

Enquiries: DG Paterson

Ref. No: P07000018

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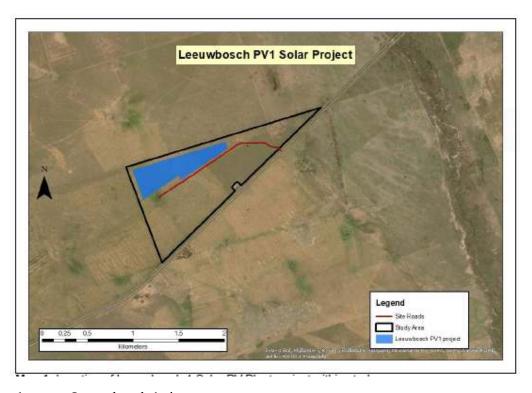
20-04-2022

To whom it may concern:

Leeuwbosch PV3 Solar Facility, Leeudoringstad - Soil and Agricultural Potential

ARC-Soil Climate and Water was appointed to carry out the original soil and agricultural potential assessment for the various developments and infrastructure for the Leeudoringstad Solar Project. This was reported on in 2016/17 and the amended project again in 2020 (Paterson, 2020).

The specific areas that were reported on include the two sites as shown below, namely "Leeuwbosch 1" (shown in blue) and "Leeuwbosch 2" (shown in orange).



Map 1. Leeuwbosch 1 site



Map 2. Leeuwbosch 2 site

As was reported on in the original report, both of these sites fall within the same broad mapping unit (land type **Fb6**) and have the same soil pattern, general agricultural potential ("low") and the same limitations, impacts and other relevant aspects.

Subsequently, a further site ("Leeuwbosch 3") has been identified within the same broad study area, and this site is shown on Map 3 below (in pink).



Map 3. Leeuwbosch 3 site

Based on the same land type base data set used previously, I can confirm that the Leeuwbosch 3 site falls into the same mapping unit as the other two sites, and will be subject to the same soil pattern, agricultural potential and potential impacts. In addition, all the findings and results from the previous report (Paterson, 2020) are still completely valid.

Yours sincerely,

DG Paterson (Dr)

Research Team Manager (Soil Science),

ARC-NRE, Pretoria

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SACNASP Registration No. 400463/04

<u>Reference:</u>

Paterson, D.G., 2020. Soil information for the proposed development of the 9.9 mw Leeuwbosch 1 solar PV plant, 9.9 mw Leeuwbosch 2 solar PV plant and associated infrastructure near Leeudoringstad in the North West Province. Report No. GW/A/2020/22, ARC-Soil, Climate and Water, Pretoria.

Agricultural Compliance Statement

As required by the National Environmental Management Act (Act 107 of 1998), and gazette on 20th March 2020, the following Agricultural Compliance Statement has relevance:

- 1. This report has been compiled by a soil scientist registered with SACNASP. A CV is attached to the end of this report.
- 2. The statement is applicable to the specific site proposed for development ("Leeuwbosch 3" as shown in Figure 3 above)
- 3. Based on the available soil information and the considered interpretation thereof (as per the original report), the site is generally of low sensitivity for agriculture
- 4. The development will not have an unacceptable impact on the agricultural production capacity of the site.
- 5. The development has not been subject to micro-siting or unnecessary fragmentation of activities.
- 6. All relevant mitigation factors and monitoring outcomes have been considered.
- 7. All assumptions and gaps in the available data have been addressed in the original report.

Signed and certified:

DG Paterson

CURRICULUM VITAE: D G Paterson

SURNAME: PATERSON **FIRST NAME(S):** David Garry

KNOWN AS: Garry

DATE OF BIRTH: 25-08-1959 in Bellshill, Scotland

NATIONALITY: South African 5908255258088

LANGUAGE PROFICIENCY: English, Afrikaans (both fluent), French (poor)

MARITAL STATUS: Married, one son, one grandson

ADDRESS: ARC-Institute for Soil, Climate and Water **TEL.:** 012 310 2601(w)

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Pretoria 0001 083 556 2458 (cell)

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E-MAIL ADDRESS: garry@arc.agric.za

ACADEMIC QUALIFICATIONS:

• Matriculated: 1976, Dalziel High School, Motherwell, Scotland

- **BSc (Hons) Geography**, 1980, University of Strathclyde, Glasgow, Scotland
- **MSc (Soil Science)** *cum laude*, 1998, University of Pretoria (*Title of thesis: "The use of Ground Penetrating Radar to investigate subsurface features in selected South African soils"*)
- **PhD (Soil Science),** 2014, University of Pretoria (*Title of thesis: "The use of palm leaf mats in soil erosion control"*)

PROFESSIONAL CAREER:

- 1981-1987: Soil Scientist: Soil and Irrigation Research Institute, Pretoria
- 1987-1992: Senior Soil Scientist: Soil and Irrigation Research Institute, Pretoria
- 1992-2017: Senior Soil Scientist: ARC-Soil, Climate & Water, Pretoria
- 2017- : Research Team Manager (Soil Science): ARC-Soil, Climate & Water

FIELDS OF SPECIALITY AND COMPETENCE:

- Soil classification and mapping
- Soil interpretations
- Soil conservation, including biotextiles
- Soil rehabilitation (especially coal mine soils)
- Soil survey project management
- Environmental assessment and land evaluation
- Soil survey and land capability course presentation
- Ground penetrating radar

PUBLICATIONS (see attached list):

- Fifteen refereed articles
- Nine Congress papers/posters
- Two book chapter contributions
- S.A. Soil Classification (1991 and 2018 editions) (Member of working group)
- Five 1:250 000 Land Type Maps
- Three Land Type Memoirs
- More than 250 soil survey reports and/or maps

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COURSES COMPLETED:

- Course in Project Management (University of Stellenbosch)
- Course in Junior Personnel Management (Dept of Agriculture)
- Course in Handling of Grievances and Complaints (Dept of Agriculture)
- Course in Marketing (ARC-ISCW)
- Course in National Qualifications Framework Assessment, ARC-CO
- Training Course in Ground Penetrating Radar (GSSI, USA)
- Introduction to ArcGIS 8, GIMS, 2004

PROFESSIONAL STATUS:

- ➤ Registered Natural Scientist: Soil Science (SA National Council for Natural Scientific Professions)
 registration number 400463/04
- ➤ Member of South African Soil Classification Working Group, 1990-present
- ➤ Convenor of South African Soil Classification Working Group, 2013-2015
- ➤ Member of Soil Science Society of South Africa (1982-present)
- ➤ President of Soil Science Society of South Africa (2005-2007)
- ➤ Member of South African Soil Survey Organisation (2000-present)
- ➤ Council Member of South African Soil Survey Organisation (2002-2003)
- ➤ Member of International Erosion Control Association
- Scientific Referee, S.A. Journal for Plant and Soil
- ➤ External Examiner: University of Pretoria, University of Witwatersrand, University of Venda, University of the Free State

AWARDS:

Best article on Soil Science, South African Journal for Plant and Soil, 2011