

Comment and Responses Summary: Eskom Battery Storage - Paleisheuwel: Draft Basic Assessment Report

In compliance with the requirements of the Environmental Impact Assessment (EIA) Regulations, 2014, the Issues and Responses Summary reflects the *issues* raised by stakeholder¹ and received by SRK on the Draft Basic Assessment (BA) Report (BAR) released on 29 August 2019, as listed in Table 2. Responses are provided by SRK, Eskom and/or specialists.

Copies of original comments received by SRK are collated and presented in Appendix G6 of the Final BAR.

Issues are grouped into the following general themes in the Issues and Responses table (see Table 2):

- A. Planning
- B. Project Description
- C. Alternatives
- D. Waste Management
- E. Terrestrial Ecology
- F. Heritage
- G. Public Participation Process
- H. Risk Assessment
- I. EA Application
- J. Final BAR
- K. EMPr
- L. Other

Abbreviations and Acronyms used in the Issues and Responses Summary

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|--------|--|--------|---|
| BA | Basic Assessment | EMPr | Environmental Management Programme |
| BAR | Basic Assessment Report | GN | General Notice |
| DEFF | Department of Environment, Forestry and Fisheries | HWC | Heritage Western Cape |
| DEA&DP | Department of Environmental Affairs and Development Planning | NEM:WA | National Environmental Management: Waste Act (59 of 2008) |
| DTPW | Department of Transport and Public Works | SAWIS | South African Waste Information System |
| EA | Environmental Authorisation | SCC | Species of Conservation Concern |

¹ Issues noting minor errors in the BAR (e.g. spelling errors) have not been included in the Issues and Responses Summary, but have been addressed.

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| EAP | Environmental Assessment Practitioner | SWMP | Stormwater Management Plan |
| EIA | Environmental Impact Assessment | WCDM | West Coast District Municipality |

Written comments were received on the draft BAR from the stakeholders listed in Table 1.

Table 1: Stakeholders who submitted written comments

| # | Stakeholder | Affiliation | Comment received |
|----|-----------------------|--|-------------------|
| 1. | Kotze, Doretha | West Coast District Municipality (WCDM) | 12 September 2019 |
| 2. | Duffell-Canham, Alana | CapeNature | 23 September 2019 |
| 3. | Alberts, Herman | Department of Environment, Forestry and Fisheries (DEFF) | 26 September 2019 |
| 4. | Corin, Anthony | Private | 27 September 2019 |
| 5. | Isaacs, Rondine | DEA&DP: Development Management | 30 September 2019 |
| 6. | Galvaan, Waleed | DEA&DP: Waste Management | 30 September 2019 |
| 7. | Natus, Monique | DEA&DP: Pollution and Chemicals Management | 30 September 2019 |
| 8. | Portia Makitla | DEA: Biodiversity Conservation | 7 October 2019 |

Table 2: Issues and Responses Table: Eskom BESS Paleisheuvel BAR

| No | Issues | Stakeholder | Draft BAR response | | | | | | | | | | | | | | | |
|-------------------------------|--|------------------------|--|----------------|--------|------------------------|---------------------------|--|--|--------------------------|------------------|----------------------|--------------------------|--|--|----------------------|--------------------|---------------|
| A. Planning | | | | | | | | | | | | | | | | | | |
| 1. | No development/construction should take place prior to approval of the relevant building plans by Cederberg Municipality. | WCDM | Noted. | | | | | | | | | | | | | | | |
| B. Project Description | | | | | | | | | | | | | | | | | | |
| 2. | The reports are completely lacking in any detailed and quantified information, analysis, mitigation of any of the specific chemicals that are envisaged to be used. | Anthony Corin | <p>Eskom is unable to specify detailed information on the technology type and final quantified information at this stage as this will be dictated by the market at the time of the tender call. In the absence of this information and in an effort to ensure that the risks and impacts have been assessed conservatively, the Risk Assessment conducted by Eskom (see Appendix E of the final BAR) and impact assessment undertaken by SRK (see Section 6 of the final BAR) assumes the worst-case scenario, i.e.:</p> <ul style="list-style-type: none"> • 500 m³ of electrolyte will be stored on site during operation; • The chemicals envisioned to be used are toxic; and • The electrolyte will be of a liquid nature. <p>The following has been recommended as a condition of authorisation: "Submit an updated Risk Assessment to DEFF once the technology type and associated chemical composition has been determined. Should any additional mitigation measures be identified, the EMPr must be amended to include these".</p> | | | | | | | | | | | | | | | |
| 3. | No detail is provided on the possible chemicals involved or the specific risks associated. This must be rectified. | Anthony Corin | | | | | | | | | | | | | | | | |
| 4. | The report is hardly lacking detail on numerous other potential impacts, which frankly are minor and almost negligible by comparison. | Anthony Corin | | | | | | | | | | | | | | | | |
| 5. | The Draft BAR indicates the operational phase impact of an accidental electrolyte spill that may contaminate surrounding soil, resulting in groundwater contamination and the resultant deterioration of groundwater quality. Please clarify whether this impact is the same as soil contamination due to leakage and spillages of infrastructure for the storage of dangerous goods? If not, then the indicated impact (for both the development and operational phases) must be included and assessed in the Final BAR to be submitted to the competent authority. | DEA&DP | <p>Dangerous goods will be stored on site during the construction and operation phases (see Table 1 below).</p> <p>Table 1: List of dangerous goods stored on site</p> <table border="1"> <thead> <tr> <th>Dangerous Good</th> <th>Volume</th> <th>Storage Infrastructure</th> </tr> </thead> <tbody> <tr> <td colspan="3">Construction Phase</td> </tr> <tr> <td>Fuel (petrol and diesel)</td> <td>1 m³</td> <td>Fuel tanks / bowsers</td> </tr> <tr> <td colspan="3">Operational Phase</td> </tr> <tr> <td>Chemical electrolyte</td> <td>500 m³</td> <td>Battery cells</td> </tr> </tbody> </table> | Dangerous Good | Volume | Storage Infrastructure | Construction Phase | | | Fuel (petrol and diesel) | 1 m ³ | Fuel tanks / bowsers | Operational Phase | | | Chemical electrolyte | 500 m ³ | Battery cells |
| Dangerous Good | Volume | Storage Infrastructure | | | | | | | | | | | | | | | | |
| Construction Phase | | | | | | | | | | | | | | | | | | |
| Fuel (petrol and diesel) | 1 m ³ | Fuel tanks / bowsers | | | | | | | | | | | | | | | | |
| Operational Phase | | | | | | | | | | | | | | | | | | |
| Chemical electrolyte | 500 m ³ | Battery cells | | | | | | | | | | | | | | | | |
| 6. | It is noted that the project proposal includes the development of facilities or infrastructure for the storage of (a) dangerous good/s; however, the Draft BAR is not very specific what this will entail. | DEA&DP | | | | | | | | | | | | | | | | |

| No | Issues | Stakeholder | Draft BAR response |
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| 7. | The activity description must be updated to clearly indicate how the development proposal is linked to the listed activity being applied for. In addition, the Final BAR must indicate the anticipated quantity/volume of the dangerous good/s that will be stored. | DEA&DP | Potential groundwater impacts associated with potential leaks and spills from storage infrastructure are assessed separately for each phase in Section 6.3 of the BAR. The final BAR has been updated to describe the storage of dangerous goods more clearly (see Sections 3.4.5 and 3.5.3 of the Final BAR). |
| 8. | It is requested that the EAP provide detailed information regarding the specifications of the dangerous goods, i.e. quantities, type etc. In addition, the impacts associated with the relevant activity must be identified, described and assessed in the BAR. | DEFF | |
| 9. | [In reference to Issue 10,] not all the impacts associated with the proposed development may have been identified and assessed in the Draft BAR. [If so] the EMPr must be updated to include the following recommendations: <ul style="list-style-type: none"> • A complete list of all the potential impacts and mitigation measures for all the phases of the proposed development • A complete list of impact management outcomes for the proposed development; and • A complete list of impact management actions that will be undertaken for all phases of the proposed development. | DEA&DP | SRK is confident that all the impacts associated with the proposed development have been identified and assessed. Potential groundwater impacts associated with the potential leaks and spills of dangerous goods are assessed for construction and operation phases in Sections 6.2.2 and 6.3.2 of the BAR. Mitigation measures are included in the EMPr to mitigate these impacts. |
| 10. | <i>“Self-contained batteries - The electrolyte typically consists of a mixture of any of the following materials: lithium nickel cobalt aluminium oxide, lithium nickel manganese cobalt oxide, lithium nickel manganese oxide or lithium cobalt oxide.”</i> This statement is factually incorrect. | Anthony Corin | Agreed. This description is applicable to lithium-ion batteries and is not typical of solid-state batteries. This paragraph has been corrected to the following “Solid-state battery electrolytes typically consist of Lead Acid (Pb), Nickel Cadmium (NiCad), Lithium-Ion (Li-ion), Sodium Sulphur (NaS) or Sodium Nickel Chloride / Zebra (NaNiCl).” SRK is confident that this correction does not compromise the overall findings of the report. |
| 11. | It should be clarified that Lithium Ion Solid State batteries do not contain liquid electrolyte in a state able to spill, as they are vacuum starvation filled. | Anthony Corin | Solid-state battery electrolytes can be either liquid, gel polymer or solid in nature. e.g. Lead Acid and Nickel Cadmium cells will have liquid or gel electrolytes, while Lithium-ion will have gel or solid-state electrolytes. Liquid electrolytes are prone to spillage if containment is breached and for the purposes of this BA and taking the precautionary approach, SRK has assumed that Eskom will use a liquid-state electrolyte in a solid-state battery as the worst-case scenario. |
| C. | Alternatives | | |
| 12. | Please provide a description of any identified alternatives for the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives will have on the environment and on the community | DEFF | In terms of Appendix 1 Section 3 (h)(i) of the EIA Regulations, 2014, project alternatives have been identified and are described in Section 3.3. of the BAR. |

| No | Issues | Stakeholder | Draft BAR response |
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| | that may be affected by the activity as per Appendix 1 (2) (e) and 3 (1) (h) (i) of GN R.982 of 2014, as amended. | | |
| D. | Waste Management | | |
| 13. | Please note that all waste must be managed in accordance with sections 16 (“general duty in respect of waste management”) and 21 (“general requirements for storage of waste”) of the NEM: WA. | DEA&DP | All waste will be managed in accordance with sections 16 (“general duty in respect of waste management”) and 21 (“general requirements for storage of waste”) of the National Environmental Management: Waste Act (59 of 2008) (NEM:WA) and all applicable municipal by-laws. |
| 14. | All hazardous waste intended for disposal to land may only be disposed of at a licensed hazardous waste disposal facility and proof of waste disposal certificates must be made available to the competent authority upon request. | DEA&DP | An agreement will be established with the MLM for general waste disposed at landfills under the jurisdiction of the MLM. Hazardous waste will be disposed of at a licensed hazardous waste disposal facility and waste disposal manifests will be made available to the competent authority upon request. |
| 15. | <p>Whilst the Draft BAR indicates that the applicant will temporarily store less than 100m³ of general and less than 80m³ of hazardous waste, please note the following waste management legislation for consideration in the Final BAR and EMP: 2.3.1:</p> <ul style="list-style-type: none"> National Waste Information Regulations promulgated in Government Notice (“GN”) No. R. 625 of 13 August 2012 List of waste management activities identified in GN No. 921 of 29 November 2013 (as amended) | DEA&DP | <p>The purpose of the National Waste Information Regulations (GN R625 of 2012 promulgated in terms of NEM:WA) is to regulate the collection of data and information to fulfil the objectives of the South African waste information system (SAWIS). The Regulations apply to all persons conducting an activity listed in Annexure 1 of the Regulations, which specifies waste activities that must be registered on the SAWIS.</p> <p>Based on the information available at this stage, the proposed project will not trigger waste activities listed in Annexure 1.</p> <p>Deviations from the current proposal may require the need to register the activities on SAWIS.</p> <p>Government Notice (GN) 921 of 2013, gazetted and effective from 29 November 2013 in terms of NEM:WA and amended by GN R332 of 2014, provides a <i>List of Waste Management Activities that Have, or are Likely to Have, a Detrimental Effect on the Environment</i>.</p> <p>Based on the information available at this stage, the proposed project will not trigger waste management activities listed in terms of GN R921 of 2013.</p> <p>Deviations from the current proposal may require the need to obtain approval in terms of the NEM:WA.</p> |

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| | <ul style="list-style-type: none"> Waste Classification and Management Regulations promulgated in GN No. R. 634 of 23 August 2013 | | <p>The purpose of the Waste Classification and Management Regulations (GN R634 of 2013 promulgated in terms of NEM:WA) is to:</p> <ul style="list-style-type: none"> Regulate the classification and management of waste in a manner which supports and implements the provisions of NEM:WA; Establish a mechanism and procedure for the listing of waste management activities that do not require a WML; Prescribe requirements for the disposal of waste to landfill; Prescribe requirements and timeframes for the management of certain wastes; and Prescribe general duties of waste generators, transporters and managers. <p>Annexure 1 of the Regulations specifies wastes that do not require classification or assessment, including general waste.</p> <p>Eskom is required to comply with the Waste Classification and Management Regulations, 2013, and the final BAR has been updated to reflect this.</p> |
| E. | Terrestrial Ecology | | |
| 16. | Although the site has not been determined as a Critical Biodiversity Area, its mapping as an Ecological Support Area means that it is recognised as still being important for supporting Leipoldtville Sand Fynbos habitat. The presence of a fairly high number of SCC in a relatively small area confirms this. | CapeNature | The ESA does not provide any ecological functionality or sustain any CBAs (see Section 7 of the Vegetation Assessment). Furthermore, noting the isolated and transformed nature of the site, it is unlikely that the site would meaningfully support any CBA or Leipoldtville Sand Fynbos habitat. |
| 17. | There is no real mitigation for the loss of Endangered habitat and SCC on this site. Although search and rescue is good practice for certain species and where a suitable receiving area has been identified, it is not considered to be a mitigation measure that significantly lowers impacts. | CapeNature | In this case, search and rescue is one of a suite of mitigation measures that have been proposed to avoid / mitigate potential impacts on SCC. SRK agrees that search and rescue is unlikely to significantly lower impacts and this is reflected in the impact rating in the BAR for the loss of plant SCC, assessed to be <i>low</i> with and without the implementation of mitigation. |
| 18. | In this instance, <i>Leucospermum rodolentum</i> is not considered a suitable species for translocation. Although it may be possible to collect seeds, it is unlikely that these will be successfully propagated and be planted in a suitable area. | CapeNature | Noted, however, <i>Leucospermum rodolentum</i> is not the only SCC identified for search and rescue. SRK (supported by the vegetation specialist) maintains that a search and rescue of SCC be undertaken prior to the commencement of construction activities. |
| 19. | CapeNature, therefore suggests that the layout be revised and the Battery Energy Storage System (BESS) and other new infrastructure be placed on the southern side of the site and the natural vegetation on the northern side be left intact. | CapeNature | The following mitigation measure has been included in the EMP: <i>“Avoid placing infrastructure in areas containing sensitive vegetation as far as practically possible”</i> |
| 20. | The money that would have been spent on search and rescue efforts should be used to rehabilitate and maintain the site and other Eskom sites which also support Leipoldtville Sand Fynbos. | CapeNature | Rehabilitation of disturbed areas is already a recommendation in the EMP that will ultimately become a condition of authorisation should the project be authorised. Further to this, the following mitigation measure has been broadened to address this issue: <i>“Appoint a suitably qualified person to identify species of conservation concern (SCC) and</i> |

| No | Issues | Stakeholder | Draft BAR response |
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| | | | protected species within the construction footprint and oversee the rescue and relocation of these species <i>into a suitable receptor site.</i> " |
| 21. | The Directorate: Biodiversity Conservation does not have any objections to the proposed development. | DEA: Biodiversity Conservation | Noted. |
| 22. | <p>The following recommendations must be implemented and adhered to:</p> <ul style="list-style-type: none"> • A Botanist must perform the final walkthrough prior construction to identify SCC; • A permit must be obtained from relevant authorities for the removal or disturbance of any species listed in terms of TOPs and Red Data list; • All disturbed and cleared areas must be re-vegetated with indigenous perennial shrubs and grasses from the local area; • Alien invasive plant species in and around the proposed development area must be removed in terms of Conservation of Agricultural Resources Act (CARA) and National Environmental Management Biodiversity Act (NEMBA); follow up-actions for at least five years need to take place • Concurrent rehabilitation and alien vegetation control program within all sensitive areas must be implemented. | DEA: Biodiversity Conservation | <p>The following mitigation measures are already included in the EMPr:</p> <ul style="list-style-type: none"> • Appoint a suitably qualified specialist to oversee search and rescue of floral species. Obtain necessary approval and permits from CapeNature. Rescue and relocate all identified Species of Conservation Concern as per the Botanical Report to areas adjacent to construction footprint areas, preferably in Autumn, once the rains have fallen; • Appoint a botanist / rehabilitation specialist to compile a rehabilitation plan and oversee the rehabilitation process; • Ensure that affected areas are rehabilitated following construction; • Rehabilitate project areas with locally indigenous species, reseeding, using anti-erosion measures such as biobarrier or soil saver as soon as possible after activities have ceased at each area, or as directed by the Botanist; • Remove all alien and weed species encountered within areas disturbed by construction activities; and • Remove cuttings of alien vegetation from the site. |
| F. | Heritage | | |
| 23. | Please be advised that the comment from Heritage Western Cape (HWC) was not included in the Draft BAR and must be included in the Final BAR to be submitted to the competent authority. | DEA&DP | The proposed project does not trigger any activities in terms of the NHRA and as such, no comment was obtained from HWC. |
| G. | Public Participation Process | | |
| 24. | <p>The following information must be submitted with the final BAR:</p> <ul style="list-style-type: none"> • A list of registered interested and affected parties as per Regulation 42 of the NEMA EIA Regulations, 2014, as amended; • Copies of all comments received during the draft BAR comment period; and | DEFF | <p>Refer to Appendix D1 of the final BAR.</p> <p>Refer to Appendix D4 of the final BAR.</p> |

| No | Issues | Stakeholder | Draft BAR response |
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| | <ul style="list-style-type: none"> A comment and response report which contains all comments received and responses provided to all comments and issues raised during the public participation process for the draft BAR. Please note that comments received from this Department must also form part of the comment and response report. | | Refer to Appendix D3 of the final BAR. |
| 25. | Please ensure that all issues raised and comments received during the circulation of the draft BAR from registered I&APs and organs of state which have jurisdiction (including this Department's Biodiversity Section) in respect of the proposed activity are adequately addressed in the final BAR. | DEFF | Noted. |
| 26. | Proof of correspondence with the various stakeholders must be included in the final BAR. Should you be unable to obtain comments, proof should be submitted to the Department of the attempts that were made to obtain comments. | DEFF | Refer to Appendix D2 of the final BAR. |
| H. | Risk Assessment | | |
| 27. | A risk assessment for each of the proposed technology alternatives proposed must be conducted and included in the final BAR. | DEFF | Refer to Appendix E of the final BAR. |
| 28. | This Directorate has reviewed the Draft BAR and EMPr and is satisfied that the pollution risks have been identified and the impacts have been adequately addressed. All specialist recommendations, including pollution risk mitigation measures, must always be implemented and adhered to. | DEA&DP | Noted. |
| I. | EA Application | | |
| 29. | Please ensure that all relevant listed activities are applied for, are specific and that it can be linked to the development activity or infrastructure as described in the project description. | DEFF | Noted. |
| 30. | If the activities applied for in the application form differ from those mentioned in the final BAR, an amended application form must be submitted. | DEFF | Noted. |
| J. | Final BAR | | |
| 31. | The final BAR must also have an undertaking under oath/affirmation by the EAP (administered by a Commissioner of Oaths). | DEFF | Refer to Appendix I of the Final BAR. |

| No | Issues | Stakeholder | Draft BAR response |
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| 32. | Specialist Declaration of Interest forms must be attached to the final BAR. You are therefore requested to submit original signed Specialist Declaration of Interest forms for each specialist study conducted. | DEFF | |
| 33. | You are required to include the details and expertise of the EAP in the BAR, including a curriculum vitae, in order to comply with the requirements of Appendix 1(3)(1)(a) of the NEMA EIA Regulations, 2014, as amended. | DEFF | Refer to Appendix A of the Final BAR. |
| 34. | The final BAR must include the period for which the Environmental Authorisation is required and the date on which the activity will be concluded as per Appendix 1(3)(1)(q) of the NEMA EIA Regulations, 2014, as amended. | DEFF | The EAP recommends that non-operational activities conclude within five years of the date of issue of the Environmental Authorisation. The final BAR has been updated to include the above recommendation. |
| K. | EMPr | | |
| 35. | The EMPr must also include the following: <ul style="list-style-type: none"> All recommendations and mitigation measures recorded in the BAR and the specialist studies conducted. An environmental sensitivity map indicating environmental sensitive areas and features identified during the assessment process. Measures to protect hydrological features such as streams, rivers, pans, wetlands, dams and their catchments, and other environmental sensitive areas from construction impacts including the direct or indirect spillage of pollutants. The EMPr must include a detailed fire management and protection plan. | DEFF | All recommendations and mitigation measures recorded in the BAR and the vegetation study are included in the EMPr. All environmental sensitivity maps included in the BAR have now been included in the EMPr. There are no watercourses or wetlands within 500 m of the proposed site and no impacts are anticipated on surface water / hydrological features. Potential groundwater impacts associated with the potential leaks and spills of dangerous goods are assessed to be <i>very low</i> during the construction and operational phases (see Sections 6.3.1.1, 6.3.1.2 and 6.3.2.1 of the final BAR). Mitigation measures are included in the EMPr to mitigate these impacts. As stated in the EMPr, Eskom is required to develop emergency procedures which will include fire management. |
| 36. | A fine system should be implemented for potential transgressions. | DEADP | In SRK's experience, penalty systems are difficult to enforce and do not necessarily assist in avoiding/mitigation impacts. SRK believes that the corrective actions described in Section 3.2.3 of the EMPr (see Appendix E of the final BAR) adequately address potential transgressions in such a way that repeated corrective action is not required. |
| 37. | Should the competent authority decide to authorise the proposed development, then the Environmental Management Programme ("EMPr") and the mitigation measures recommended in the BAR and the various specialist reports must be strictly implemented. | DEADP | Noted. |

| No | Issues | Stakeholder | Draft BAR response |
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| L. | Other | | |
| 38. | The West Coast District Municipality has no objection to the proposal provided the recommended mitigation measures are implemented. | WCDM | Noted. |