	EMP Conditions	EMP / EA	Comment	Implemen ted (Y/N)
	Special Mitigation Measures			
1	Restriction of Working Areas It is important that activities are conducted within a limited area to facilitate control and to minimise impacts on the natural environment. For this reason the working areas and 'no-go' areas must be identified and clearly demarcated. Working areas are defined as those areas required by the Contractor to undertake construction. The Contractor shall ensure that all plant, labour and materials remain within the boundaries of the working area. The working area for the proposed Moorreesburg_Vyevlei 66 kV powerline and substation site will be defined as follows: 11 meters on either side of the centre of the 66 kV powerline. Proposed substation site. Care must be taken when working on private land owner's property - respect and consideration to these properties must be given high priority. In addition, farm roads and existing access roads can also be considered as working areas with	EMP		Y
	the permission of the landowners. All areas outside the working area shall be considered as 'no go' areas.			
	Objective: Minimise the impact of construction activities on the surrounding environment. Target: - No disturbance to the areas outside the working areas; and - Construction activities and materials, vehicles and staff to remain within the working areas.	EMP		Y

EMP Conditions	EMP / EA	Comment	Implemen ted (Y/N)
Procedure > From the outset of construction the working area especially the substation must be well demarcated with danger tape or any other appropriate method where possible. > All staff, vehicles and construction material are to be restricted to the working area. > The working areas are as defined above. > Vehicles, if parked on site, must have a clearly demarcated area. > Accommodation must be made for oil leaks that may occur from the vehicle sumps. This can be achieved by providing a sump or a drip tray for each vehicle that is later removed to be disposed of at a licensed hazardous disposal site. > Any machinery or stockpiles that may present a source of pollution during construction activities should be placed on an impermeable surface to prevent the run-off of the spillages into the water-courses. > All hazardous material must be stored in a secured area that is fenced and has restricted entry. > The stockpilling of materials needs to take place within the working area and not be allowed to spill over into vegetation. > Campsites, should they be required, must be erected outside of the 66 kV substation site and if possible, campsites must be identified on the farm with the permission from the farmer.	EMP	The Substation has a temporary fence around the boundary of the Eskom property. The powerline is divided into two servitudes. One being 22 meters in width and the other 28 meter in width. Construction of the new line will take place in the center of each servitude. Construction activities for the substation is confined to the Eskom property. Whereas, the construction activities for the the powerline is restricted to the servitude, existing access roads, access roads agreed upon by the land owners, laydown areas agreed by the land owners as well as the site offices/camp sites in Moorreesburg town. On 20/02/2015 an oil spill of approximately 200ml and one square meter was discovered at tower 65 by the ECO. The contractor, MEW, was informed of the incident and issued with a non-conformance. Refer to the incident documentation contained in the Incident section in the quaterly report.	Y
Objective: To minimise the impact on the surrounding environment and vegetation (wheat). Target: - Minimize disturbance to vegetation, i.e., wheat No open fires are permitted on site as there is a major threat of fire occurring, especially in the summer months.			
Procedure:	EMP		Y
> Contamination of the perennial crops due to dust pollution must be avoided at all times.	EMP	Dust pollution not an issue on site.	Y
> When working in farming areas the farmers' land, animals, wheat, crops etc must be treated with respect.	EMP		Y
> All staff, vehicles and construction material are to be restricted to the working area.	EMP	Working areas as defined above.	Y
> In cases where vehicles travel through open veldt, pasturelands etc., the general rule of one track in and one track out must be applied.		Restricted to working areas as defined above.	Y
> The stockpiling of materials needs to take place within the working area and not spill over into vegetation.	EMP		Y

EMP Conditions	EMP / EA	Comment	Implemen ted (Y/N)
> Vegetation clearing, if required, must be done under the supervision of the Contractor.	EMP		Y
> Vegetation clearing on the route as well as on the substation site must be undertaken in accordance with Eskom's standard (Unique Identifier: 32-247).	EMP		Y
> All bush cuttings, if of no use to the farmers must be removed from the site and disposed of at a licensed landfill site.	EMP		Υ
> Invasive plants must be controlled (invasive plants and weeds must be identified and controlled in such a manner that it is not introduced to the area and prevented from spreading).	EMP		Y
> Small to medium sized alien plants should be hand-pulled. Loppers should be used to cut plants that cannot be pulled out by hand to below ground level. This needs to be done in order to prevent resprouting.			Y
> Stump treatments (only a certified Pest Control Officer may be appointed) should be applied to larger sized trees where necessary.	EMP		Y
> The use of herbicides must be done according to Eskom's Standard for the safe use of pesticides and herbicides (Unique Identifier: 32-329).	EMP		Y
> Herbicide spraying of resprouting species should be undertaken immediately to minimize regrowth.	EMP		Y
> Should any protected trees be affected by the proposed activity, a permit application must be submitted to the Department of Agriculture and Forestry prior to removing the trees.	EMP	No protected trees identified on the line route or substation. 95% of the route is covered with wheat and agricultutal products.	
> Once the powerline is constructed, routine maintenance of the powerline will be necessary. All the above mitigating actions will then have to remain enforced.	EMP	Vegetation management as per procedure: Vegetation Management and Maintenance within Eskom Land Servittudes and Rights of Way (Unique Identifier: 32-247) and Contract specifications for vegetation management services (Unique Identifier: 240-52456757)	
3 Watercourses		No import on waters were	
Objective: - Minimise environmental impact on watercourses. - Strict erosion control measures are to be taken during and after construction to ensure no erosion of the bed or banks of a watercourse takes place. Target:	ЕМР	No impact on watercourses. General Authorisation (GA) obtained from the Department of Water Affairs for being within 100 meters of seasonal water streams and wet areas. Permit reference number: 16/1/1/6/6/7 dared 23 Sept 2014.)
No pollution and detrimental environmental impact to watercourses.	ļ	Compliant to GA.	<u> </u>
Procedure: > All sections and regulations of the National Water Act, 1998 (Act No. 36 of 1998) regarding water			Υ
use must be adhered to.	EMP		Y

EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
> In the case where a powerline crosses water resources and banks of watercourses are altered, then a license application needs to be done in terms of Section 40 of the National Water Act, 1998 (Act No. 36 of 1998) if the General Authorisation limits are exceeded in terms of Section 39.	EMP	GA obtained	Υ
> Water must not be used to suppress dust nuisance.	EMP	Construction water (not potable water) obtained from Swartland Municipality is being used for dust suppression at the Vyevlei SS.	
> Storm water management must be addressed both in terms of flooding and pollution potential.	EMP	No flooding or pollution control envisaged.	Y
> All relevant sections and regulations of the Environment Conservation Act, 1989, (Act No. 73 of 1998) regarding the disposal of solid waste must be adhered to.	EMP	See condition 8 and 9 of the EA	Υ
> Fuels, oils, hydraulic fluids, cement etc. must be stored in properly contained areas so as to minimize accidental spillage. Special care should be taken near seasonal watercourses.		Petrol, diesel and chemicals are stored at the camp site in a shed or cage which has drip trays or bunds underneath/ around to capture any spillages that might occur from the containers. Only the amounts necessary for a day is stored on site. Cement bags are stored indoors or on a pallet with suitable covering to prevent spillages in adverse weather conditions.	Y
> No pollution in the form of effluent, chemicals, or waste products should be allowed to run into any seasonal streams/ vleis.	EMP		Υ
> No structures to be placed within 32 m from a riverbed, a floodplain, wetland or seasonal streams.	EMP	All structures placed outside 32 meters of watercourses.	Υ
> Any water use activity that is not Schedule 1 water use must be registered and authorised by DWA.	EMP	GA obtained	Υ
> Authorisation for any development within 500m from any wetland must be obtained from DWA before it takes place.	EMP		Υ
> Storm water management plan must be put in place.	EMP		Υ
> No littering, waste disposal or other pollution of watercourses.	EMP		Y
> No fishing or bathing in watercourses.	EMP		Υ
> No driving in the watercourses	EMP	Only where existing farm roads/ bridges exist.	

	EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
3	Access			
	Objective: - Maintain the access currently used, except at the substation site where an access road will have to be created. However, if additional access is required, it must be negotiated and agreed upon with the farm owner. - Wheat must not be trampled by driving of construction vehicles. - In areas where there are no evident roads, great care must be taken not to create more tracks than are absolutely necessary. The general rule is one track in and one track out. - Ensure that property owners have unrestricted access to their properties. - Eskom or contract workers are not to deviate from the demarcated 11m from the centre line of the powerline.	EMD		Y
	Procedure:	EMP		Υ
	> Use existing access roads/tracks, particularly in the wheat farm land.	EMP	All wheat harvested prior to construction.	Y
	> No driving through watercourses, sensitive vegetation, etc.	EMP		Y
	> Should additional access tracks be required, the access must be agreed upon with the relevant property owner in conjunction with the contractor. A written agreement must be in place, prior to any construction of the said access route.		Making use of existing access roads/ tracks and areas prescribed by the land owners.	
	> Adequate provision to prevent erosion by the installation of earth berms at regular intervals must be made where necessary.	EMP	Erosion protection structures i.e. gabions and reno matrasses will be installed between structured 76-82 within the agricultural drainage channel	

EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
Oil Spill Management			
Objective - Prevent potential oil spills during the construction of the proposed powerline and substation.	EMP		Υ
Procedure:	EMP		Υ
> Fuels, oils, hydraulic fluids, cement etc. must be stored in properly contained areas so as to minimize accidental spillage.	EMP	Petrol, diesel and chemicals are stored at the camp site in a shed or cage which has drip trays or bunds underneath/ around to capture any spillages that might occur from the containers. Only the amounts necessary for a day is stored on site.	Y
> No hazardous or toxic chemicals or substances should be stored where there could be accidental leakage into subterranean water supplies.	EMP		Υ
> Fuel and oil storage area to be hardened and bunded in order to minimise pollution of the environment.	EMP	Petrol, diesel and chemicals are stored at the camp site in a shed or cage which has drip trays or bunds underneath/ around to capture any spillages that might occur from the containers. Only the amounts necessary for a day is stored on site.	Y
> Accommodation must be made for oil leaks that may occur from vehicle sumps. This can be achieved by providing a sump or drip tray for each vehicle that is later removed from site to be disposed of at a licensed hazardous disposal site.	EMP	Drip trays and checks are part of the prevention and mitigation measures mentioned in the Eskom Oil Spill Management Instruction (240-79588150). A non-conformance (NC) was issued to MEW for not conforming to the requirements of using drip trays as a preventative measure on 20/02/2015. The NC is in progress.	Y
> All spills must be reported to the environmental department within 24 hours of the spill via a flash report.	EMP	The minor oil spill incident which took place on 20/02/2015 has been cleaned. The amount of hydrailic oil spilled was less than 200ml. Details on the incident can be found in the Incident Section of the quaterly report.	Υ
> The contractor should be in possession of a mobile oil spill kit and/ or a wheely bin should be available on site.	EMP	. , ,	Y
> A mobile kit can be acquired from Drizit at Tel. No. (021) 425 5187 (see the rest of oil spill emergency contractors on page 25 of this EMP).	EMP		Υ
> The Oil Spill Clean-up and Rehabilitation under the Waste Management Procedure (Ref.No: 32-245) needs to be implemented (refer to APPENDIX 2 for the Waste Management Procedure).	EMP		

EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
Fauna			
Objective: Prevent and minimise impact on fauna including birds. When working in farming areas the farmers' animals must be treated with respect. Any tortoises or other reptiles found should be relocated to places of safety and not harmed in any way. If work is done in summer, tortoises are very evident and can easily be caught and relocated elsewhere. All activities on site must comply with the regulations of the Animal Protection Act, 1962 (Act No. 71 of 1962). All construction workers must be informed that the intentional killing of any animal is not permitted as faunal species are a benefit to society. Poaching is illegal and it must be a condition of employment that any employee caught poaching will be dismissed. Employees must be trained on how to deal with fauna species as intentional killing will not be tolerated. In the case of a problem animal e.g. a large snake a specialist must be called in to safely relocate the animal if the ECO is not able to. Environmental induction training and awareness must include aspects dealing in safety with wild animals on site. Focus on animals such as snakes and other reptiles that often generate fear by telling workers how to move safely away and to whom to report the sighting. Workers should also be informed where snakes most often hide so that they can be vigilant when lifting stones etc. Employees and contractors alike should be sensitised to the fact that they are working on private farms and ALL fauna and flora must be treated with respect.	ЕМР		
Target: - Prevent injury and harm to birds and animals (including farm animals).		A dead jackal was found at tower 7. Refer to the Incident section of the quaterly report for information.	
Procedure:			Υ
> There have been no historic incidents of bird electrocution or collision along the study area. However, Endangered Wildlife Trust (EWT) will be used during the operational phase of the project to mitigate electrocution and collision of any bird species and provide guidance on applicable minimum setback near the different sensitive areas.	EMP		Y
> Bird flappers and/ or diverters to mitigate bird collisions will be put in place where the proposed powerline runs along the dams.	EMP		Υ
> Demarcate substation site where possible to prevent accidental injury and harm to animals.	EMP	Substation is temporarily demarcated. Permanent pallisade fencing to be istalled around the substation.	Y
> Notify landowners to move their cattle, sheep etc away from construction areas where relevant.	EMP		Y
> There shall be no pilfering of domestic animals and birds.	EMP		

	EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
6	Soil Erosion			
	Objective: - Prevent soil erosion Strict erosion control measures are to be taken during and after construction to ensure no erosion of roads and the bed or banks of a watercourse takes place In cases where vehicles travel through open veldt, pasturelands etc., the general rule of one track in and one track out must be applied	EMP	Erosion protection structures i.e. gabions and reno matrasses will be installed between structured 76-82 within the agricultural drainage channel	
	Procedure:			Υ
	> Vehicles to use the current access route and the one that will be created to access the proposed substation.	EMP		Y
	> If roads are damaged due to construction activities, it will be the responsibility of the responsible construction contractor to rehabilitate the roads to a state they were before construction.	EMP		Y
	> All construction activities to be undertaken within the working area.	EMP		
	Use of cement/ concrete			
	Objective: - Prevent ground pollution.	EMP		
	Procedure:			Υ
	> Concrete shall be mixed on mortar boards, and not directly on the ground.	EMP		Υ
	> The visible remains of the batch plant and concrete, either solid, or from washings, shall be physically removed immediately and disposed of as waste in a registered landfill site.	EMP	No batch plant on site. The substation might have a cement mixing machine once foundations needs to be casted. Cement mixing only permitted in designated areas with a bund walls/ area lined with plastic and have elevated sides to function as a containment area.	Y
	> Washing the visible signs into the ground is not acceptable.	EMP		Υ
	> All aggregate and cement bags shall also be removed.	EMP		

EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
Refuse and Waste Management			
Objective: - Limit the potential of site pollution and the accumulation of waste materials on site. Target: - No waste and/ or refuse are to be stored on site for longer than 2 months All waste must be removed off site and dispose of at a licensed landfill site.	EMP		
Procedure:			Υ
> Solid waste must be managed in accordance with the requirements of the relevant legislation.	EMP	Line: MEW makes use of Moorreesburg Municipal waste collection and disposal services. The Municipality temporarily stored waste at the Moorreesburg transfer station before taking the waste to Malmesbury Highlands Waste Disposal Facility. Cannot find waste license for Moorreesburg transfer station used by Moorreesburg Municiplaity. Malmesbury Highlands landfill is registered (license number: B33/2/442/1/S/P67). Line: Roshcon disposes of waste at the Vissershok licensed waste disposal facility. Receipts are on file. Substation: Adenco and Westland Civils take their waste to Malmesbury Highlands Waste Disposal Facility after purchasing coupons from Swartland Municipality (Malmesbury).	Y
> The main contractor is responsible for cleaning-up at the end of construction.	EMP		Y
> The Contractor shall not dispose of any waste and/ or construction debris by burning or burying.	EMP		Y
> The use of waste bins, refuse bags and/or skips is recommended.	EMP		Υ
> The bins shall be provided with lids to prevent contents blowing out.	EMP		Υ
> The Contractor shall ensure that all waste is deposited in the waste bins for removal by the Contractor, or if Eskom is responsible for construction, remove it to an approved Municipal waste site.	EMP		Y
> Bins shall not be used for any purposes other than waste collection and shall be emptied on a regular basis.	EMP		Υ

EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
		Roshcon: Uses Boland Toilets	
> Temporary ablution facilities (i.e. Chemical toilets) must be made available and used. A	EMP	MEW: Uses Econoloo	Y
minimum of one chemical toilet must be provided per 15 persons. > Abluting anywhere other than in the toilet facilities available shall not be permitted (i.e. no abluting in the veldt).	EMP	Substation: Swartland Toilets	Y
> Chemical toilets utilised during construction to be properly located such that they do not pose risk of water resource pollution and its contents must be disposed of at an authorised facility.	EMP		Y
> Servicing and cleaning of vehicles is strictly prohibited in the access roads, working areas and in the veldt.	EMP		Y
	EMP	Line: MEW makes use of Moorreesburg Municipal waste collection and disposal services. The Municipality temporarily stored waste at the Moorreesburg transfer station before taking the waste to Malmesbury Highlands Waste Disposal Facility. Cannot find waste license for Moorreesburg transfer station used by Moorreesburg Municpilaity. Malmesbury Highlands landfill is registered (license number: B33/2/442/1/S/P67).	
> All waste shall be disposed of off site at a licensed landfill site.		Line: Roshcon disposes of waste at the Vissershok licensed waste disposal facility. Receipts are on file. Substation: Adenco and Westland Civils take their waste to Malmesbury Highlands Waste Disposal Facility after purchasing coupons from Swartland Municipality (Malmesbury).	

	EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
9	Archaeological			
	Objective: - To ensure that any archaeological findings during the construction process is managed accordingly.	EMP	No archaelogical material found on site as of yet.	
	Procedure:			Accept
	> If any archaeological material (e.g. fossils, bones, artefacts etc) is found during final pegging as well as during construction, the contractor shall stop work immediately.	EMP		Accept
	> The ECO (Nokhuthala Hlongwana) shall inform Heritage Western Cape (HWC) and arrange for a palaeontologist/ archaeologist to inspect, and if necessary excavate, the material, subject to acquiring approval from HWC.	EMP		Accept
	> The Contractor shall not recommence working in that area until written permission has been received from the ECO.	EMP		
10	Noise Pollution/Vibration			
	Objective: - Avoid disturbing the local community When near residential areas, consideration must be shown for the residents of those areas.	EMP		
	Procedure:			Υ
	> Where possible the contractor must use equipment which falls within the allowable noise/vibration limits.	EMP		Y
	> All noise/ vibration generating activities must be scheduled between 7am - 7pm Mondays to Fridays and weekends as required and with the permission of the landowner.	EMP		Υ
	> Any complaints pertaining to noise must be reported to the ECO and addressed.	EMP	No noise complaints received from the public	
11	Security Camp (if required)			
	Objective: - Manage the impact the security camp has on the environment.	EMP		
	Procedure:			Υ
			Security at MEW camp site for which a lease agreement is in place.)
	> The security contractor is to obtain the permission from the landowner (if not on Eskom property) before the security camp is established on site.	EMP	Security at the substation is also located in the Adenco and Westland Civils camp i.e. Eskom property.	
	> The security contractor shall provide water and/ or washing facilities at the camp for personnel.	EMP		Υ
	> The security camp shall be kept neat and tidy and free of litter.	EMP		Y
	> The security contractor shall provide the necessary ablution facilities for all his personnel.	EMP	Chemical toilets available	Υ

	EMP Conditions	EMP/EA	Comment	Implemen ted (Y/N)
	> Chemical toilets shall be used. The toilets shall be secured to prevent them from blowing over, and shall be provided with an external closing mechanism to prevent toilet paper from being blown out. Toilet paper shall be provided in all toilets. The security contractor shall ensure that chemicals and/ or waste from toilet-cleaning operations are not spilled on the ground at any time.	EMP		Y
	> Abluting anywhere other than in the toilets shall not be permitted.	EMP		Υ
	> Closed fires or stoves shall only be permitted at a designated safe site to be determined by the PC.	EMP		Y
	> Fires shall not be permitted near any potential sources of combustion, such as near vehicles, fuel storage area, vegetation etc.	EMP	No fires made by security.	Y
	> Extreme care MUST be taken that no open cooking fires are made. The major fire threat is in summer. Much of the surrounding pasturelands and exotic stumps of trees will burn during the dry summer months.	EMP		
12	Site Rehabilitation			
	Objective: - To restore any degradation caused by the construction activities. - Rehabilitate the disturbed and degraded areas to sustain a bio-diverse ecosystem. Target: Site rehabilitation to be completed within three months of construction or by an elternative data.	EMP	To be implemented by the ECO once the conductor is	
	 Site rehabilitation to be completed within three months of construction or by an alternative date stipulated by the ECO. 		strung and with the final line walkdown and snaglist.	
	Procedure:			Y
	> All recommendations made by an ECO must be adhered to.	EMP		Υ
	> All construction equipment and excess aggregate, gravel, stone, concrete, bricks, temporary fencing and the like shall be removed from the site upon completion of the work.	EMP		Y
	> No discarded materials of any nature shall be buried on the site or on any other land within the site.	EMP		Y
13	Air Quality			
	> No burning of waste material, such as vegetation from any clearing operations is allowed;	EMP		Y
	> Drive at moderate speeds on the access road in order to minimise or avoid dust pollution.	EMP		Y
14	Water Quality			
	> Under no circumstances must surface or ground water be polluted. Ground or surface water pollution could occur as a result of spillages or the incorrect usage of oil, petrol, cleaning materials, herbicides, etc.	EMP		Y

	EMP Conditions	EMP / EA	Comment	Implemen ted (Y/N)
15	Land Management			
	> All fauna (including domestic livestock) within and around the substation and/ or powerline shall be protected. Birds and animals shall not be caught or killed by any means, including poisoning, trapping, shooting or setting of snares. Offenders may be prosecuted in terms of CNC Ordinance 19 of 1974;	EMP		Y
	> No fences or gates of property owners must be damaged. The condition of Eskom gates and locks must be regularly monitored to ensure they are secure (i.e. to prevent animals getting out or access by unauthorised personnel). The access gates to the substation must always be closed and locked when daily construction activities are completed;	EMP		Y
	> Soil erosion must be prevented at all times along the access road, along the powerline route as well as in the substation sites;	EMP		Υ
	> Bush clearing on the route or around the substation must be in accordance to Eskom's Bush Clearing Standard (Reference – 32-247);	EMP		Y
	> No bush clearing to be undertaken without the knowledge thereof by the property owner.	EMP		Υ
16	Socio-Cultural Issues			
	> A plan of action should be drawn up in the case of an emergency (veldt fire, damaged powerline,	EMP	Construction staff have an emergency preparedness plan.	Y
	vegetation problems etc.). Eskom contact names and telephone numbers must be available on site;		Emergency numbers available and displayed on site.	
	> Property owners or occupiers must be treated with respect and courtesy at all times;	EMP		Y
	> The culture and lifestyles of the communities living in close proximity to the substation and the powerline must be respected;	EMP		Y
	> Removal (pilfering) of agricultural products is prohibited. Receipts must be obtained for any merchandise purchased or received from landowners;	EMP		Y
	> Vehicles must be driven carefully in hazardous road conditions (sharp bends, narrow roads, bad weather, children playing on or near the road, domestic animals on or near the road etc.).	EMP		Y
	> Vehicle movement should be kept to a minimum during rainy days to avoid damage to the access road;	EMP		Y
	> Environmental clauses (as referred to in this EMP) must be included into the contract documents for all contractors;	EMP	EMP and EA forms part of contract documentation	Υ
	> Tribal graves, archaeological sites and sites of historical interest in close proximity to the substation and the powerline are to be treated with respect and protected.	EMP		Υ
	> No firewood is to be collected except with the written consent of the landowner;	EMP		Υ
	> A register must be maintained of all complaints or queries received as well as action taken.	EMP		Y