



Your Reference: 16/2/7/J300/A/7

28/5/2013

Our Reference: ESK-OUTD-COR-004

Department of Water Affairs
Private Bag X16
Sanlamhof
7532
Attention: Deugald Jephtha

PROPOSED ESKOM OUTENIQUA-OUTDSHOORN 132KV POWERLINE INSTALLATION: SECTION 21 (c) & (i) APPLICATIONS

With reference to your letter regarding the above matter, we would herewith like to present our preliminary findings and recommendations.

After consultation with yourself on 26 April 2013, we conducted a site visit to all the affected water courses along the Red Route to assess the potential impact of the power line pylons on the beds and banks or potential flow impediments. 15 potential impact sites were identified for the site visit as depicted in the figure below:



Figure 1: ESKOM OUTENIQUA - OUTDSHOORN 132KV POWERLINE ROUTE

The aim of this report is to identify the sites for which Section 21 (c) & (i) General Authorisation Applications must be submitted. As discussed at our meeting the following criteria were considered; the existence of 1:100 year flood line delineations, the 100m restriction in the absence of such a flood line, the 32m buffer zone considered by the Depart of Environmental Affairs (DEA) and lastly, the extent of the water course and associated riverine vegetation.

During our investigation it was considered whether it would be possible for the proposed pylons to span the river without compromising the above restrictions and thus avoid any impact on the water course's beds, banks or flow regime. Our consideration was influenced by the size of the water course (width), shape of the valley and presence of existing power line structures. (See Annexure)

It must be noted that the power line's planning is still at an early stage and that the pylon positions have not yet been determined. The Department of Water Affairs (DWA) however require the exact pylon coordinates to appear on the application forms. It is therefore assumed that the recommendations of this report and the Freshwater Assessment Study dated August 2012 by Ms T Belcher will be taken on board and dictate the pylon positions at water course crossings.

It is thus our conclusion that out of the potential 15 impact sites considered, only the following 4 proposed river crossings require further investigation and preliminary applications for Section 21 (i) water uses.

Number	Name	Latitude:	Longitude:
Crossing No 9	Dam on tributary of Doring River	X: 33°39'26.90"S	Y: 22°19'8.71"E
Crossing No 10	Doring River (North)	X: 33°39'17.72"S	Y: 22°18'56.16"E
Crossing No 14	Kammanassie River	X: 33°37'31.57"S	Y: 22°15'26.47"E
Crossing No 15	Olifants River	X: 33°36'51.03"S	Y: 22°15'14.30"E

We therefore recommended that Section 21 (i) applications be drawn up for the above 4 river crossings and submitted for processing to the Department of Water Affairs and once the final pylon positions are known the applications be amended to the reflect the exact pylon coordinates.

We further recommend that once all the pylon positions are known they be evaluated for conformity with the restrictions imposed on their locations by this report in accordance with the DWA and DEA requirements as well as the requirements of Ms T Belcher's report.


We trust that you find this report and its findings and recommendation acceptable and we would like to get your response and direction on the way forward.


Yours sincerely,




Meyer de Villiers Pr. Eng.
for Sustainable Engineering Solutions


ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 1			
NAME	Unnamed Tributary of Tributary		
COORDINATES	X: 33°45'49.22"S	Y: 22°21'20.64"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 2	FARM: 27	
OWNER	Martin Truter Trust		
POSTAL ADDRESS	PO Box 862, Oudtshoorn, 6620		
CONTACT NUMBERS	TEL: 044 272 7024	FAX:	
DESCRIPTION:	Eroded, dry, shallow, donga running into earth dam. No aquatic life visible. No riverine vegetation visible.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES		NO ✓
MOTIVATION	Small, dry and shallow eroded donga. No aquatic life visible. No riverine thicket visible. Possible to span tributary without impacting the drainage line.		


CROSSING NO 2			
NAME	Unnamed Tributary of Doring River		
COORDINATES	X: 33°45'13.41"S	Y: 22°21'32.89"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 2	FARM: 27	
OWNER	Martin Truter Trust		
POSTAL ADDRESS	PO Box 862, Oudtshoorn, 6620		
CONTACT NUMBERS	TEL: 044 272 7024	FAX:	
DESCRIPTION:	Eroded, dry, shallow, donga running below earth dam. Aquatic life possible. Some riverine vegetation visible.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES		NO ✓
MOTIVATION	Small, dry and shallow eroded donga. Limited riverine thicket visible. Possible to span tributary without impacting the drainage line as per existing power line.		


ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 3				
NAME	Doring River (South)			
COORDINATES	X: 33°43'54.35"S	Y: 22°22'1.38"E		
QUARTEARNARY DRAINAGE				
FARM	PORTION: Remainder	FARM: 19		
OWNER	Joli Farming and Allied Activities CC			
POSTAL ADDRESS	PO Box 163, De Rust, 6650			
CONTACT NUMBERS	TEL: 021 788 6085	FAX:		
DESCRIPTION:	Flowing river in deep ravine. Aquatic life assumed. Dense riverine vegetation and trees present.			
PHOTOS:				
STATUS:	RIVER ✓	TRIBUTARY		
PYLON LOCATION	>100m ✓	<100m	>32m	<32m
SECTION 21 (i) REQUIRED:	YES	NO ✓		
MOTIVATION	Existing pylons span ravine by more than 100m both sides and well outside 1:100 year flood line without affecting the riverine vegetation, beds or banks of the river.			

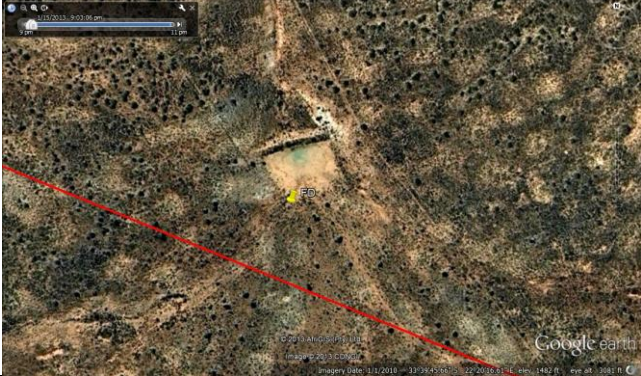
CROSSING NO 4				
NAME	Unnamed Tributary of Doring River			
COORDINATES	X: 33°42'40.44"S	Y: 22°22'29.12"E		
QUARTEARNARY DRAINAGE				
FARM	PORTION: Remainder	FARM: 19		
OWNER	Joli Farming and Allied Activities CC			
POSTAL ADDRESS	PO Box 163, De Rust, 6650			
CONTACT NUMBERS	TEL: 021 788 6085	TEL: 021 788 6085		
DESCRIPTION:	Dry, shallow, stream running below earth dam. Aquatic life possible. Riverine vegetation visible below dam.			
PHOTOS:				
STATUS:	RIVER	TRIBUTARY ✓		
PYLON LOCATION	>100m	<100m	>32m ✓	<32m
SECTION 21 (i) REQUIRED:	YES	NO ✓		
MOTIVATION	Small, dry and shallow stream. Limited riverine thicket visible. Possible to span tributary without impacting the stream or dam.			


ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 5			
NAME	Tributary of Tributary of Doring River		
COORDINATES	X: 33°42'23.02"S	Y: 22°22'34.75"E	
QUARternary DRAINAGE			
FARM	PORTION: Remainder	FARM: 19	
OWNER	Joli Farming and Allied Activities CC		
POSTAL ADDRESS	PO Box 163, De Rust, 6650		
CONTACT NUMBERS	TEL: 021 788 6085	FAX:	
DESCRIPTION:	Barely noticeable drainage line with no evidence of flowing water.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES	NO ✓	
MOTIVATION	Existing pylons span drainage line well outside 32m buffer zone and has no affect on riverine vegetation, beds or banks of the drainage line.		


CROSSING NO 6			
NAME	Tributary of Doring River		
COORDINATES	X: 33°40'8.14"S	Y: 22°20'57.73"E	
QUARternary DRAINAGE			
FARM	PORTION: Remainder	FARM: 168	
OWNER	Bennie Stander		
POSTAL ADDRESS	PO Box 450, Oudtshoorn, 6620		
CONTACT NUMBERS	TEL: 044 272 5046	CEL: 082 824 6834	
DESCRIPTION:	Well defined, narrow river bed with evidence of occasional flooding and well developed river thicket and trees.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES	NO ✓	
MOTIVATION	Existing pylons span narrow tributary well outside 32m buffer zone and has no affect on river thickets, trees, beds or banks of the tributary.		


ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 7				
NAME	Dam			
COORDINATES	X: 33°39'50.06"S		Y: 22°20'26.12"E	
QUARternary DRAINAGE				
FARM	PORTION: Remainder		FARM: 168	
OWNER	Bennie Stander			
POSTAL ADDRESS	PO Box 450, Oudtshoorn, 6620			
CONTACT NUMBERS	TEL: 044 272 5046		CEL: 082 824 6834	
DESCRIPTION:	Dry dam.			
PHOTOS:				
STATUS:	RIVER N/A		TRIBUTARY	
PYLON LOCATION	>100m N/A	<100m	>32m	<32m
SECTION 21 (i) REQUIRED:	YES		NO ✓	
MOTIVATION	Power line route misses dam location. This application not necessary.			


CROSSING NO 8				
NAME	Tributary of Doring River			
COORDINATES	X: 33°39'34.28"S		Y: 22°19'26.03"E	
QUARternary DRAINAGE				
FARM	PORTION: 10		FARM: 139	
OWNER	Morne Jonker			
POSTAL ADDRESS	PO Box 599, Oudtshoorn, 6620			
CONTACT NUMBERS	TEL: 044 203 3071		CEL: 083 584 5121	
DESCRIPTION:	Short, well defined, narrow river bed with steep banks and some river thickets.			
PHOTOS:				
STATUS:	RIVER		TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓	<32m
SECTION 21 (i) REQUIRED:	YES		NO ✓	
MOTIVATION	Pylons can easily span narrow valley well outside 32m buffer zone and should have no affect on river thickets, beds or banks of the tributary.			

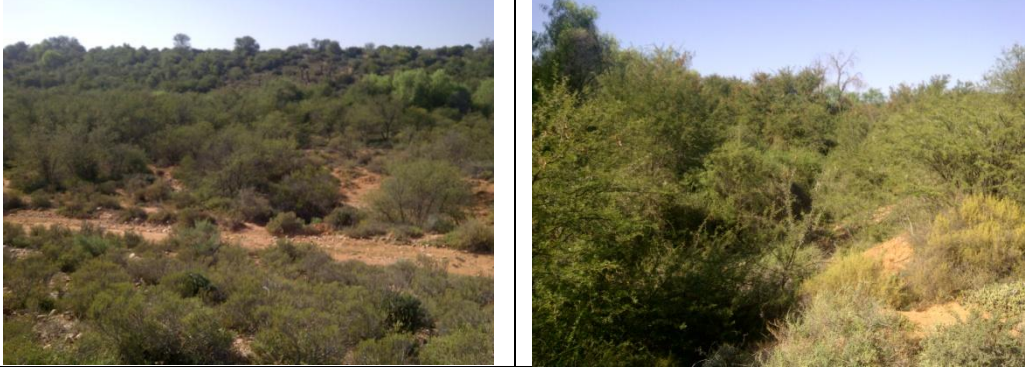
ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 9			
NAME	Dam on tributary of Doring River		
COORDINATES	X: 33°39'26.90"S	Y: 22°19'8.71"E	
QUARternary DRAINAGE			
FARM	PORTION: 10	FARM: 139	
OWNER	Morne Jonker		
POSTAL ADDRESS	PO Box 599, Oudtshoorn, 6620		
CONTACT NUMBERS	TEL: 044 203 3071	CEL: 083 584 5121	
DESCRIPTION:	Larger tributary flowing into a dam. Dry, but with clear signs of flooding. Well developed riverine vegetation along the banks. Steep valley slopes.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m <32m ✓
SECTION 21 (i) REQUIRED:	YES ✓		NO
MOTIVATION	Pylons of turn point on power line route possibly closer than 32m from top of dam and river bank. Pylon position will be above full water supply level of dam.		


CROSSING NO 10			
NAME	Doring River (North)		
COORDINATES	X: 33°39'17.72"S	Y: 22°18'56.16"E	
QUARternary DRAINAGE			
FARM	PORTION: 10	FARM: 139	
OWNER	Heinrich Jonker - Kumquat Pty Ltd		
POSTAL ADDRESS	PO Box 599, Oudthoorn, 6620		
CONTACT NUMBERS	TEL: 044 203 3071	CEL: 083 584 5121	
DESCRIPTION:	Medium sized river with sandy river bed, wide flood plain, multiple channels with reed beds and trees.		
PHOTOS:			
STATUS:	RIVER ✓	STATUS:	
PYLON LOCATION	>100m	<100m ✓	>32m <32m
SECTION 21 (i) REQUIRED:	YES ✓		NO
MOTIVATION	Pylons will be within 100m from river's edge in the absence of 1:100 year flood lines.		


ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 11			
NAME	Tributary of Kammanassie River		
COORDINATES	X: 33°38'11.98"S	Y: 22°16'25.65"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 74	FARM: 141	
OWNER			
POSTAL ADDRESS			
CONTACT NUMBERS			
DESCRIPTION:	Medium sized, well defined, dry river bed with wide valley banks and plenty of river thicket and trees.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES	NO ✓	
MOTIVATION	Pylons can easily span valley well outside 32m buffer zone and should have no affect on river thickets, beds or banks of the tributary.		


CROSSING NO 12			
NAME	Tributary of Kammanassie River		
COORDINATES	X: 33°38'7.51"S	Y: 22°16'2.99"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 74	FARM: 141	
OWNER			
POSTAL ADDRESS			
CONTACT NUMBERS			
DESCRIPTION:	Small, well defined, dry river bed with wide valley banks and plenty of river thicket and trees.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES	NO ✓	
MOTIVATION	Pylons can easily span valley well outside 32m buffer zone and should have no affect on river thickets, beds or banks of the tributary.		

ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 13			
NAME	Tributary of Kammanassie River		
COORDINATES	X: 33°38'4.32"S	Y: 22°15'47.46"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 74	FARM: 141	
OWNER			
POSTAL ADDRESS			
CONTACT NUMBERS			
DESCRIPTION:	Very small, shallow, eroded river bed with a little bit of water. Poorly defined valley and narrow strip of riverine thicket.		
PHOTOS:			
STATUS:	RIVER	TRIBUTARY ✓	
PYLON LOCATION	>100m	<100m	>32m ✓ <32m
SECTION 21 (i) REQUIRED:	YES	NO ✓	
MOTIVATION	Pylons can easily span valley well outside 32m buffer zone and should have no affect on river thickets, beds or banks of the tributary.		

CROSSING NO 14			
NAME	Kammanassie River		
COORDINATES	X: 33°37'31.57"S	Y: 22°15'26.47"E	
QUARTERNARY DRAINAGE			
FARM	PORTION: 36	FARM: 141	
OWNER	Provincial Government, Western Cape		
POSTAL ADDRESS	Private Bag X9078, Cape Town		
CONTACT NUMBERS	TEL: 044 272 6077	Cel: 082 653 9888	
DESCRIPTION:	Medium sized river with multiple channels, wide flood plain, reed beds and trees lining river.		
PHOTOS:			
STATUS:	RIVER ✓	TRIBUTARY	
PYLON LOCATION	>100m	<100m ✓	>32m <32m
SECTION 21 (i) REQUIRED:	YES ✓	NO	
MOTIVATION	Pylons will be within 100m from river's edge in the absence of 1:100 year flood lines.		

ANNEXURE 1: SUMMARY OF SITE INVESTIGATION

CROSSING NO 15			
NAME	Olifants River		
COORDINATES	X: 33°36'51.03"S	Y: 22°15'14.30"E	
QUARternary DRAINAGE			
FARM	PORTION: 72	FARM: 141	
OWNER	Leon Nortier Boerdery Trust		
POSTAL ADDRESS	PO Box 356, Oudthoorn, 6620		
CONTACT NUMBERS	TEL: 044 272 6418	CEL: 082 517 1404	
DESCRIPTION:	Medium sized river with multiple channels, wide flood plain, reed beds and trees lining river.		
PHOTOS:			
STATUS:	RIVER ✓		STATUS:
PYLON LOCATION	>100m	<100m ✓	>32m <32m
SECTION 21 (i) REQUIRED:	YES ✓		NO
MOTIVATION	Pylons will be within 100m from river's edge in the absence of 1:100 year flood lines.		