
Annexure B - Distribution Environmental Screening Document (DESD)
(Informative)

Reticulation Powerlines and Ancillary Services

Ratified and accepted by:

Environmental Practitioner/ Senior Environmental Advisor/Senior Supervisor Engineering
Survey

(one signature above please)

Accepted by Land Owner/s/Users

(Kindly cross-out what is non-applicable)

Landowner/land-user declaration:

I have seen the completed document and accept the

recommendations made :

Assessor/s

Form completed bySignature:

in consultation with :Signature:

CAPACITY (e.g. land owner, specialist):

DATE COMPLETED:

Instructions

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GUIDELINE TO DESD COMPILERS

1. PURPOSE

The purpose of this DESD is to:

- Determine whether or not the project triggers a listed activity in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended in the latest Environmental Impact Assessment Regulations, and thus require an Environmental Authorisation before construction can commence.
- Identify and mitigate the negative impact of Eskom's activities to a minimum in line with both Legislation and Eskom's Environmental Policies.
- Inform route selection and engineering design.
- Provide opportunity for alternative selection of routes upon assessment of impacts on proposed location and provide mitigation measures.

2. INSTRUCTIONS AND SUBMISSION PROCESS

2.1 The DESD must be completed on site, ensure that all three (3) alternatives are assessed. Mark the appropriate box with an 'x' where applicable.

2.2 Please COMPLETE ALL REQUIRED INFORMATION and where the question / statement is not applicable mark N/A.

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- 2.3 DESD forms must be accompanied by a locality map with a project drawing and photographs of the site.
- 2.4 Indicate sensitive areas on a map and/or spanning plans.
- 2.5 DESDs must be **scanned and e-mailed with supplementary information** to the following people:
- i. To the responsible Head of Survey or Senior Supervisor Engineering Survey who issued work / TO (and copy environmental section). A hardcopy must be sent to Senior Supervisor Engineering Survey.

3. APPROVAL OF DESDs AND FEEDBACK TO CONTRACTOR/ CNC

Step 1: Head of Survey or Senior Supervisor Engineering Survey will register the DESD submission and forward the DESD and supplementary information to Environmental Management

Step 2: Environmental Management has 5 days to approve/ reject the DESD or to seek additional information. During this time the DESD will be evaluated, the impact of the project assessed and mitigation measures identified.

Step 3: Feedback on the DESD will be given by returning (i) a ratification sheet, and (ii) an Environmental Management Plan

Step 4: Head of Survey or Senior Supervisor Engineering Survey will forward the above documentation with the spanning sheets, way-leaves and/or statutory approvals (if applicable) to the relevant Project Engineering Designer

Step 5: The Project Engineering Designer shall ensure that the DESD and documents specified in Step 3 above is included in the Project Package that is given to the contractor and relevant CNC. These documentation must form part of the project specification to the project engineering designer and contractor (to the CNC if not constructed by a contractor).

Step 6: The Project Execution representative shall inform Environmental Management of construction start 5 days in advance.

Step 7: Environmental Management will randomly select 2 to 5 projects per month to audit compliance with ratification conditions and EMP. The NCR process will be followed for non-compliance.

4. ADDITIONAL INFORMATION NEEDED WITH DESD SUBMISSION

Additional supplementary information is required to apply for relevant permits from authorities and to adequately assess the DESD. Note that DESDs submitted with no supplementary information might be delayed and/or rejected. The following must accompany the DESD application. Please indicate what supplementary information has been submitted with DESD.

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Supplementary Information	Not Applicable	Attached to Application?	
		Yes	No
Locality Map		X	
GPS coordinates of sensitive features (river crossings, wetlands, trees, graves, old structures or buildings, etc.)		X	
Photographs of site (location of proposed infrastructure within the surrounding environment)		X	
Photos of trees to be removed (if trees need to be removed please take a photo of the tree and a close up of a branch of the tree in order to identify the tree)	X		
Development Environmental Authorisation (eg. Vodacom, municipal housing development, etc.)	X		
GPS coordinates of location of new infrastructure (start, middle and end)		X	
Any other supplementary information supplied?			

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SECTION A: PROJECT SCOPE AND ADDITIONAL INFORMATION

1. PROPERTY INFORMATION (PLEASE COMPLETE IN FULL)

Area/ Town:			
Municipality:			
Rural Scheme Feeder:			
Voltage:			
Supply from (Scheme name, pole numbers for tee-off):			
Erf or Farm Name and Nr etc. (property for which application is made)			
Street Address :			
GPS Coordinates of Property (A logical centre point. Format based on WGS84):			
Extent of Property (Hectares):			
Land Use (e.g. Agricultural, Residential, Industrial, etc.):			
Land Owners Telephone Nr:	(Home)	(Cell)	(Fax)
Land Owners Email Address:			
Total Length of Line (m)			

2. PROPERTIES TRAVERSED

Farm Name:			
Farm Number (Registration Nr, Division and Sub-division):			
GPS Coordinates of Property (A logical centre point. Format based on WGS84):		Line Length (m):	
Farm Name:			
Farm Number (Registration Nr, Division and Sub-division):			
GPS Coordinates of Property (A logical centre point. Format based on WGS84):		Line Length (m):	
Farm Name:			

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Farm Number (Registration Nr, Division and Sub-division):			
GPS Coordinates of Property (A logical centre point. Format based on WGS84):		Line Length (m):	

3. PROJECT SCOPE AND SUPPLEMENTARY INFORMATION

Give a brief description of the project scope, including all activities anticipated:				
Will the power line/ cable be 300m or longer? (Y/N)	YES	X	NO	
Will the line be near any old structures or buildings or known historical towns.	YES		NO	X
Are there any marked or unmarked graves on the route/ or on site?	YES		NO	X
Will any planned activity or infrastructure be within 100meters of a watercourse (rivers/ streams/ dams)?	YES		NO	X
Is any portion of the power line or cable or any other infrastructure within 32m of a watercourse/ wetland? <i>If yes , is the physical footprint of the structure 100 square meters or more</i>	YES		NO	X
Will any planned activity or infrastructure be within 500meters of a wetland (seasonal and permanent)?	YES		NO	X
Is any portion of the power line or proposed activity within 100m of the high-water mark of the sea/ estuary/ lagoon in the Urban area and 1000m in the rural areas?	YES		NO	X
Is any property affected a nature reserve or conservancy?	YES		NO	X
Will the power line be going through or adjacent to a forest/ plantation area?	YES	X	NO	
Will any portion of project be cabled through veld/ natural vegetation?	YES		NO	X
Will any portion of project be cabled through a river-bed/ stream?	YES		NO	X
Are new access roads/ tracks needed to maintain & operate the power line?	YES		NO	X
Are there any protected trees/ heritage trees along the power line or close to it? (Owner might know)	YES		NO	X
Will natural/ indigenous vegetation have to be removed prior to construction?	YES	X	NO	
Did you observe any evidence of wildlife in close proximity to the power line? For example, birds, nests, giraffe, elephants, etc.	YES		NO	X

SECTION B: ENVIRONMENTAL IMPACT SCREENING

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**ENVIRONMENTAL IMPACT ASSESSMENT FOR
DISTRIBUTION ACTIVITIES**

Unique Identifier: **240-**
Revision: **1**
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1. WATER RESOURCES					
Aspect (Mark with an 'X' if applicable)		Present Condition (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Streams		Non-seasonal/ Permanently Wet Watercourse		Erosion of bed and banks of the watercourse	
Rivers		Seasonal Watercourse/ Dry waterbed		Compaction of ground of bed and banks of a watercourse	
Dams		Man-made Dam or other watercourse		Activity may divert/ restrict the flow of watercourse	
Wetlands		Degraded watercourse (in poor condition)		Activity has the potential to cause flooding	
Sea/ Estuary		Drainage Channel		Risk of oil, fuels, hydraulic fluids, chemicals or other pollutants near watercourse resulting from activity	
Floodplains		Pristine Condition		No Impact	
Springs		Alien Vegetation		Other (specify):	
Other (specify):		N/A		N/A	

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2. SOIL					
Aspect (Mark with an 'X' if applicable)		Present Condition (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Sandy		Unstable rocky or steep slopes		Contamination of soil with concrete and cement	
Rocky	X	Saturated/ wet soils/ shallow water table		Compaction of soil due to driving	
Clayey	X	Sensitive to erosion or evidence of erosion in the area	X	Erosion	X
Other (Specify):		N/A		N/A	

3. TOPOGRAPHY					
Aspect (Mark with an 'X' if applicable)		Present Condition (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Flat	X	Unstable rocky or steep slopes		Difficult to construct in area	
Ridgeline		Erosion present on site		Erosion	
Mountainous/ Side slope of hill/ mountain		Steep slopes with loose soil		Difficult vehicular access	
Undulating plain/ low hills		Rocky outcrops		New access roads needed	
Dune (In-land or Coastal)		Dolomite, sinkhole or doline areas		Seasonal dune movement (impact on clearance)	
Sea-front		Any other unstable soil or geological feature		Other (Specify):	None
Valleys/ Ravine/ Donga		Other (Specify):			
Other (Specify):		N/A			

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4 GROUNDCOVER AND FLORA					
Aspect (Mark with an 'X' if applicable)		Present Condition (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Natural Vegetation	X	Natural veld in good condition	X	Contamination of ground due to driving during construction	
Alien Vegetation		Natural veld with scattered aliens		Trampling and loss of natural vegetation due to driving and walking over it	
Bare Soil		Natural veld with heavy alien infestation		Fire risk	
Other (Specify):		Thick bush		Erosion risk	Minimum vegetation clearance
		Gardens/ Sport fields		Vegetation clearance is required for construction and maintenance	
		Paved/ hardened Surface		Other (Specify):	

5 FAUNA					
Aspect (Mark with an 'X' if applicable)		Present Condition (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Birds (Specify if you can identify type, e.g. vulture, eagle, blue crane, raptor):		Bird nests present		Threat of electrocution or collision/ habitat disturbance	
Mammals		Game (Giraffe, Elephants, etc)		Threat of collision/electrocution	
Other (Specify):	domestic animals	Other (Specify):	dogs	Other (Specify):	None

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6.RESTRICTED AREAS			
Aspect (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Nature Reserve/ Conservancy		Construction within nature reserve or a conservancy	
Heritage Site/ Areas of cultural significance		Loss of natural vegetation/ biodiversity	
Green belts/ Vegetation Corridors		Require permits	
Residential Areas	X	Objection from public/ other interest groups	
Sacred/ Holy Grounds		Threat of Encroachment/ Direct Impact on restricted area	
Other (Specify):		Other (Specify):	None

7.VISUAL AESTHETICS			
Aspect (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Easily Seen	X	Infrastructure will be obtrusive in landscape (not fit in)	
Hidden Partially		Objection by members of public/ interest group/ owners	
Hidden Completely		Negatively impact on a business (e.g. Tourism)	
Other (Specify):		Other (Specify):	None

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8.NATURAL HERITAGE			
Aspect (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Area of cultural significance		Infrastructure will be obtrusive in landscape (not fit in)	
Known Archaeological objects present on site		Objection by members of public/ interest group/ owners	
Known Palaeontological objects present on site		Negatively impact on a business (e.g. Tourism)	
Monuments		Threat of encroachment	
Graves		Direct impact (e.g. Cutting of heritage trees, etc.)	
Meteorites		Require permits/ other special permission	
Ruins/ Old buildings (structures older than 60 years)		Deface/ damage to heritage resource	
Windbreak Trees/ Trees with heritage significance/ Trees registered as a heritage resource/ national champion tree		Objection by public/ interest group	
Other (Specify):	None	Other (Specify):	None

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9. LAND USE, COMMERCIAL & OTHER INFRASTRUCTURE			
Aspect (Mark with an 'X' if applicable)		Potential Impact (Mark with an 'X' if applicable)	
Agriculture / Farm lands (Crops, Orchards, Grazing, etc.) Please Specify:	X	Objection by members of public/ interest group/ owners	
Forestry Area		Negatively impact on a business (e.g. Tourism)	
Mining Activity (including sand mining): Please specify:		Impact on centre pivots or other farming/ mining implements	
Factories/ Shops/ Industrial (Please specify):		Threat of encroachment with or contact(Safety risk/ clearance)	
Road Crossings or near main roads (National Roads, etc.)		Construction limited to specific season/ time period	
Other infrastructure (e.g. Railways, communication towers, existing power lines, sewer, water pipes, cables) Please specify:	X	Loss of orchards, crops, etc.	
Air fields, landing strips/ wind turbines (Please specify):		Other (Specify):	Electrification

10 IMPACT OF PROJECT

Significance rating:

The criterion below was used to assess the significance of the impacts. The significance ratings in relation to characteristics of Eskom electrical infrastructure maintenance activities are determined. These ratings are defined in terms of the magnitude, Likelihood, Business risks, Regulatory scrutiny and Stakeholder interest.	
LIKELIHOOD	MAGNITUDE
High (3):	High (3):
Routine or ongoing activity or impact. Is known to have occurred on routine basis in the past. Impacts associated with the aspects are likely to emerge soon. Impacts are known.	Aspect has a recognized global environmental impact. Widespread or permanent ecological damage locally. Remediation would take longer than one year. Could result in a major public health hazard.

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Medium (2):		Medium (2):	
Periodically occurs once or twice a year. Impacts that are likely to occur within one year.		Aspect could result in a major uncontained or sustained environmental release impacting on an Operating Unit or local environment only. Ecological damage can be remedied within one year. Health hazard to humans in the immediate vicinity, but not resulting in .critical or fatal.	
Low (1):		Low (1):	
Very infrequent, every several years. Impacts associated with the aspects are several years away		Little or no ecological effect and no measurable impact on human health.	
BUSINESS RISK/ BENEFITS	REGULATORY SCRUTINY	STAKEHOLDER INTEREST	
High (3):	High (3):	High (3):	
Aspect poses significant risk. Early response necessary. Industrial initiatives underway/developed. May have major impact on competitive position. May have a significant impact on value of Eskom's assets.	Regulated by Legislation. High potential for regulatory action or limitations to operate (subject to regulatory inspections & historical compliance problems)	Very important to public and customers. Aspect has the potential to cause damage to corporate reputation. Ongoing dialogue has begun; negative perception, possibility for third party lawsuits. Customers expect superior performance by Eskom in managing this aspect.	
Medium (2):	Medium (2):	Medium (2):	
Aspect is likely to pose risk.	Regulated & Legislated, however not a priority in terms of enforcement	Important to the public and customers. The aspect is likely to cause damage to corporate reputation.	
Low (1):	Low (1):	Low (1):	
Aspect does not pose significant risk. No need for early response. No industry initiative associated with aspect. Does not threaten competitive position. Does not affect values of Eskom assets	Relatively unimportant, Little or no potential for regulatory action (e.g. not regulated; not a target of enforcement).	Relatively unimportant; the public is unaware or is aware but it is not an issue. No threat to corporate image. It is not an issue with customers.	

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SIGNIFICANCE OF THE IMPACTS:
The significance of the unmanaged and managed impacts has been assessed through consideration of the likelihood of the impact occurring, the magnitude over which the impact will be experienced, and the level of business risk, regulatory scrutiny and stakeholders interest the impact will have on the environment.
The formula for calculating the significant environmental impacts score is:
(Likelihood X Magnitude)
+ Regulatory scrutiny
+ Stakeholder interest
+ Business risk/benefit
The significant rating, as determined by the Operating unit, is as follows:
· 0 – 5: Low
· 6 -10: Medium
· 11 – 18: High
Impacts with a value greater than or equal to 11 will be considered as significant, environmental practitioner must conduct site verification in the event of significantly rated alternatives.

Rate the potential impact of the project on the following elements – Mark with an ‘X’									
Evaluation of Alternatives									
ELEMENT	Alternative 1			Alternative 2			Alternative 3		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Water Resources									
Soil	X								
Topography	X								
Groundcover and Flora	X								
Fauna	X								
Restricted Areas									
Visual Aesthetics									
Natural Heritage									
Land Use, Commercial and other Infrastructure	X								
Line Length/Cost									
Overall rating	Low								

OVERALL RATING Low 0 - 5, Medium 6 - 10, High 11 -18

10.1: STATE PREFERRED ALTERNATIVE ROUTE

11. PROPERTIES TO BE TRAVERSED DURING CONSTRUCTION / OPERATIONS

(Include portion of the farm, owner’s name and telephone numbers)

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13. **SPECIAL CONDITIONS TO BE ADHERED TO DURING DESIGN / CONSTRUCTION / OPERATIONS PHASES** (specific issues identified during the scoping as needing attention/migratory measures i.e. anti-erosion berms, bird flappers, protected trees, avoid wetlands with vehicles, landowner’s specific request, etc.)

**Annexure C - Environmental Management Plan
(Normative)**

ENVIRONMENTAL MANAGEMENT PROGRAMME

Conditions of Environmental Management Plan to be adhered to during construction and operational phase:

- 1.1 The Eskom project manager or coordinator shall be responsible for ensuring that the land owners have been informed before any work is carried out on site. Contractors shall find out if the landowners have been informed before moving onto site.
- 1.2 No infrastructure may be placed with 32 meters of any watercourse (rivers, streams, dams). **(Permit required!!!) If this cannot be avoided, consultation is needed with Department of Water and Sanitation and an application for a Water Use License (WULA) or General Authorisation. Please contact the Land Development-Environmental Management Department to provide this service.**
- 1.3 No Infrastructure may be placed within 500meters of any wetland (seasonal or permanent). **(Permit required!!!) If this cannot be avoided, consultation is needed with Department of Water Affairs and an application for a Water Use License (WULA) or General Authorisation. Please contact the Land Development-Environmental Management Department to provide this service.**
- 1.4 No Infrastructure may be placed within 100meters of the high-water mark of the sea or estuary or any river with a saline component (particularly relevant to coastal towns) without an Environmental Authorisation (on completion of EIA process). **Please contact the Land Development-Environmental Management Department to provide this service.**
- 1.5 No tree cutting/ clearance/ pruning may be done without identifying the type of tree, identifying whether it is a protected tree or not and/ or whether it is in a forest/ plantation area. **(Permit required!!!) A permit is required if Eskom needs to cut/ disturb any protected tree, champion tree, heritage value tree or any tree in a forest/ plantation area. Please contact the Land Development-Environmental Management Department to provide this service.**

1.6 No fences, gates or locks shall be damaged to obtain access onto a line route. Arrangements shall be made in advance to obtain permission for access.

1.7 Use of private roads shall be arranged in advance. Any damage to private roads shall be repaired at the contractor's expense and to the satisfaction of the landowner. This shall be the responsibility of the project manager or coordinator.

1.8 Gates shall be left as they are found, i.e. closed gates shall be kept closed and open gates shall be left open. Gates to adjacent properties or onto public roads shall be closed at all times. Any Eskom gates installed on the line route shall be kept closed and locked except while stringing is taking place. Open gates shall be guarded to prevent animals straying and unauthorised persons and vehicles entering into adjacent camps or properties.

1.9 Permission shall be obtained from landowners before any water is used.

1.10 No fires shall be lit on private property. If fires are lit on Eskom's property or in the construction camp, provision shall be made that no accidental fires are started. No firewood shall be collected in the veld.

1.12 No property may be accessed after normal working hours except with the permission of the landowner. Privacy shall be respected at all times.

1.13 Eskom, Eskom's contractors and their employees shall at all times be courteous towards landowners, tenants and the local community.

1.14 Eskom, Eskom's contractors and their employees shall not cause damage to property, crops or animals. Activities that may cause conflict with landowners, tenants, the local work force or the local community shall be avoided. Should conflict arise it shall be immediately reported to the Eskom project manager or coordinator.

1.15 Vehicles shall be driven at a moderate speed on private roads and stay within the statutory speed limit on public roads.

1.16 All movement of vehicles shall take place on the established Eskom servitude road or on private roads as agreed in advance. Keep to existing tracks. No movement shall take place through the veld.

1.17 Special care shall be taken to prevent excess damage during wet weather.

1.18 If any vehicle should get stuck, the damage shall be repaired immediately so that no deep ruts remain.

1.19 Any damage to private property shall immediately be reported to Eskom and the owner. The damage shall be rectified immediately if possible and/or appropriate compensation shall be paid to the owner at the discretion of the project manager/coordinator in consultation with the property owner, Tender committee approval shall be obtained. A record of damages and rectifying action shall be kept. The landowner's satisfaction with the outcome of rectifying action shall be obtained in writing.

1.20 A proper system of waste management shall be instituted in the construction camp. This entails that sufficient waste bins are available on site and in the construction camp. The waste shall be dumped at an approved waste disposal site. No containers, scrap metal, conductor etc. shall be left on site. All scrap shall be removed and taken to an appropriate disposal site. No oil, diesel or other chemicals shall be spilled or discarded anywhere. If an accidental spill occurs, it shall be reported immediately and cleaned to the satisfaction of Eskom and the landowner. No waste shall be left in the veld or on the line route.

1.21 Washing and toilet facilities shall be provided on site and in the construction camp. The facilities shall comply with Eskom standards and shall have the approval of the landowner.

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1.22 Herbicides shall only be applied with Eskom's permission and in accordance with the Eskom Specifications

1.23 Camp and office sites shall be dismantled and removed after completion of the construction phase of the project. The site shall be rehabilitated to as close as possible to its original condition to the satisfaction of the landowner, which shall be in writing.

1.24 All excavations shall be enclosed to prevent animals or people from accidentally falling into excavations.

1.25 No trees shall be cut or removed without prior permission from the landowner. Permits shall be obtained for the cutting and removal of street side or protected trees (protected trees shall be dealt with in 2, **(Special conditions)**)

1.26 Should any natural heritage object be found, or exposed during excavations, all work shall be terminated immediately and the finding reported to the Project Manager who shall inform the Eskom Environmental Practitioner and the SAHRA.

ADDITIONAL SITE SPECIFIC CONDITIONS:

The Distribution Environmental Screening Document (DESD) for the above project is approved subject to compliance to the conditions of the Environmental Management Plan attached and the site specific conditions below:

RECOMMENDED FOR COMPLIANCE AUDITING DURING CONSTRUCTION?

Y

N

2 Special conditions

(Specific issues identified during the scoping as needing attention i.e. erosion berms, bird flappers, protected trees. etc.).

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.....
.....

Annexure C
(continued)

TYPICAL MITIGATION MEASURES

ENVIRONMENTAL CONCERNS	MITIGATION MEASURES
AGRICULTURE	
Loss of standing crop due to access road and tower work site.	<ul style="list-style-type: none"> - limit width of access and size of tower site. - avoidance of crop areas. - monetary compensation for crop loss. - time construction to avoid growing season.
Soil Compaction	<ul style="list-style-type: none"> - scheduling activities to times of the year when soils are least susceptible to compaction. - stop activities when ground conditions are poor. - use of equipment with low bearing capacity. - chisel ploughing.
Construction of new lines	<ul style="list-style-type: none"> - locate access roads along existing traffic routs.
Topsoil – subsoil mixing/soil rutting	<ul style="list-style-type: none"> - scheduling activities. - stop activity when ground conditions are poor. - use of equipment with low bearing capacity. - use of gravel roads. - addition of manures to offset fertility loss. - compensation for reduced soil pEAuctivity. - removal of spoil and/or bentonite from foundation operations. - Segregation of topsoil and subsoil.
Disturbance to farm operations	<ul style="list-style-type: none"> - maintain contact with landowner/tenant regarding preferences.
Loss of livestock	<ul style="list-style-type: none"> - employ noise control measures near sensitive livestock. - Construction of farm gates. - Securing farm gates. - Clean-up construction materials which could be ingested. - Compensation for lost, injured livestock.
SOCIAL IMPACTS	
Mud and Dust	<ul style="list-style-type: none"> - wetting down dry soils. - chemical control of dust. - cleaning roads to remove mud. - temporary planting of grasses.

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Annexure C
(continued)

Aesthetics	<ul style="list-style-type: none"> - screen with natural or planted vegetation restoration. - avoid linear access down the right-of-way. - addition of topsoil to gravel access roads. - hoarding construction sites. - installation of landscaping in advance of site completion.
Inconvenience	<ul style="list-style-type: none"> - select route and method of installation to suit landowners' conditions. - select timing of activity.
Heritage resources	<ul style="list-style-type: none"> - avoidance/isolation. - design measures to make facility less obtrusive. - screening. - alternate methods of equipment. - protection by use of enclosures, barrier fencing, covering. - salvage in conjunction with SAHRA. - relocation in conjunction with SAHRA.
Tourism and recreation resources	<ul style="list-style-type: none"> - design measures to make facility less obtrusive or disruptive. - screening and restoration. - minimise noise and dust. - safety precautions to protect the public. - scheduling to avoid peak use periods.
WATER QUALITY	
Sedimentation of streams due to erosion from the right-of way.	<ul style="list-style-type: none"> - minimise use of slopes adjacent to streams during soils testing, construction and maintenance. - maintain a cover crop. - retain buffers.
Stream bank erosion.	<ul style="list-style-type: none"> - mechanical erosion control. - retain shrubby stream bank vegetation and selectively cut or prune trees during line clearing/maintenance. - selective spraying of herbicides. - Mechanical erosion control.
Impedance of natural flow streams/others surface waters.	<ul style="list-style-type: none"> - use and maintenance of appropriate stream crossing device.
Ponding or channelization of surface waters due to rutting.	<ul style="list-style-type: none"> - timing activities to stable ground conditions. - use of gravel roads.
Contamination of surface or ground waters through spills or leaks of toxic substances.	<ul style="list-style-type: none"> - spill control material and procedures readily available. - site selection where possible.
Soil compaction/topsoil-subsoil mixing.	<ul style="list-style-type: none"> - avoidance of rutting by vehicles where possible. - construction timing. - use of gravel roads. - use of vehicles with low bearing pressures. - stop activities when ground conditions are poor.
Wind/water erosion.	<ul style="list-style-type: none"> - avoidance of areas with high erosion potential. - timing activities to the most stable ground conditions. - slope stabilisation. - mechanical erosion control. - vegetation erosion control. - Re-compaction of trenches. - avoid trenching parallel to the fall of a slope.

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Annexure C
(continued)

Contamination by petrochemicals.	<ul style="list-style-type: none"> - Spill control material and procedures made readily available. - Restoration methods investigated.
FAUNA & FLORA	
Loss of habitat, breeding and/or food source for terrestrial wildlife.	<ul style="list-style-type: none"> - Environmental mapping to identify sensitive areas. - avoidance of areas containing rare/endangered species. - Construction and maintenance activities to be timed where possible to avoid peak breeding periods. - the creation of "edge" (may be considered a positive impact.) - promotion of wildlife habitat through vegetation control. - avoid the filling of small wetlands. - use design with low risk to wildlife electrocution or collision - fit bird flight divertors to powerlines in bird migration areas.
Changes in composition of vegetation as a result of disturbance.	<ul style="list-style-type: none"> - construction timing to minimise soil disturbance. - restoration of soils to a stable condition.
Removal or burial of stream bottom habitat and increased turbidity due to sedimentation.	<ul style="list-style-type: none"> - Minimise erosion from the right-of-way by maintaining a cover crop. - Mechanical erosion control. - Minimise stream bank erosion by retaining shrubby bank vegetation and selective cutting, pruning of trees near watercourses. - Installation of sediment traps when necessary.
Possible loss of wildlife/fish migration/travel routes.	<ul style="list-style-type: none"> - Avoid filling small wetlands servings as staging areas for waterfowl migration. - Installation and maintenance of a proper stream crossing device. - time construction activities to avoid disturbance to migrating fish and wildlife or during breeding. - Follow Eskom standards for the application of herbicides near watercourses. - Preserve and/or augment existing natural corridor crossings; investigate tower placement to optimise clearances to preserve existing vegetation.
IntEAuction of exotic plant species resulting from vegetative erosion control.	<ul style="list-style-type: none"> - use of native species for erosion control.
Vegetation stress due to nutrient loss as a result of soil deterioration.	<ul style="list-style-type: none"> - erosion control measures.
Changes in vegetation due to soil disturbance (topsoil-subsoil mixing).	<ul style="list-style-type: none"> - time construction/clearing to take advantage of stable soil conditions.

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Annexure D- NEC3 Professional Services Contract

Please refer to the most recent NEC3 Professional Services Contract (PSC3) that can be obtained from National procurement

Please refer to the terms of reference and TOC selection process for process of appointing environmental consultants as per existing national environmental services contract (**Annexure G**)

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