EIR (Plant rescue rehabilitation Plan) than to disturb the natural surrounding areas to source plant material.</p> <p><u>Comments on the Vegetation Assessment Report:</u> Appendix C on pages 51 &amp; 59 contains a list of plant species observed in the broad vegetation groupings during a field survey of April 2013. Many of the species listed are provincially protected species of which the protected status was not indicated on the list. Some are also protected in terms of the TOPS Regulations. Therefore, it is not clear if all relevant documentation was consulted to determine the protected status of plant species in the study site. It is important to highlight the protected status of plant species to guide the ECO, as these reports will certainly be used at a later stage to apply for licenses and permits.</p>		<p>(together with those of other specialist studies) and make decisions that take all findings into account. Furthermore, please note that the terrestrial fauna assessment did not only consider species listed in the Threatened and Near Threatened categories under the IUCN system, but also considered the potential presence of range-restricted, rare or habitat-restricted species, protected areas and areas identified as being of biodiversity importance for the region in the Namakwa Biodiversity Sector Plan in this assessment.</p> <p><b>EAP:</b> Thank you for the recommendations. Amendments will be made.</p> <p><b>Vegetation Specialist:</b> The list of plants protected under Northern Cape Nature Conservation Act, Act 9 of 2009 (NCNCA) is given in Section 3.2.2, page 21 in Table 4. This table includes the plants confirmed as well as those likely to occur. I am not sure if the I&amp;AP had access to the whole report or just the appendices. I can amend the plant list in the Appendices to indicate whether it is a provincially protected species.</p> <p>TOPS: Species can be listed as threatened or protected in terms of section 56 of the National Environmental Management: Biodiversity Act (NEMBA) of 2004</p> <ul style="list-style-type: none"> <li>• critically endangered</li> <li>• endangered</li> </ul>

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	<p>Pg 62 stated that <i>Boscia albitrunca</i> can only be pruned or removed from site with prior consent from DAFF. Kindly note this applies to all NFA listed species in the study site, not just <i>B. albitrunca</i>. According to Appendix C on page 58 <i>Acacia erioloba</i> was also encountered on site. Pg ii stated that the protected <i>Acacia haematoxylon</i> is also likely to occur within the corridors (although I doubt it).</p>		<ul style="list-style-type: none"> <li>• vulnerable</li> <li>• protected</li> </ul> <p><b>Vegetation Specialist:</b> This list should be updated every 5 years, but to my knowledge the last list was published in 2007. In my report I do list these species (see Section 3.2.1. page 20). However, I use the current classification as per the SANBI Threatened species data base where the protected plants are further classified as for example Near Threatened or Declining. IF needed, I can add the TOPS classification, although they will be the same for most plants. The Threatened Species Programme database is just more up to date and may even have reclassified a species from Vulnerable to Endangered.</p>
<p><u>Solar Reserve South Africa</u> Terrance Govender, Director</p>	<p>SolarReserve South Africa (Pty) Ltd in partnership with Kotulo Tsatsi Energy has initiated the relevant Environmental Impact Assessment (EIA) for the development, construction and operation of a Solar Park approximately 60km outside of Kenhardt in the Northern Cape. We are currently in the Scoping Phase of the EIA Process and have concluded our preliminary project layout and determined our project footprint to be assessed as Phase 1 of the Solar Park development.</p> <p>As the project developer we would like to register formally as an Interested and Affected party for the proposed project. We would furthermore like to put it on record that DotCom Properties, as the landowner, has no record of being notified and/or consulted with during the Aries-Helios 765KV Transmission power line Environmental Impact Assessment (EIA) process for the proposed power line (for corridor 1 options 1 and 2).</p> <p>Based on the information receive from the Environmental Assessment Practitioners, we would like to raise an objection with respect to the proposed corridor 1 and 2 of the Aries-Helios 765KV</p>	<p>11-09-14</p>	<p><b>EAP:</b> Thank you for bringing it to our attention. The developer and the landowner are included in the I&amp;APs Register.</p> <p><b>EAP:</b> Noted with thanks.</p>

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	<p>Transmission power line project proposed over the properties listed below, as it transects our development site and project layouts if the current corridor is expanded and/or if the new corridor is approved:</p> <ol style="list-style-type: none"> <li>1. Portion 2 (Valsch Vley) of the Farm Steyns Vley 280, Kenhardt;</li> <li>2. Remainder of portion 1 (Steyns Vley) of the Farm Steyns Vley 280, Kenhardt;</li> <li>3. Remainder of the Farm Gemsbok Rivier 301, Kenhardt;</li> <li>4. Portion 2 (Gannakom) of the Farm Kopjes Vley 281, Kenhardt;</li> <li>5. Remainder of the Farm Melkbosch Vley 278, Kenhardt; and</li> <li>6. Any other portion of the land under our control.</li> </ol> <p>With respect to the aforementioned we have the following comments:</p> <ol style="list-style-type: none"> <li>1. Corridor 1 (existing 400KV): The proposed power line corridor traverses the solar park site and the line is situated approximately 450-600m from the outer boundary of the proposed Concentrated Solar Power (CSP) sites.</li> <li>2. Corridor 2: The proposed power line corridor traverses the solar park site passing near to the developable CSP sites.</li> <li>3. The proposed CSP footprints are located within the 2km buffer of the power line Corridors 1 and 2.</li> </ol> <p>Should Corridor 1 be expanded, or if Corridor 2 is chosen as the preferred corridor and approved by the Department of Environment Affairs, it would render our development layout/footprint area restricted, in terms of sufficient development space (surface area). Choosing either one of these corridor options as the preferred option would have an adverse impact on our development. However it should be noted that corridor 1 and 2 are not outright excluded due to their associated potential benefits (i.e. proximity to</p>		<p><b>EAP:</b> At this stage, Corridor 3 has been chosen as the suitable route alignment. Should Corridor 1 or 2 be chosen, a further engagement would be arranged to discuss impacts and mitigations measures of the proposed power line affecting your proposed development.</p> <p><b>EAP:</b> In addition to the above response: In April 2016, a new deviation was included for Corridor 3, to accommodate SKA, Kotulo Tsatsi and Farm Leopont concerns. See amended map</p>

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	<p>existing power line on Corridor 1 and SKA preference of Corridor 2), and as the project developer we would like to request inclusion in all further discussions in terms of the proposed alignment (Refer to the map attached as Annexure 1)</p> <p>However, it needs to be stated that we are in support of the deep network strengthening efforts implemented by Eskom and based on the alternative layouts received, prefer Corridor 3, as it has no direct on the Solar Park project, as it passes approximately 10km north of the projects.</p>		<p>in Appendix C and Minutes to the meeting held with Kotulo Tsatsi and SKA in <b>Appendix K</b> of the Final EIR.</p> <p><b>EAP:</b> Thank you for your comments.</p>
<p><u>PHS Consulting</u> Paul Slabbert, <i>Managing Member</i></p>	<p>Please find attached comments in Appendix L of the Final EIR</p>	10-12-15	<p><b>EAP:</b> Email sent to (paul@phsconsulting.co.za) on 26-05-16:</p> <p>Good day Paul. Please find attached kmz files and map. The yellow deviation indicated in the map has been proposed to partly avoid your property as well as to consider Kotulo Tsatsi and SKA interferences. Please provide us with your comments regarding this new deviation at your earliest convenience. We would like to finalise this project.</p>
	<p>We still prefer that the existing line corridor to be used for the upgrade, because the impacts have already occurred in this corridor and landowners are used to the lines in this position.</p> <p>The CSP development should not be used as a reason to avoid this corridor. We oppose the development of the Solar Reserve in its entirety.</p> <p>Will you still run a last formal PPP round as part of your final submission?</p>	10-06-16	<p><b>EAP:</b> Thank you for your response. Your comments have been noted.</p> <p>Apparently the CSP development has already been granted Authorisation. The development has to be avoided by the proposed line to avoid technical challenges between the two developments.</p> <p>Yes, a 21 days notification for the final EIR will be circulated to I&amp;APs for the final comments.</p>
<p><u>SAHRA</u> Natasha Higgitt</p>	<p>Please find attached comments in Appendix L of the Final EIR</p>	22-02-16	<p><b>EAP:</b> Palaeontology Desktop Study (PDS) Report is provided in Appendix M of the Final EIR. Furthermore, the Final EIR and appendices have been submitted to the case file (SAHIRS</p>

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			Case ID: 8856) for further comments.
<u>Savannah Environmental (PTY) Ltd</u> Karen Jodas Director	<p>Dear Judith,</p> <p>Please find attached a comment from the avifauna specialist who worked on the Kotulo Tsatsi projects as savannah Environmental's specialist. He has asked for these comments to be included in the comments and response report for the 765kV line project, as his comments are specific to the power line infrastructure and the need for mitigation.</p> <p>Please can you confirm receipt of these comments, and confirm that these will form part of the public participation documentation submitted to DEA.</p> <p>Kind regards Karen</p>	05-05-16	<p><b>EAP:</b> Hi Karen and Rob,</p> <p>Thank you for your comments. They will be included in the Comments and Response Report. Your mitigation measures which are similar to those of the Avifauna's recommendations for Aries-Helios Project. These will be included in the EMPr.</p> <p>Please Note: Dr Rob Simmons's comments are provided in Appendix L (forming part of this Comments and Response Report).</p>
<u>Mokgope Consulting</u> Judith Fasheun, EAP	<p>Dear Attie and Karen</p> <p>Please find attached map prepared by Eskom. As indicated on the map, the yellow corridor represents the proposed deviation to avoid clashes with Kotulo Tsatsi developments. Please also find attached the kmz files for your use.</p> <p>We'd greatly appreciate your comments with regards to the proposed deviation so we may go ahead with including it to the Final EIR.</p>	24-05-16	<p><b>Karen (Savannah Environmental):</b></p> <p>Dear Judith, Thank you for your email and the information attached. We have considered the proposed deviation, and consider the route as now provided to be acceptable to avoid potential clashes with the Kotulo Tsatsi developments.</p> <p>Thank you for the opportunity to provide input into the process.</p> <p>Kind regards Karen</p>
<u>Mainstream Renewable Power</u> David Dean, GIS Specialist	<p>Could you please send us the shapefiles or KMZ files for the proposed Aries – Helios 765kV powerline corridors? Also can you please register me as an I&amp;AP.</p>	07-06-16	<p><b>EAP:</b> Does Mainstream have any comments with regards to the above mentioned project? See map attached.</p> <p>Attached are kmz files as requested. Please provide us with comments at your earliest convenience. Greatly appreciated.</p>

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	<p>Hi Judith</p> <p>No comments from our side.</p> <p>Thank you</p>	<p>10-06-16</p>	<p>You have been included in the I&amp;AP database.</p> <p>Hi David</p> <p>Pardon me for rushing you. Any new developments on the proposed Aries-Helios traversing on Mainstream near Helios that we should know of? I would like wrap up the project for submission to the departments. Thank you.</p>
<p><u>Mokgope Consulting</u>                      Judith Fasheun,                      EAP</p>	<p><b>EAP:</b>                      Dear Vegetation and Fauna Specialist</p> <p>We are in the process of submitting the final Environmental Report to the DEA. Before we submit, kindly provide us with comments/opinion on the proposed deviation indicated in yellow (see attached map from Eskom and kmz files). We have not yet included the deviation on our locality maps.</p> <p>The corridor is close to the corridors you previously assessed and that there would not be much difference. Nonetheless, we need to attach your comments and any recommendations regarding this deviation. Thank you.</p>	<p>24-05-16</p>	<p><b>James Harvey</b> – Fauna Specialists                      Comments attached (Appendix L)</p> <p><b>Antoinette Eyssell-Knox</b> – Vegetation Specialist</p> <p><u>RE: Opinion on Aries-Helios Deviation 3D</u></p> <p><b>Existing information from 2013 assessment:</b>                      For the most part, the vegetation observed in the 2013 assessment was found to be homogenous, mainly comprising a mixture of dominant dwarf shrubs and grasses. The majority of the vegetation along the three route corridors assessed comprised Mixed Karoo, which was classified as being of</p>

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**DEA Ref: 14/12/16/3/3/2/441**

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			<p>medium sensitivity to the proposed powerline routes and wherein negative impacts can be mitigated. Sensitive areas that should be spanned or circumvented comprised the vegetation within pans (Bushmanland vloere), on hills and riparian areas.</p> <p>The three corridors are also situated within an area included in the Namakwa Biodiversity Sector which maps areas of biodiversity concerns to ensure that biodiversity information can be accessed and utilized by local municipalities to inform land use planning and development. As per the Namakwa biodiversity Sector Plan, Corridor 1 and 2 traverse a portion of a Critical Biodiversity Areas about 40km north east of Helios substation (natural landscapes with no disturbances and which is irreplaceable in terms of reaching conservation targets within the district). All three corridors traverse an Ecological Support Areas (not essential for meeting biodiversity representation targets/thresholds, but nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas) south of the Aries substation.</p> <p>The 2013 assessment found that Corridor 3 was the preferred route from a vegetation perspective, because this corridor did not traverse through a CBA, although all three traverse an ESA. It must be noted that powerline development within an ESA is more acceptable than within a CBA, provided that suitable buffers and mitigation measures are implemented. Furthermore, Corridor 1 and 2 will traverse more drainage line/riparian areas/pans (and this sensitivities) than Corridor 3.</p> <p><b>Proposed deviation 3D:</b>                      The proposed deviation 3D and its 2km buffer corridor (approximately 74.4km) was not ground-truthed and aerial</p>

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			<p>imagery and the existing information were used to form an opinion with regards to the potential sensitivities along this route and its suitability to the proposed powerline route.</p> <p>Deviation 3D corridor falls within about 36km of Corridor 2. The majority of the vegetation traversed comprise Mixed Karoo and are comparable to Alternative 3 corridor. However, about 21km south-west of Aries and about 13km south east of where 3D joins corridor 3, Deviation 3D will traverse portions of the Bushmanland Vloere, that was regarded as sensitive in the 2013 assessment (yellow encircled areas in the Figure attached below). Furthermore, additional drainage lines (non-perennial rivers) will also be traversed. The “Vloere” are flat plains with high clay content that could periodically be flooded. The “Vloere” are usually sparsely to densely vegetated, while pans are mostly devoid of vegetation. According to Mucina and Rutherford (2006), the “Vloere” are also endorheic pans on flat surfaces, wherein the centre of the pan is usually devoid of vegetation and the remainder of the pan well vegetated with dwarf shrubs. The “Vloere” also include the broad bottoms of the intermittent rivers (Mucina and Rutherford, 2006). Both features play important hydrological roles in this dry landscape.</p> <p>Deviation 3D does not traverse CBA areas, but does traverse the ESA as all three the other corridors.</p> <p><b>Conclusion 3D:</b>                      Deviation 3D likely contains a slightly higher percentage of sensitivities along the route, comprising of the Bushmanland vloere, than the corresponding section of Alternative 3. However, as with Alternative 3, no CBA will be traversed. Therefore, Deviation 3D is comparable to the corresponding section of Alternative 3 and if mitigation measures are</p>

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			<p>followed as set out in the 2013 assessment (Dimela Eco Consulting, 2013), Deviation 3D is a viable deviation from a vegetation perspective, rather than following Alternative 2 and 3.</p> <p><b>References:</b></p> <p>Dimela Eco Consulting, (2013): The Proposed Aries-Helios Powerline Project, 765kV Transmission Powerline and substations upgrade, Northern Cape Province. Vegetation Assessment Report drafted for Mokgope Consulting. October 2013.</p> <p>Desmet, P. and Marsh, A, (2008): Namakwa District Biodiversity Sector Plan. Available from BGIS <a href="http://bgis.sanbi.org/namakwa/project.asp">http://bgis.sanbi.org/namakwa/project.asp</a></p> <p>Mucina, L. &amp; Rutherford, M.C. (2006): The vegetation of South Africa, Lesotho and Swaziland. <i>Strelitzia 19. South African National Biodiversity Institute</i>, Pretoria.</p>

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	<p data-bbox="593 327 806 395">Vegetation map</p> 		