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Tel: 021 934 52 68

27 February 2013

Our Ref: - CAA_2012_W0149

Attention: Christopher Aberdein.

Comments on Wind Farm application received in January 2012 for the Environmental Impact Assessment process on the construction of the Proposed Development near De Aar known as De Aar 2 Plateau East (South) wind farm.

The CAA recognizes the national need for renewable energy resources and as such is supportive of the development of any such projects within its mandate to ensure aviation safety in South Africa.

In light of this, a provisional assessment of your proposal has been conducted in relation to the terms and provisions as contained in the Aviation Act (Act 13 of 2009) for the controlling and/or restricting of structures which will constitute an obstruction or potential hazard to aircraft moving in the navigable air space in the vicinity of aerodromes, along promulgated air routes and airspaces, or to aviation communication/navigation/surveillance assets, or which will adversely affect the performance of the said aviation assets or landing systems.

The Civil Aviation Authority has identified concerns regarding the potential negative impact of your proposal on aviation safety, as reflected in the accompanying correspondence, from both the South African Air Force (SAAF) and the Air Traffic and Navigation Services Supplier (ATNS). Please note the comment regarding marker number 9 as reflected under item 2 of the SAAF correspondence.

Any impact of the wind farm on the SAAF or ATNS surveillance systems will require mitigation by the Developer to a level acceptable to both SAAF and ATNS or as individually required by either organisation at the Developer's cost.

Subject to the above conditions, the Civil Aviation Authority therefore has **no objections** to the development of your proposal, and will require the submission of the final turbine layout, where after the SCAA will provide conditions of approval with regard to markings as per Civil Aviation Technical Standards, Part 139.01.30.

Note that this letter of non-objection does not constitute a replacement or substitution for other approvals which may be required for this proposed project.

Kindly contact Lizelle Stroh (011 545 1232 or strohl@caa.co.za) if any further information is required.

Yours Truly,



Koos Pretorius

Acting Manager Aviation Obstacle and GIS

Air Navigation Services

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Air Command
Directorate Command and
Control Systems
Private Bag X199
Pretoria
0001

5 October 2012

Ms Lizelle Ströh
SA Civil Aviation Authority
Private Bag X73
Halfway House
1685

Dear Lizelle,

CAA_2012_W0149: DE AAR 2 PLATEAU EAST (SOUTH)

1. Request for the establishment of a wind farm near De Aar has reference. The matter was investigated extensively by the SA Air Force (SAAF) under the guidelines below. Please note any conditions stipulated in this letter for approval.
2. Location Relative to Military Area of Interest. The proposed wind farm is located 30km east of the De Aar Military Airfield, inside the designated amber zone around a military area of interest. Therefore it stands to reason that the SA National Defence Force (SANDF) will be extremely cautious in granting conditional approval for this development. The SANDF wants the developer to clearly understand that, although no specific risks to military operations could be identified at this stage in terms of its location relative to the military airfield, the developer will be held responsible for any expenditure to mitigate future impact on military operations. However, the closest marker (nr 9) is located inside the red zone around De Aar Military Airfield and **is not** approved if that is to be the exact location of a turbine. Conditional approval is granted, but marker nr 9 is not approved.
3. Environmental. At present no objection to the proposed obstacle is raised. The SAAF is to be fully informed and, if required, involved in the Environmental Impact Assessment process.
4. Obstacle Limitation Surfaces. The proposed wind farm is outside the OLS of the De Aar Military Airfield. No objection.
5. PANS-OPS Surfaces. Not applicable. No objection.
6. Radar Terrain Clearance. Not applicable. No objection.
7. Safety Altitudes and Emergency Routes. The obstacle is situated well clear of any emergency routes, and outside safety lanes for weapons systems. No objection.
8. Training Areas, Aviation Patterns and Routes. No direct impact on any of these. No objection.
9. Electromagnetic Emissions and Communication Systems. It is foreseen that there will be no impact on current communication systems. If any, the applicant will have to rectify the problem. No objection.

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10. Radar Interference and Shadowing. Due to the strategic importance of the De Aar Military Airfield, it may happen that radar systems are deployed to this location for specific operations. Should the established wind farm interfere with any of the SANDF radar systems in the vicinity, the developer will be cautioned to provide mitigation (at developer's own cost). Conditional approval.

11. Military and National Security. No direct impact is foreseen in terms of security. No objection.

12. Obstacle Marking and Lights. Conditional approval - the proposed wind turbines must be marked and lighted in accordance with SACAA specifications.

13. Based on the comments and results of the investigation, the SAAF grants conditional approval for the development of the wind farm. The SAAF maintains the right to withdraw its consent to this development if the developer does not meet any of the above-mentioned conditions.

14. For any further information, do not hesitate to contact me.

Yours sincerely



**(COLONEL E.P. DE VILLIERS)
DEPUTY CHIEF OF THE AIR FORCE: MAJOR GENERAL**

DISTR

For Action

External: SA Civil Aviation Authority

For Info

CAF
Dep CAF
CDFP
DAS
OC AFCP

Internal

File: AIRCOMD/DC&CS/319/5/7

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17 July 2012

Mulilo Renewable Energy (Pty)Ltd

Attention: Christopher Aberdein

PAGER POWER REPORT ON MULILO RENEWABLE ENERGY (PTY) LTD PROPOSED DEVELOPMENT AT DE AAR PLATEAU EAST (NORTH AND SOUTH) WIND DEVELOPMENT

The report as prepared by Pager Power and submitted to my office in May 2012 refers.

The conclusion synopsis is noted and agreed to in principle, the only concerns are related to the fact that the "multiple sensor coverage" is only relevant to altitudes higher than FL195, and the potential interference issues as highlighted may occur for flights at lower altitudes.

ATNS is in the process of introducing Mode-S trials at Johannesburg and should the trials be successful it will be rolled out to all sensors, thus additional interference may be introduced accordingly.

ATNS will support the application provided that **MULILO RENEWABLE ENERGY (PTY)LTD** will implement mitigation solutions to resolve any identified interference, resulting from the wind farm development.

Should you require any additional information, please do not hesitate to contact me.


Carel Gersbach

Senior Manager CNS Planning

ATNS/HO/C09

17 July 2012

Company Registration No. 1993/004150/06

Directors: MD Mamashela (Chairman) PK Dlamini (Chief Executive Officer)
Fabian Msimang, Hlengiwe Makhathini, Kgathatso Thlakudi,
Nomfanelo Magwentshu, Thandeka Mgoduso, Sindi Zilwa, Siphon Mseleku,
Company Secretary: S Mngomezulu

