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TERMS OF REFERENCE FOR TERRESTRIAL BIODIVERSITY AND PLANT SPECIALIST ASSESSMENT

Dear Specialist,

PROPOSED REHABILITATION OF THE ROAD TR75/1 (N12 HIGHWAY) NEAR OUDTSHOORN, OUDTSHOORN LOCAL MUNICIPALITY, GARDEN ROUTE DISTRICT MUNICIPALITY, WESTERN CAPE.

1. INTRODUCTION

Sharples Environmental Services cc (SES) has been appointed by the Western Cape Government: Department of Public Works – Roads Branch (hereafter referred to as the applicant), as the independent Environmental Assessment Practitioner (EAP) to conduct the Application for Environmental Authorisation, in terms of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998) and the 2014 Environmental Impact Assessment (EIA) Regulations of 2014, as amended (GNR 326 of 2017), for the Proposed rehabilitation of the road TR75/1 (N12 Highway), near Oudtshoorn within the Oudtshoorn Local Municipality, which forms part of the Garden Route District Municipality, Western Cape (see Figure 1).

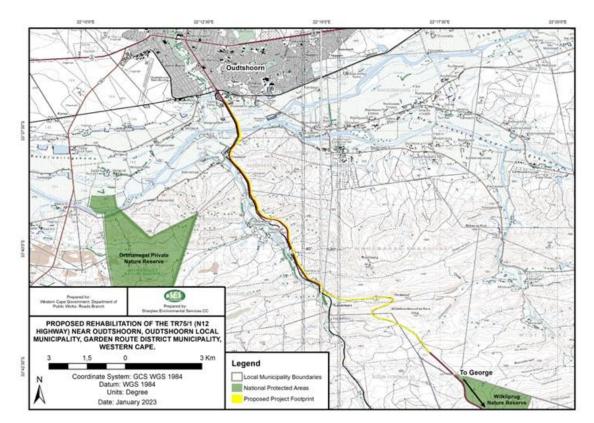


Figure 1: Locality map of the proposed project.

These terms of reference define all the requirements for the Terrestrial Biodiversity and Plant Specialist Assessment and the deliverables expected of the specialist.

1.1 <u>Screening tool report</u>

A screening report was completed on the 19th of October 2022. A "Very High" environmental sensitivity rating was indicated for the Terrestrial Biodiversity theme. A "Medium" environmental sensitivity rating was indicated for the Plant theme.

As per the procedures for the assessment and minimum criteria for reporting on identified environmental themes (Terrestrial Biodiversity and Terrestrial Plant Species) in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation (March 2020), "An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified on the screening tool as being of "very high sensitivity" for terrestrial biodiversity, must submit a Terrestrial Biodiversity Specialist Assessment". Furthermore this legislation states that "when applying for Environmental Authorisation (October 2020), "An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of "medium sensitivity" for terrestrial plant species, must submit either a Terrestrial Plant Species Specialist Assessment Report or a Terrestrial Plant Species Compliance Statement, depending on the outcome of a site inspection/site sensitivity verification undertaken".

The following sensitivity features for the plant species theme were indicated by the screening tool report. PLEASE NOTE: Sensitive Species (SS) were identified by the screening tool. Due to the sensitive nature of these species, this information is not to be made public.

<u>Table 1: Terrestrial Biodiversity Sensitive Features (DEA Screening Tool)</u>

Sensitivity	Feature(s)
Very High	Critical Biodiversity Area 1
Very High	Ecological Support Area 1
Very High	Ecological Support Area 2
Very High	Critically Endangered Ecosystem

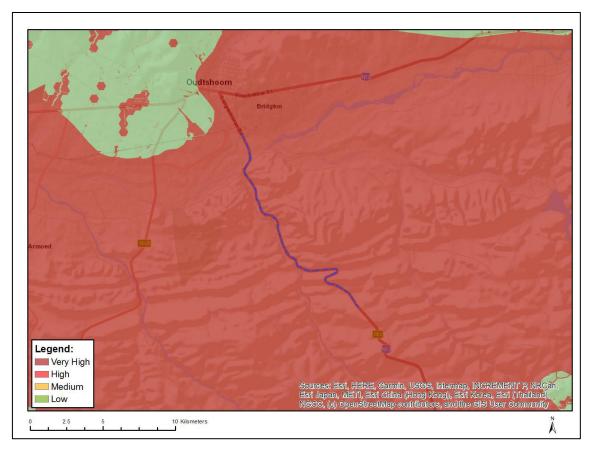


Figure 2: Terrestrial biodiversity sensitivity as indicated in the DEA Screening Tool (2022)

Table 2: Plant Species Sensitive Features (DEA Screening Tool)

Sensitivity	Feature(s)	IUCN red list status
Low	Low Sensitivity	
Medium	Glottiphyllum linguiforme	Endangered
Medium	Glottiphyllum regium	Endangered
Medium	Aspalathus pedunculata	Rare
Medium	Selago ferruginea	Critically Endangered
Medium	Syringodea derustensis	Vulnerable
Medium	Sensitive species 537	Requested
Medium	Erica zebrensis	Endangered
Medium	Sensitive species 155	Requested
Medium	Sensitive species 111	Requested
Medium	Sensitive species 842	Requested
Medium	Sensitive species 187	Requested
Medium	Adromischus mammillaris	Endangered

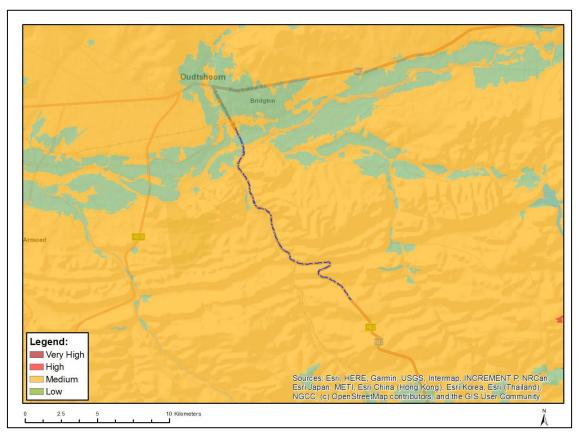


Figure 3: Plant species sensitivity as indicated in the DEA Screening Tool (2022)

2. SPECIALIST INVOLVEMENT

The <u>purpose of this study</u> is to determine whether a Terrestrial Biodiversity and Plant Specialist Assessment(s) or a Compliance Statement(s) would be required for the proposed site, by assessing the potential impact of the proposed development on the Terrestrial Biodiversity and the plant species of concern. Thereafter, either a full Terrestrial Biodiversity Assessment Report or a Compliance Statement Report should be undertaken, as per the Gazetted Protocols:

- https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted
 Terrestrial Biodiversity Assessment Protocols.pdf; and
- https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted
 Plant Species Assessment Protocols.pdf

The specialist conducting this study must:

- Be independent and have expertise in conducting similar assessments;
- Have a suitable academic qualification in the relative field;
- Be registered with the South African Council for Natural Scientific Professionals (SACNASP and having expertise in the field of Terrestrial Biodiversity;
- Be familiar with the assessment criteria commonly used in the EIA Process to assess and evaluate impacts, as well as the newly promulgated Protocols related to the Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes (March 2020 & October 2020);
- Have good knowledge relating to assessment techniques and to relevant legislation, policies and guidelines.
- Perform the work in an objective manner, even if this results in views and findings that are not favourable to the applicant.

2.1 Terms of Reference

The assessment of the proposal will necessitate specialist input which will need to be undertaken with the Terms of Reference listed below as well as the relevant specialist guidelines. In addition to meeting the requirements of the relevant legislation, the assessments should also meet those of the Guideline for Involving Terrestrial Biodiversity specialists in EIA Processes and the relevant Gazetted Protocols.

The reports should not be limited to this brief. Where the specialist sees the necessity for providing other vital information or investigations, this should be included.

The specialist must have no financial or other vested interest in the proposed development and must be professionally registered with the SACNASP.

<u>Terrestrial Biodiversity Assessment scope.</u>

Phase 1

The assessment must provide a baseline description of the site which includes, as a minimum, the following aspects:

- ✓ A description of the ecological drivers or processes of the system and how the proposed development will impact these;
- ✓ A description of the ecological infrastructure, functioning, processes and services (e.g. fire, migration, pollination, etc.) that operate within the preferred site;
- ✓ A description of the ecological corridors that the proposed development would impede including migration and movement of flora and fauna;
- ✓ Indicate whether or not the proposed development will have any impact on biodiversity features;
- An indication and description of any significant terrestrial landscape features, including rare or important flora- faunal associations, presence of strategic water source areas (SWSAs) or freshwater ecosystem priority area (FEPA) sub catchments;
- ✓ A description of terrestrial biodiversity and ecosystems on the preferred site, including:
 - o main vegetation types;
 - threatened ecosystems, including listed ecosystems as well as locally important habitat types identified;
 - ecological connectivity, habitat fragmentation, ecological processes and fine scale habitats; and
 - o species, distribution, important habitats (e.g. feeding grounds, nesting sites, etc.) and movement patterns identified;
 - Species of Conservation Concern
- ✓ Make reference to the allocated sensitivity as per the screening tool, state whether or not this sensitivity is accurate and recommend appropriate reclassification if it is not.
- ✓ The assessment must identify any alternative development footprints within the preferred site which would be of a "low" sensitivity as identified by the screening tool and verified through the site sensitivity verification.

Phase 2

Based on the results of a site visit, the following aspects are to be identified, discussed and applied to form the base for assessment:

- ✓ Terrestrial Critical Biodiversity Areas (CBAs), including:
 - o the reasons why an area has been identified as a CBA;
 - an indication of whether or not the proposed development is consistent with maintaining the CBA in a natural or near natural state or in achieving the goal of rehabilitation;
 - o percentage of site (erven/farm portions) covered by CBA

- o percentage of CBA (specify degraded/transformed and pristine) lost to proposed development layout alternatives (if layout is available).
- the impact on species composition and structure of vegetation with an indication of the extent of clearing activities in proportion to the remaining extent of the ecosystem type(s);
- the impact on ecosystem threat status;
- o the impact on explicit subtypes in the vegetation;
- o the impact on overall species and ecosystem diversity of the site; and
- the impact on any changes to threat status of populations of species of conservation concern in the CBA;
- o Inclusion of any necessary buffer areas, including the identification of zones of sensitivity within the CBA that are priority to maintain ecological integrity.
- ✓ Terrestrial Ecological Support Areas (ESAs), including:
 - o Percentage/quantity of site (erven/farm portions) covered by ESA
 - o percentage of ESA lost to development (if layout is available)
 - o the impact on the ecological processes that operate within or across the site;
 - o the extent the proposed development will impact on the functionality of the ESA; and
 - loss of ecological connectivity (on site, and in relation to the broader landscape) due to the degradation and severing of ecological corridors or introducing barriers that impede migration and movement of flora and fauna;
 - o Inclusion of any necessary buffer areas, including the identification of zones of sensitivity within the ESA that are priority to maintain ecological integrity.
- ✓ Protected areas as defined by the National Environmental Management: Protected Areas Act, 2004 including
 - o an opinion on whether the proposed development aligns with the objectives or purpose of the protected area and the zoning as per the protected area management plan;
- ✓ Priority areas for protected area expansion, including
 - the way in which in which the proposed development will compromise or contribute to the expansion of the protected area network;
- ✓ SWSAs including:
 - o the impact(s) on the terrestrial habitat of a SWSA; and
 - the impacts of the proposed development on the SWSA water quality and quantity (e.g. describing potential increased runoff)
- ✓ FEPA sub catchments, including-
 - the impacts of the proposed development on habitat condition and species in the FEPA sub catchment;
- ✓ Indigenous forests, including:
 - o impact on the ecological integrity of the forest; and
 - o percentage of natural or near natural indigenous forest area lost and a statement on the implications in relation to the remaining areas.
- ✓ Vegetation present onsite, including:
 - o percentage of vegetation cover on the proposed site (erven/farm portions)
 - percentage of indigenous vegetation cover
 - percentage of alien invasive vegetation cover
 - percentage of vegetation cover to be lost due to development (provision of layouts depending)
 - percentage indigenous vegetation lost
 - percentage of alien invasive vegetation to be cleared
 - o visualisation (map/illustration) of alien and indigenous vegetation loci.
- ✓ Identification of core ecosystem areas within the proposed site, as well as a description of the Ecosystem services and process provided.

- ✓ An indication and description of any Species of Conservation Concern
 - If search and rescue is recommended please provide a description of appropriate removal, maintenance and reinstatement methodology.
- ✓ Specify location of the areas not suitable for development, which are to be avoided during construction and operation (where relevant)
- ✓ Determine the need for a Compliance Statement or a Terrestrial Biodiversity Assessment Report, as per point 1: General Information of the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Biodiversity, it is stated:
 - o 1.3. However, where the information gathered from the site sensitivity verification differs from the designation of "very high" terrestrial biodiversity sensitivity on the screening tool and it is found to be of a "low" sensitivity, then a Terrestrial Biodiversity Compliance Statement must be submitted.
 - o 1.5. If any part of the proposed development footprint falls within an area of "very high" sensitivity, the assessment and reporting requirements prescribed for the "very high" sensitivity apply to the entire footprint, excluding linear activities for which impacts on terrestrial biodiversity are temporary and the land in the opinion of the terrestrial biodiversity specialist, based on the mitigation and remedial measures, can be returned to the current state within two years of the completion of the construction phase, in which case a compliance statement applies. Development footprint in the context of this protocol means the area on which the proposed development will take place and includes any are that will be disturbed.

Phase 3 – If a Compliance Statement is Required

- ✓ The compliance statement must be prepared by a specialist registered with the SACNASP and having expertise in the field of ecological sciences.
- ✓ The compliance statement must:
 - o be applicable to the preferred site and proposed development footprint;
 - o confirm that the site is of "low" sensitivity for terrestrial biodiversity; and
 - o indicate whether or not the proposed development will have any impact on the biodiversity feature.
- ✓ The compliance statement must contain, as a minimum, the following information:
 - o the contact details of the specialist, their SACNASP registration number, their field of expertise and a curriculum vitae;
 - o a signed statement of independence by the specialist;
 - o a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;
 - o a baseline profile description of biodiversity and ecosystems of the site;
 - o the methodology used to verify the sensitivities of the terrestrial biodiversity features on the site, including equipment and modelling used, where relevant;
 - o in the case of a linear activity, confirmation from the terrestrial biodiversity specialist that, in their opinion, based on the mitigation and remedial measures proposed, the land can be returned to the current state within two years of completion of the construction phase;
 - o where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr;
 - a description of the assumptions made and any uncertainties or gaps in knowledge or data;
 and
 - o any conditions to which this statement is subjected.
- ✓ A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

The Terrestrial Biodiversity Specialist Assessment Report must discuss the following aspects:

- ✓ A description of the areas not suitable for development, which are to be avoided during construction and operation (where relevant);
- ✓ additional environmental impacts expected from the proposed development;
- ✓ any direct, indirect and cumulative impacts of the proposed development;
- ✓ the degree to which impacts and risks can be mitigated;
- ✓ the degree to which the impacts and risks can be reversed;
- ✓ the degree to which the impacts and risks can cause loss of irreplaceable resources;
- ✓ proposed impact management actions and impact management outcomes proposed by the specialist for inclusion in the Environmental Management Programme (EMPr);
- √ how the mitigation hierarchy was applied when determining mitigation measures and recommendations.
- ✓ a motivation must be provided if there were development footprints identified as the site verification visit, that were identified as having a "low" terrestrial biodiversity sensitivity and that were not considered appropriate;
- ✓ a substantiated statement, based on the findings of the specialist assessment, regarding the acceptability, or not, of the proposed development, if it should receive approval or not; and
- ✓ any conditions to which this statement is subjected.
- ✓ Identification of any buffer areas.

Terrestrial Plant Species Assessment

Phase 1 (Status Quo Assessment)

- ✓ The assessment must contextualize the study area in order to provide a baseline description
 of the ecological system, the terrestrial plant biodiversity and any significant terrestrial
 features must be provided.
- The assessment must identify the following;
 - o Terrestrial critical biodiversity areas (CBAs)
 - Terrestrial ecological support areas (ESAs)
 - Protected areas as defined by the National Environmental Management: Protected Areas Act, 2004
 - o Priority areas for protected area expansion
 - Indiaenous forests
- ✓ Undertake a site visit and ground-truth biodiversity information. Where required, undertake baseline surveys and/or studies to supplement the information base and inform the assessment
- ✓ Estimate the trajectory of change in the context of the 'No-Go' Alternative due to existing impacts.
- ✓ Assessment criteria to be aligned with the promulgated Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes (October 2020).

Following the site verification visit, in which the Specialist confirms the presence, likely presence or confirmed absence of a SCC identified within the site identified as "medium" sensitivity by the screening tool, the Specialist is to confirm the need for a Compliance Statement or a Terrestrial Plant Species Assessment and undertake this report/statement in accordance with the Gazetted Protocol (October 2020).

If a Compliance Statement is Required:

- ✓ Specialist must SACNASP registered under one of the two fields of practice (Botanical Science or Ecological Science).
 - o The compliance statement must:
 - be applicable within the study area;
 - confirm that the study area is of "low" sensitivity for terrestrial plant species;
 and

- indicate whether or not the proposed development will have any impact on SCC.
- ✓ Minimum Requirements Include:
 - o contact details and relevant experience as well as the SACNASP registration number of the specialist preparing the compliance statement including a curriculum vitae;
 - o a signed statement of independence by the specialist;
 - o a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;
 - o a description of the methodology used to undertake the site survey and prepare the compliance statement, including equipment and modelling used where relevant;
 - where required, proposed impact management actions and outcomes or any monitoring requirements for inclusion in the EMPr;
 - a description of the assumptions made and any uncertainties or gaps in knowledge or data;
 - o the mean density of observations/ number of samples sites per unit area; and
 - o any conditions to which the compliance statement is subjected.

Phase 2 (If a Terrestrial Plant Specialist Assessment Report is Required)

- ✓ In accordance with the Gazetted Protocols, the findings of the assessment must be written up in a Terrestrial Plant Specialist Assessment Report.
- ✓ Terrestrial Plant Specialist Assessment Report must include the following;
 - The Identification, prediction and description of potential impacts on terrestrial ecology during the construction and operational phases of the project. Impacts are described in terms of their extent, intensity, and duration. The other aspects that must be included in the evaluation are probability, reversibility, irreplaceability, mitigation potential, and confidence in the evaluation.
 - This must be undertaken for all of the alternatives and must be rated with and without mitigation to determine the significance of the impacts.
 - o The degree to which the impacts and risks can cause loss of irreplaceable resources.
 - Recommend actions that should be taken to avoid impacts on sensitive ecology, in alignment with the mitigation hierarchy, and any measures necessary to restore disturbed areas or ecological processes.
 - o Identify areas of high importance or sensitivity on which impacts should preferably be avoided or prevented or, where they cannot altogether be avoided, should at least be minimized (e.g. through buffers or setbacks).
 - Identify areas that are known to be important for biodiversity but are degraded or invaded by alien species and require rehabilitation/restoration, including areas that could improve connectivity and reduce fragmentation in the landscape.
 - An accurate description and map of the areas and features of importance to biodiversity and their sensitivity to the proposed development. Possibly recommend alternatives.
 - o Rehabilitation guidelines for disturbed areas associated with the proposed project.
 - o Any monitoring protocol that is deemed necessary
- ✓ A substantiated statement, based on the findings of the specialist assessment, regarding the
 acceptability, or not, of the proposed development, if it should receive approval or not
 must be included.
- ✓ Minimum requirements for report content include that the assessment must be undertaken in accordance with the Species Environmental Assessment Guideline and must:
 - Identify the SCC which were found, observed or are likely to occur within the study area;

- o provide evidence (photographs) of each SCC found or observed within the study area, which must be disseminated by the specialist to a recognized online database facility immediately after the site inspection has been performed
- o identify the distribution, location, viability and detailed description of population size of the SCC identified within the study area;
- identify the nature and the extent of the potential impact of the proposed development to the population of the SCC located within the study area;
- determine the importance of the conservation of the population of the SCC identified within the study area, based on information available in national and international databases including the IUCN Red List of Threatened Species, South African Red List of Species, and/or other relevant databases;
- determine the potential impact of the proposed development on the habitat of the SCC located within the study area;
- include a review of relevant literature on the population size of the SCC, the conservation interventions as well as any national or provincial species management plans for the SCC.
- This review must provide information on the need to conserve the SCC and indicate whether the development is compliant with the applicable species management plans and if not, a motivation for the deviation;
- identify any dynamic ecological processes occurring within the broader landscape, that might be disrupted by the development and result in negative impact on the identified SCC, for example, fires in fire-prone systems;
- identify any potential impact on ecological connectivity within the broader landscape, and resulting impacts on the identified SCC and its long-term viability;
- o determine buffer distances as per the Species Environmental Assessment Guidelines used for the population of each SCC; and
- discuss the presence or likelihood of additional SCC including threatened species not identified by the screening tool, Data Deficient or Near Threatened Species, as well as any undescribed species and
- o identify any alternative development footprints within the preferred development site which would be of "low" sensitivity" or "medium" sensitivity as identified by the screening tool and verified through the site sensitivity verification.

2.2 General

- ✓ Reference all sources of information and/or data used.
- ✓ Include contact details, relevant experience, CV and SACNASP registration number.
- ✓ A signed statement of independence by the specialist;
- ✓ A statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;
- ✓ A description of the methodology used to undertake the site survey, prepare the assessment, verify the sensitivities of the terrestrial biodiversity features on the site, including equipment and modelling used, where relevant.
- ✓ The assessment must be undertaken on the preferred site and within the proposed development footprint.
- ✓ Where required, proposed impact management actions and outcomes or any monitoring requirements for inclusion in the EMPr;
- ✓ A description of the limitations, assumptions made and any uncertainties or gaps in knowledge or data as well as a statement of the timing and intensity of site inspection observations;
- ✓ Any conditions to which the assessment is subjected.
- ✓ The specialist and the assessment must comply with the following guidelines and legislation:

- ✓ Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of Sections 24(5)(A) and (H) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation
- ✓ The assessment should be prepared in a suitable font and submitted to SES in draft form.
- ✓ Ensure it is clear that the mitigation hierarchy has been applied, in order, when recommendations and mitigation is applied.
- ✓ Ensure that there are no conflicting recommendations or conclusions.
- ✓ Ensure the EAP is provided with working files, ie: KML/KMZ/Shapefiles and if a buffer is recommended, please ensure relevant table of coordinates are provided.
- ✓ The following is also required in terms of the Gazetted Plant Species Protocol includes:
 - ✓ a description of the mean density of observations/number of samples sites per unit area of site inspection observations;
 - ✓ details of all SCC found or suspected to occur on site, ensuring sensitive species are appropriately reported;
 - ✓ the online database name, hyperlink and record accession numbers for disseminated evidence of SCC found within the study area;
 - ✓ the location of areas not suitable for development and to be avoided during construction where relevant;
 - ✓ a discussion on the cumulative impacts;
 - ✓ impact management actions and impact management outcomes proposed by the specialist for inclusion in the Environmental Management Programme (EMPr);
 - ✓ a reasoned opinion, based on the findings of the specialist assessment, regarding the
 acceptability or not, of the development related to the specific theme considered,
 and if the development should receive approval or not, related to the specific theme
 being considered, and any conditions to which the opinion is subjected if relevant;
 and
 - ✓ a motivation must be provided if there were any development footprint alternatives identified as having "low" or "medium" terrestrial plant species sensitivity and were not considered appropriate.

2.3 Quotation Details

Please provide a written quote for all applicable phases of the Terrestrial Biodiversity and Plant Assessment, providing a break-down of the costs for a full Terrestrial Biodiversity and Plant Impact Assessment scenario and the costs for a Terrestrial Biodiversity and Plant Compliance Statement scenario.

All quotes must clearly state whether the quoted amount includes or excludes VAT.

3. EXPECTED DELIVERABLES

If deemed necessary to undertake a Terrestrial Biodiversity and Plant Compliance Statement(s), an initial draft compliance statement covering the above requirement must be submitted to SES two weeks after the notice to proceed with the above scope of work. The final compliance statement(s) (which shall include any reasonable amendments in response to the EAP's comments on the initial draft, if necessary), as well as field survey, shall be delivered within one week after receiving comments from the EAP.

If deemed necessary to undertake a full Terrestrial Biodiversity and Plant Impact Assessment(s), an initial draft report must be submitted to SES <u>four weeks after the notice to proceed with above scope</u> of work. The final report (which shall include any reasonable amendments in response to the EAP's

comments on the initial draft, if necessary) shall be delivered **two weeks** after receiving comments on the draft report from the EAP.

The report must be prepared in a suitable font (such as Arial 12) and the format and content must comply with Appendix 6 of the amended EIA Regulations, 2017, as well as the Promulgated Protocols relating to Terrestrial Biodiversity (dated March 2020) and Terrestrial Plants (dated October 2020).

If any of the mitigation measures recommended in the specialist report require additional plans for implementation that need to form a part of the Environmental Management Programme, the specialist is required to compile the report or provide support to the EAP in terms of reviewing the plan that the EAP compiles.

The specialist is further expected to provide responses (specialist input) on the comments received from I&APs during the public participation process.