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Let002 - Application to DRE Sarah Baartman

28 August 2020

District Roads Engineer
Province of the Eastern Cape
Department of Transport
P O Box 11100
ALGOA PARK
6005

Attention: Mr Randall Moore

Dear Sir

PROPOSED CHOJE WIND FARM DEVELOPMENT: APPLICATION FOR THE PROPOSED REPAIR, UPGRADE AND MAINTENANCE OF AFFECTED PROVINCIAL SURFACED AND UNSURFACED (GRAVEL) ROADS IN THE MAKANA AND BLUE CRANE ROUTE LMA'S

Engineering Advice and Services was appointed by Wind Relic (Pty) Ltd during November 2018 for the Preliminary Design of Access Roads, Turbine Platforms and Related Civil Engineering Works for the Proposed Choje Wind Farm Development.

The Choje Wind Farm development areas are located in the Makana LMA (referred to as the Eastern Development Area) and the Blue Crane Route LMA (referred to as the Western Development Area). **Figures 1** and **2** here below display the locality of the Eastern and Western Development Areas respectively.

Access to the proposed Eastern Development Area is proposed via the N2 between Port Elizabeth and Grahamstown, and the R350 between Grahamstown and Bedford. Access to the proposed Western Development Area is proposed via the N10 between Nanaga and Golden Valley.

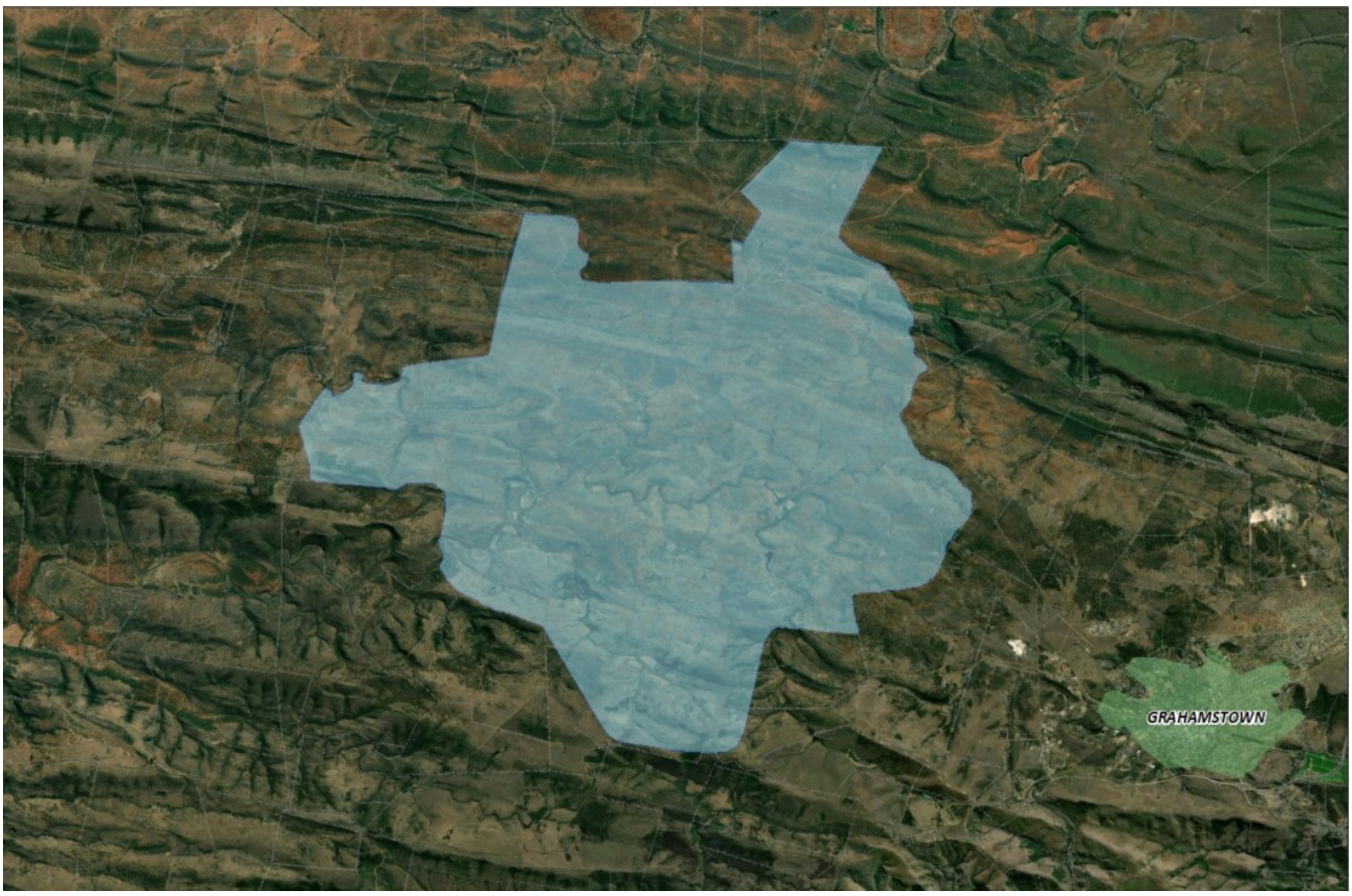


Figure 1 – Eastern Development Area

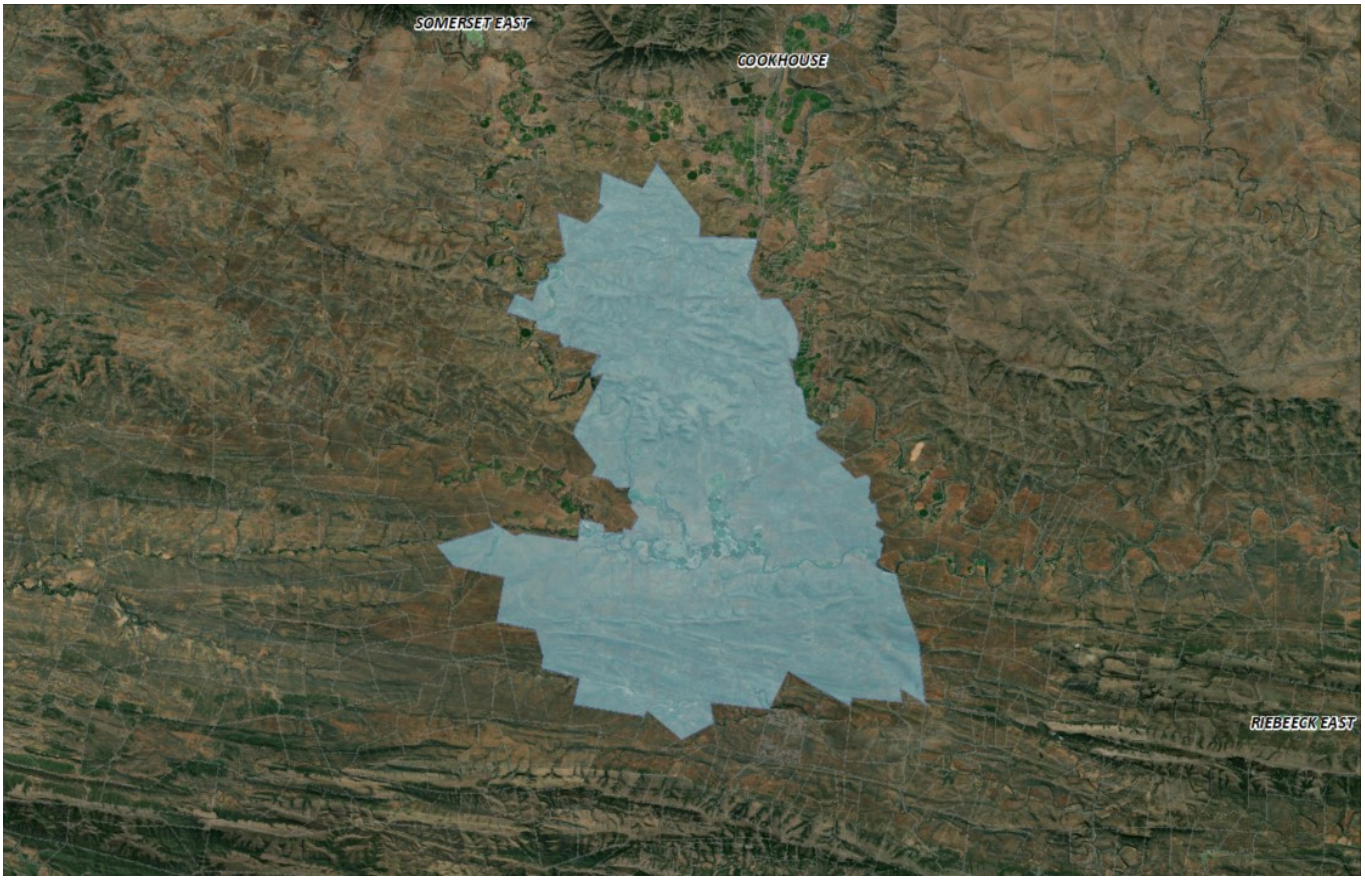


Figure 2 – Western Development Area

The routes along which materials, components, plant and equipment will be supplied to the respective turbine sites will be the National and Provincial Roads abutting and traversing the Proposed Choje Wind Farm Development. Note - Abnormal vehicles transporting the turbine components are in the order of 45m long, requiring the following minimum road geometric standards (horizontal and vertical alignment requirements) - see Table 1.

Table 1: Geometric Design Criteria (Abnormal Vehicles)

Design Criteria	Requirement
Minimum Clearance Width	6.0 m
Minimum Clearance Height	4.5 m
Radius of Curve Centreline	65.00 m
Gradient - Loose Surface (Gravel)	≤ 10 %
Gradient – Bituminous Surface	≤ 12 %
Radius of Hilltop (Crest) / Bottom of Valley (Sag)	700 m
Minimum Vertical Curve Length	30.0 m
Minimum K-value (Curve Length / Grade)	9

A number of provincial roads pass through the Proposed Choje Wind Farm Development (East and West), which roads are listed in **Tables 2** and **3** here below. It should be noted that the existing provincial surfaced and unsurfaced road network is in a fair to poor condition, particularly the minor road network and low-volume district roads, mainly due to ongoing budgetary constraints.

Further, a number of provincial roads and / or sections thereof do not meet the criteria listed in **Table 1** above, and as such the developer intends to repair and / or upgrade these provincial roads or sections thereof where necessary, in order to accommodate the abnormal vehicles and loads, ensuring the uninterrupted and safe delivery of resources, materials, components and the like to the respective turbine sites.

In addition to horizontal and vertical alignment improvements, the developer also undertakes to repair and regravel provincial unpaved (gravel) roads that will be serving the Proposed Choje Wind Farm Development, the scope of work will amongst other include the repair, replacement, and / or upgrading of watercourse pipe crossings and structures. The developer further proposes to routinely blade / maintain those provincial unpaved (gravel) roads serving the turbine sites for the duration of construction of the respective turbine sites.

Tables 2 and **3** here below summarize the relevant provincial roads, the affected length, as well as the scope of work proposed by the developer for the Eastern and Western Development Areas.

Table 2: Eastern Development Area – Affected Provincial Roads and Proposed Scope of Works (Surfaced (S) / Unsurfaced (U)

Road Name	Length of Road (km)	Proposed Repair Intervention	Proposed Maintenance Intervention
MR00477 (S)	14.4	Pothole, Base and Surface Repairs	Pothole, Base and Surface Repairs when required
MR00480 (U)	4.8	Reshape and Regravel	Wet Blade / Patch Gravel when required
MR00481 (U)	1.4	Reshape and Regravel	Wet Blade / Patch Gravel when required

Table 3: Western Development Area – Affected Provincial Roads and Proposed Scope of Works (Surfaced (S) / Unsurfaced (U)

Road Name	Length of Road (km)	Proposed Repair Intervention	Proposed Maintenance Intervention
MR00450 (U)	16.0	Reshape and Regravel	Wet Blade / Patch Gravel when required
MR00481 (U)	18.4	Reshape and Regravel	Wet Blade / Patch Gravel when required
DR02042 (U)	2.7	Reshape and Regravel	Wet Blade / Patch Gravel when required
DR02054 (U)	26.5	Reconstruct and Regravel	Wet Blade / Patch Gravel when required
DR02462 (U)	24.0	Reconstruct and Regravel	Wet Blade / Patch Gravel when required
DR02469 (U)	8.4	Reshape and Regravel	Wet Blade / Patch Gravel when required
MN50031 (U)	6.0	Reconstruct and Regravel	Wet Blade / Patch Gravel when required
MN50042 (U)	7.5	Reconstruct and Regravel	Wet Blade / Patch Gravel when required
MN50312 (U)	7.5	Reconstruct and Regravel	Wet Blade / Patch Gravel when required

The existing provincial roads listed in **Tables 2** and **3** above are represented graphically in **Figures 4** to **6** here below.

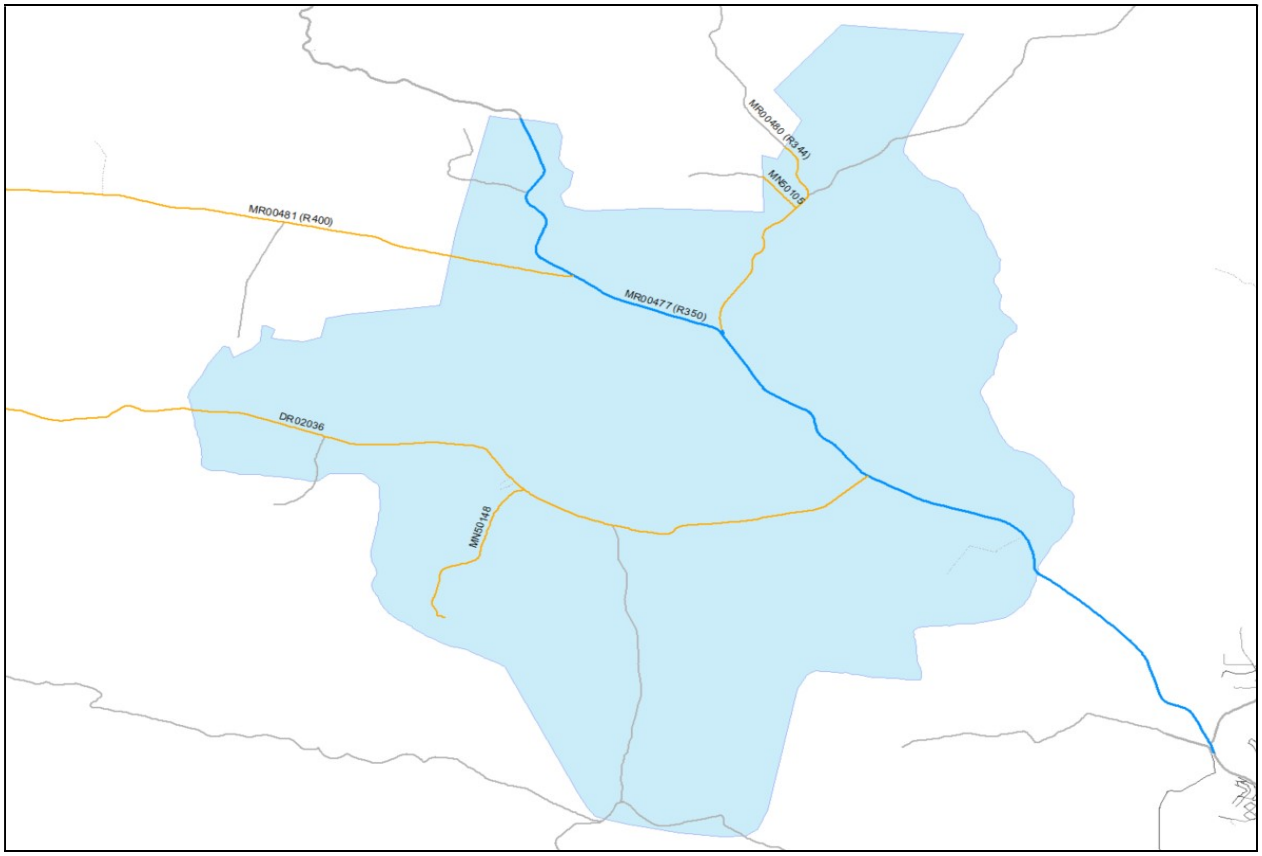


Figure 4 – Provincial Roads within Eastern Development Area

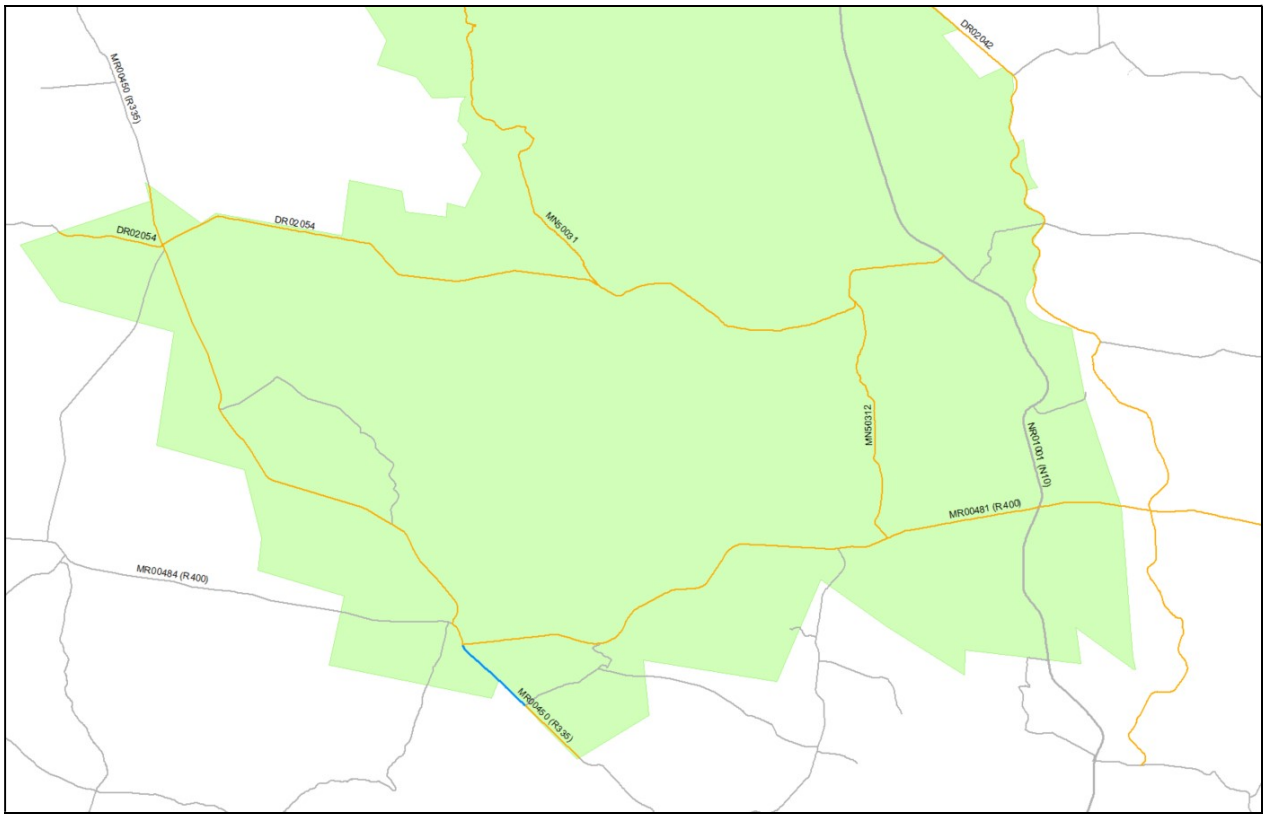


Figure 5 – Provincial Roads within Western Development Area (South)

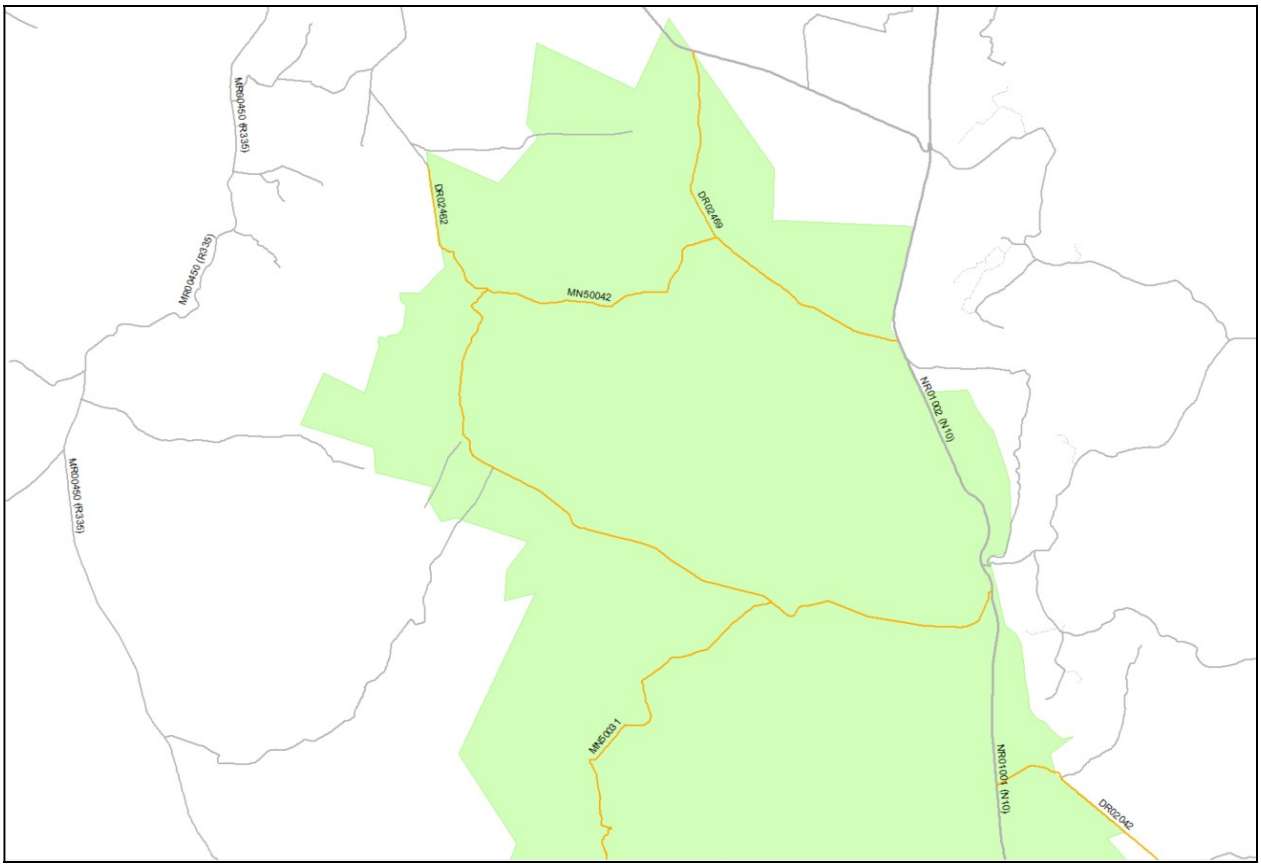


Figure 6 – Provincial Roads within Western Development Area (North)

The developer further requests the Department's approval for new accesses to be constructed off the abovementioned provincial roads (at the developer's cost).

Tables 4 and 5 here below indicate the provincial roads where accesses are required, as well as the number of accesses. The indicative position of the respective accesses is illustrated on the enclosed preliminary drawings, which will be supported by detailed drawings once the detail design stage has been reached.

Table 4: Eastern Development Area – Affected Provincial Roads and Proposed Accesses (Surfaced (S) / Unsurfaced (U))

Road Name	Length of Road (km)	No of Accesses Required
MR00477 (S)	14.4	12
MR00480 (U)	4.8	4
MR00481 (U)	1.4	1

Table 5: Western Development Area – Affected Provincial Roads and Proposed Accesses (Surfaced (S) / Unsurfaced (U))

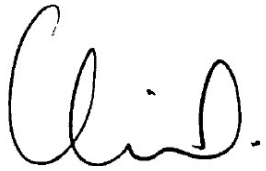
Road Name	Length of Road (km)	No of Accesses Required
MR00450 (U)	16.0	3
MR00481 (U)	18.4	5
DR02042 (U)	2.7	0
DR02054 (U)	26.5	8
DR02462 (U)	24.0	5
DR02469 (U)	8.4	1
MN50031 (U)	6.0	3
MN50042 (U)	7.5	1
MN50312 (U)	7.5	2

Herewith enclosed find Drawings Numbers 1600E-P-0001 and 1600W-P-0002, which gives an overview of the proposed Choje Wind Farm Development in the Makana and Blue Crane Route LMAs.

We now request, and would appreciate the Department's favorable consideration and approval of the above. Should the Department have any specific concerns, comments and / or requirements, please do not hesitate to contact the writer.

We trust the above meets with your approval.

Yours faithfully



Marcus Niemand Pr Tech Eng
for Engineering Advice & Services (Pty) Ltd

cc Wind Relic Renewables - Attention: Mr H Newcombe
cc Wind Relic Renewables - Attention: Mr B Emslie