

March 2022

PROPOSED PARADISE 100MW SOLAR PHOTOVOLTAIC PROJECT SOUTH OF BLOEMFONTEIN, FREE STATE PROVINCE

PROJECT ANNOUNCEMENT

Applicant:

Genesis Eco-Energy Developments (Pty) Ltd



Environmental Assessment Practitioner:

Nemai Green

NEMAI GREEN
Environmental Solutions for a Sustainable Future

CONTENT

1. Purpose of this Document
2. Background & Motivation
3. PV Technology
4. Project Overview
5. Environmental Assessments
6. Contact Details

1. PURPOSE OF THIS DOCUMENT

The purpose of this **Background Information Document (BID)** is as follows:

1. It serves to provide an overview of the proposed development of the Paradise 100MW Solar Photovoltaic (PV) Project in the Free State Province (the "Project");
2. It provides an outline of the environmental assessments that will be undertaken for the proposed Project; and
3. It grants the opportunity to be registered as an Interested and Affected Party (I&AP) and allows for upfront comments to be made on the proposed Project (refer to the attached Reply Form).

2. BACKGROUND & MOTIVATION

Electricity generation sources need to be diversified to ensure security of supply and reduction in the carbon footprint created by the current heavy reliance of South Africa (SA) on coal to produce electricity. The electricity demand is increasing in SA, and in order to match that demand there is a need to supply a diversified power generation that includes renewable energy technologies. These technologies include solar, wind, small utility scale hydro, biomass, biogas and energy storage that the Department of Mineral Resources and Energy (DMRE) intends to develop and implement as identified in the approved Integrated Resource Plan (IRP) 2019.

Genesis Eco-Energy Developments (Pty) Ltd (the Applicant) has proposed the development of the Paradise 100MW Solar PV Project south of Bloemfontein, in the Free State Province (refer to locality map in **Figure 1** below). The proposed PV Site is located on Portion 0 of the Farm Paradys 2832. The electricity generated by the Project will be injected into the existing Eskom 132 kV distribution system.

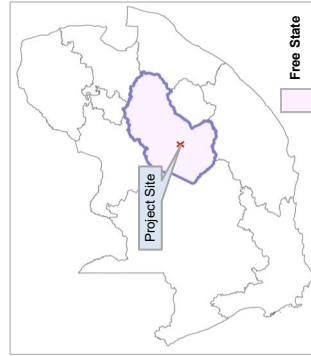
The Applicant intends to bid for Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) bid windows and /or other renewable energy markets within SA.

Paradise 100MW Solar PV Project

Layout

Legend
PARADISE PV PROJECT

- Project Boundary
- HV Cable Route
- Existing Substation



Scale 1:60000

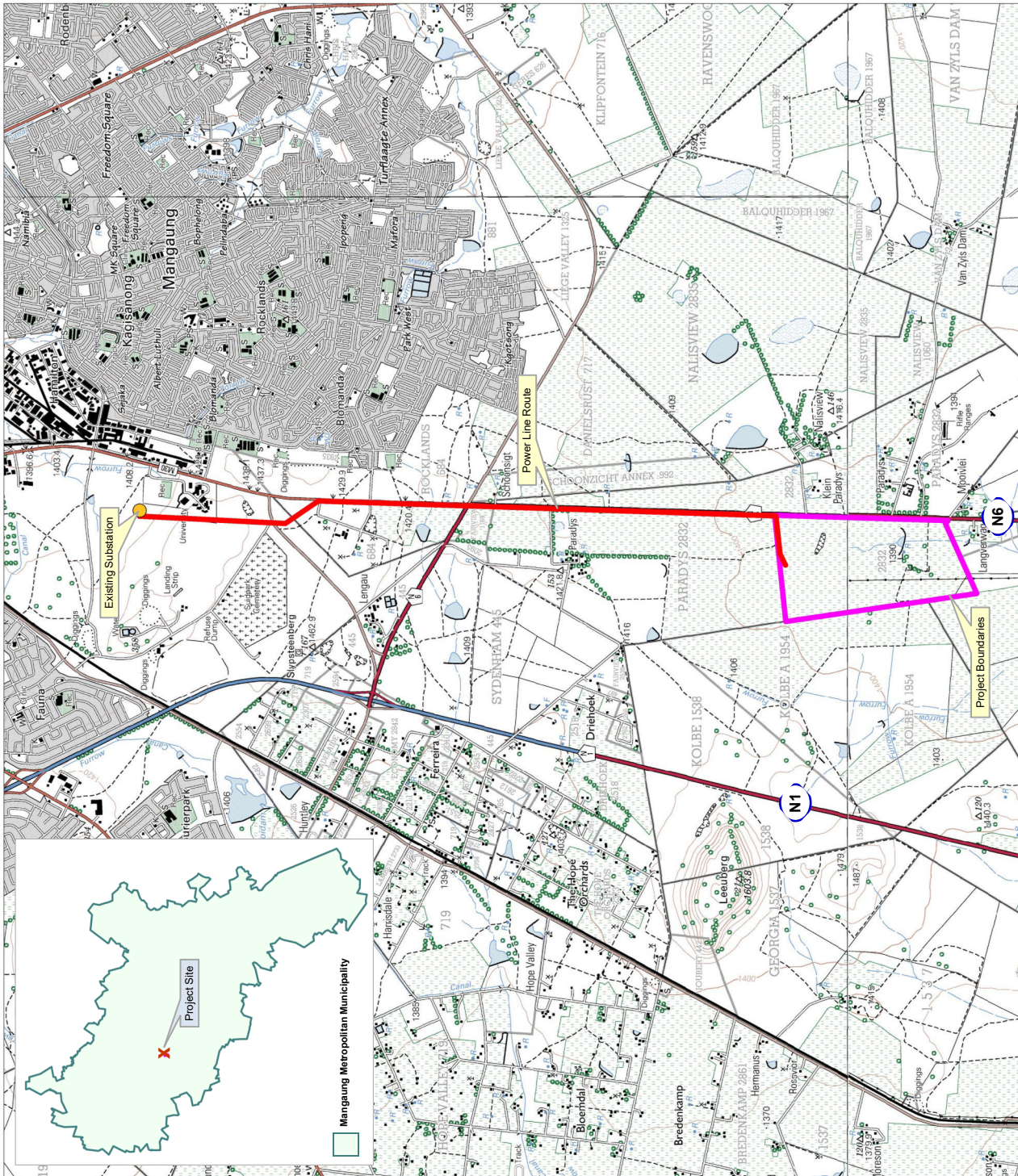
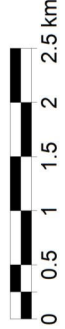
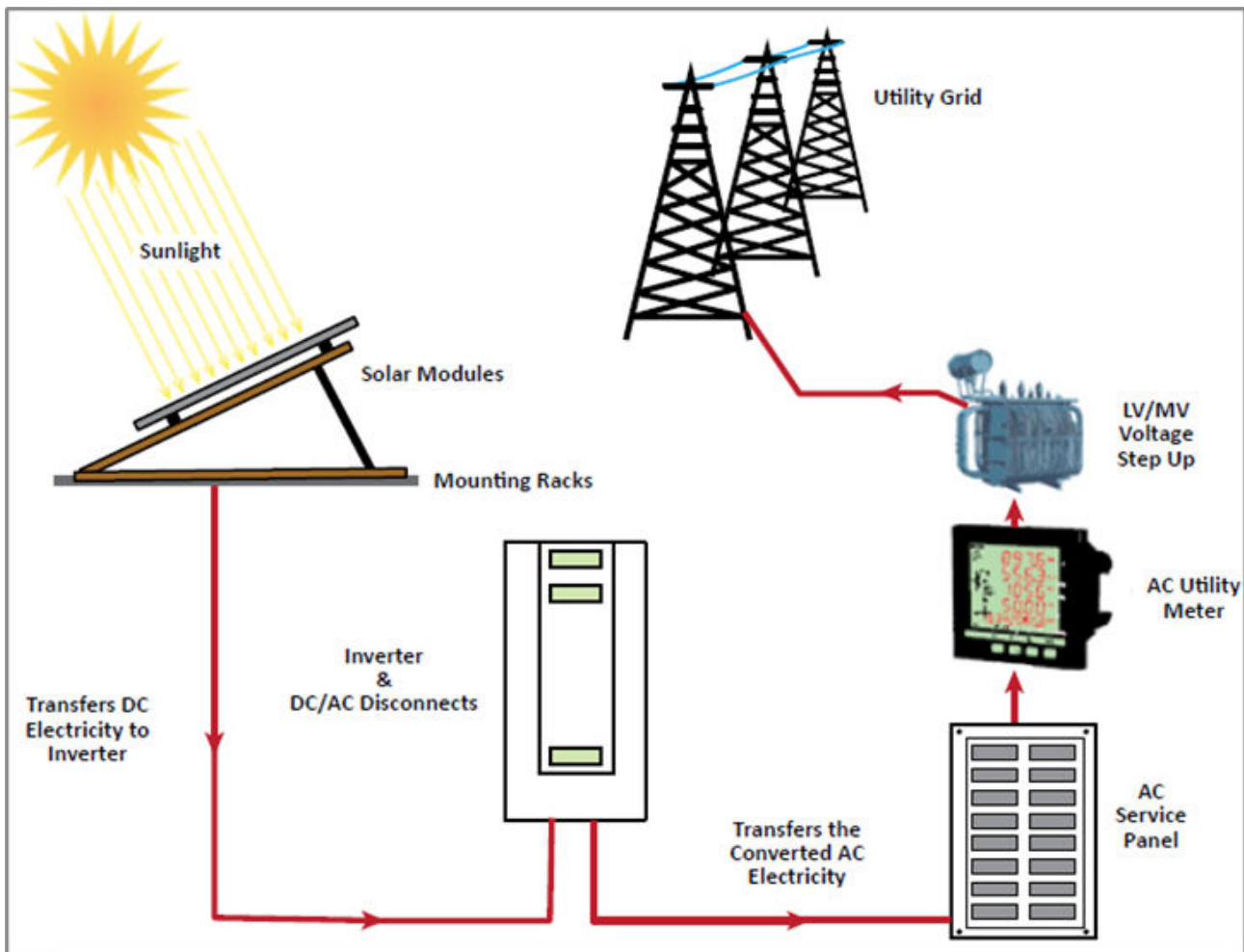


Figure 1: Locality map of project area

3. PV TECHNOLOGY

PV technology produces direct current (DC) which is then converted to alternating current (AC) via power electronic inverters. **Figure 2** below provides an overview of a typical Solar PV Power Plant project.



*Figure 2: Overview of Solar PV Power Plant
(International Finance Corporation, 2015. Utility-Scale Solar Photovoltaic Power Plants.)*

4. PROJECT OVERVIEW

The Project is located to the south of Bloemfontein and falls within the Mangaung Metropolitan Municipality, in the Free State Province. The N6 runs along the eastern boundary of the site.

The proposed Project consists of the following systems, sub-systems or components (amongst others):

- ◆ PV panel arrays, which are the subsystems which convert incoming sunlight into electrical energy;
- ◆ Mounting structures to support the PV panels;
- ◆ On-site inverters to convert DC to facilitate AC connection between the solar energy facility and electricity grid;
- ◆ New 132 kV power lines between the on-site substation(s) and the grid connection point;
- ◆ Cabling between the Project's components, to be laid underground (where practical);
- ◆ Administration Buildings (Offices);
- ◆ Workshop areas for maintenance and storage;
- ◆ Temporary laydown areas;
- ◆ Internal access roads and perimeter fencing of the footprint;
- ◆ High Voltage (HV) Transformers; and
- ◆ Security Infrastructure.

5. ENVIRONMENTAL ASSESSMENTS

5.1 ENVIRONMENTAL PROCESSES

Nemai Green was appointed as the Environmental Assessment Practitioner (EAP) to undertake the following environmental processes to seek authorisation for the proposed Project:

- Undertake a Scoping and Environmental Impact Reporting (S&EIR) Process in terms of the Environmental Impact Assessment (EIA) Regulations of 2014 (as amended), promulgated under the National Environmental Management Act (Act No. 107 of 1998) (NEMA). The mandated authority is the Department of Forestry, Fisheries and the Environment (DFFE). Refer to **Figure 3** below for an outline of the S&EIR Process; and
- Compile a Water Use Licence Application (WULA) in terms of the National Water Act (Act No. 36 of 1998) (NWA) for water uses associated with the Project. The mandated authority in terms of the NWA is the Department of Water and Sanitation (DWS). Refer to **Figure 4** below for an outline of the WULA Process.

Note that there are also other pieces of legislation and mandated authorities governing specific environmental management topics (e.g. waste, air quality, etc.) and features (e.g. biodiversity, heritage and cultural resources, etc.), which will be considered further as the environmental assessments unfold.

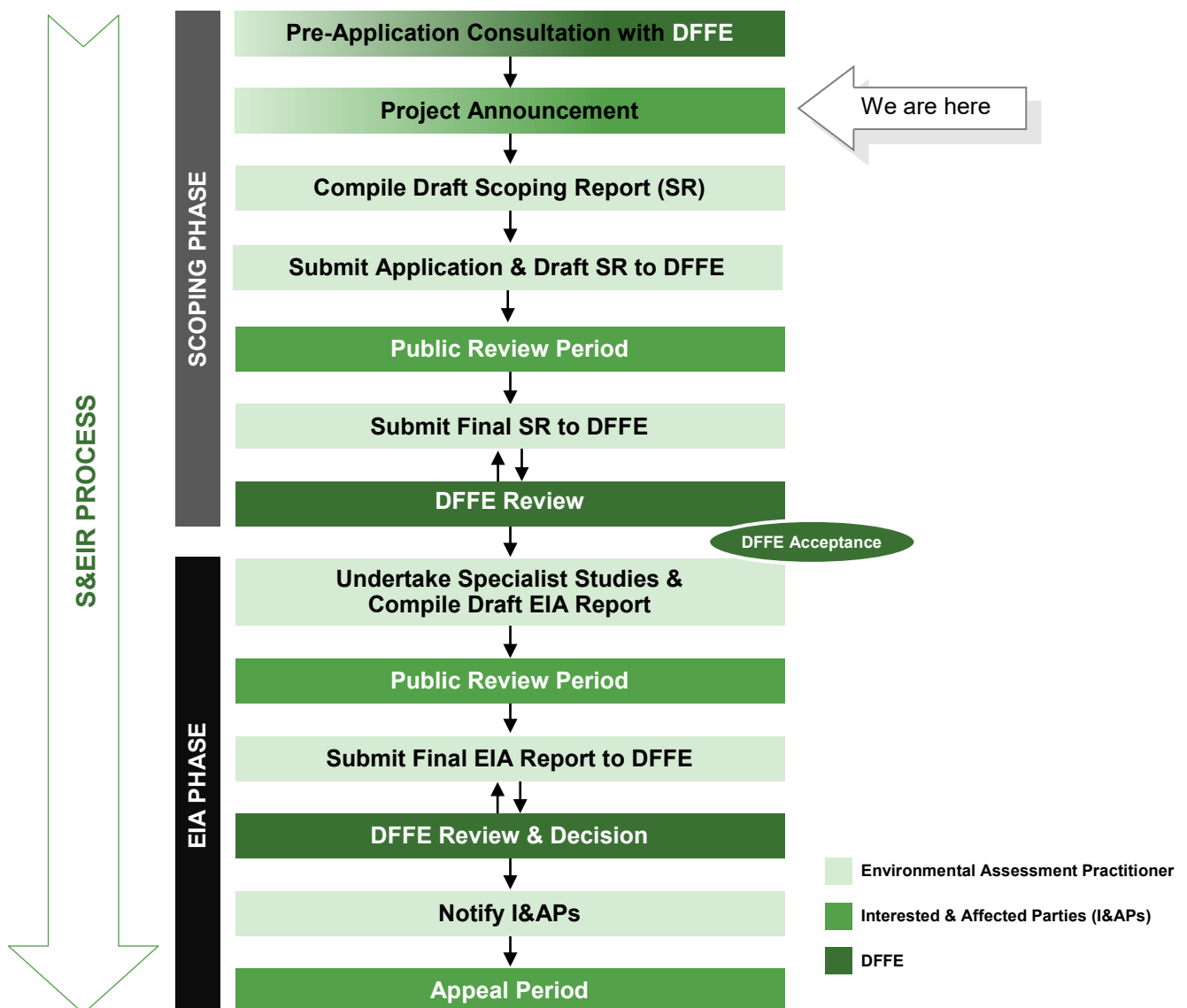
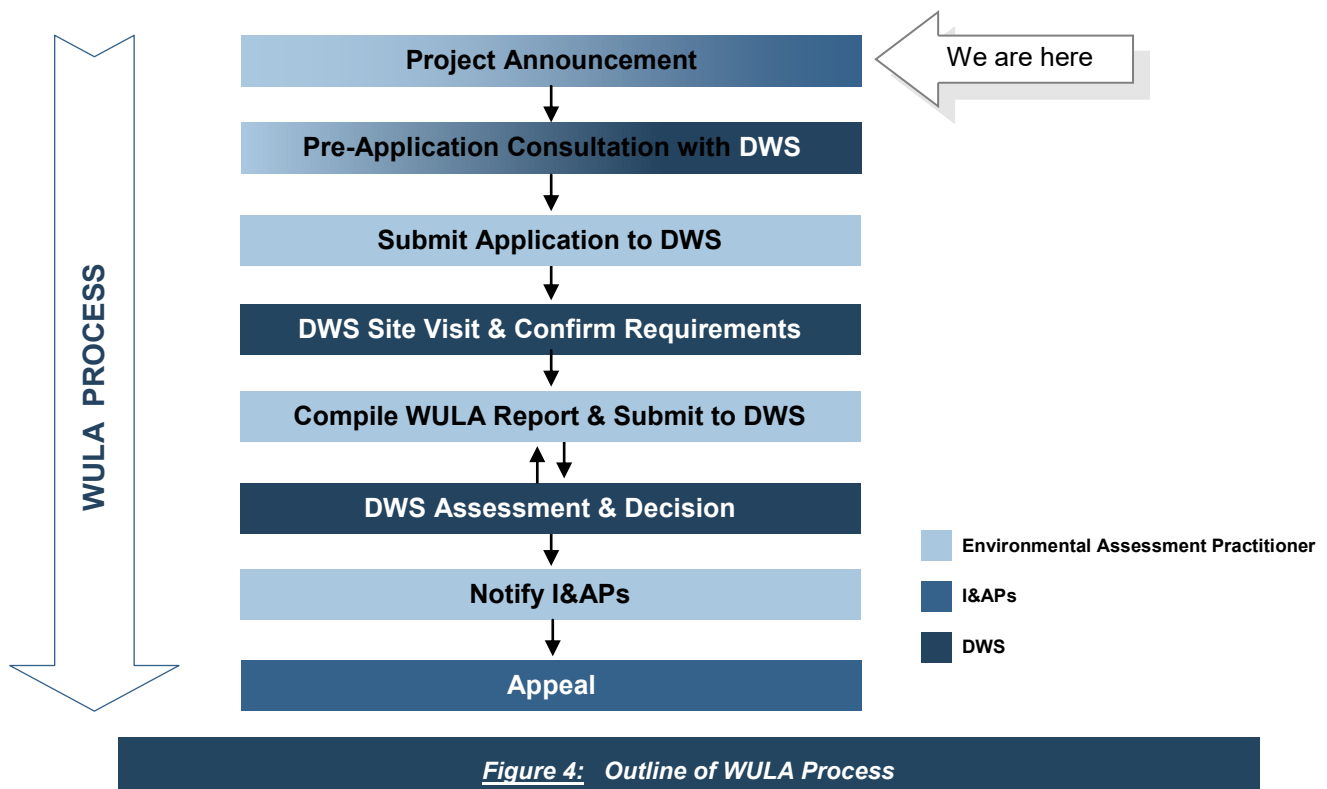


Figure 3: Outline of S&EIR Process



5.2 SPECIALIST STUDIES

Specialist input is ordinarily required to assess potentially significant impacts to particular features of the receiving environment. At this stage, the following environmental specialist studies are earmarked to be undertaken as part of the environmental processes:

- ◆ Aquatic Impact Assessment and Delineation;
- ◆ Terrestrial Ecological Impact Assessment;
- ◆ Avifaunal Impact Assessment;
- ◆ Phase 1 Heritage Impact Assessment;
- ◆ Agricultural Impact Assessment;
- ◆ Social Impact Assessment;
- ◆ Visual Impact Assessment; and
- ◆ Desktop Palaeontological Impact Assessment.

5.3 PUBLIC PARTICIPATION

5.3.1 Overview of Public Participation Process

Public Participation will be undertaken in accordance with Chapter 6 of the EIA Regulations of 2014 (as amended). Some of the key tasks that form part of the Public Participation Process include the following (amongst others):

- ◆ Compile and maintain a database of stakeholders;
- ◆ Announce the Project and allow for the registration of I&APs (*note: this is where we currently are in the process*);
- ◆ Grant authorities and registered I&APs a period of 30 days to review and submit comments on the respective draft Scoping Report and draft EIA Report, as well as the WULA Technical Report; and
- ◆ Provide notification of DFFE's and DWS' decisions and explain the respective appeal processes.

5.3.2 Registration as an I&AP

To register as an I&AP and to raise any comments or concerns regarding the proposed Project, please complete the **attached Reply Form** and return it to Nemaï Green by **5 May 2022**.

6. CONTACT DETAILS

For any queries or comments, please contact the Environmental Assessment Practitioner below:

NEMAI GREEN

Environmental Solutions for a Sustainable Future

Contact Person: Donavan Henning
Tel: (011) 781 1730
Fax: (011) 781 1731
Mobile: 082 891 0604
Email: donavanh@nemaï.co.za
Postal Address: PO Box 1673, Sunninghill, 2157