



ELAINE SOLAR FARM

Environmental Management
Plan Framework – Planning
Permit Application PA2302521

**ADVERTISED
PLAN**

Prepared for
ELGIN ENERGY PTY LTD
09 November 2023



URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Jon Mills
Consultant	Callum Goldby, Pablo Yague
Project Code	P0042161
Report Number	001

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

**ADVERTISED
PLAN**

All information supplied to Urbis in order to conduct this research has been treated in the strictest confidence. It shall only be used in this context and shall not be made available to third parties without client authorisation. Confidential information has been stored securely and data provided by respondents, as well as their identity, has been treated in the strictest confidence and all assurance given to respondents have been and shall be fulfilled.

© Urbis Pty Ltd
50 105 256 228

All Rights Reserved. No material may be reproduced without prior permission.

You must read the important disclaimer appearing within the body of this report.

urbis.com.au

ADVERTISED PLAN

CONTENTS

1.	Project Description	1
1.1.	Overview of Project.....	1
1.2.	Subject Site.....	1
1.3.	Scope of Work	3
	1.3.1. Construction and Operation Details	4
	1.3.2. Decommissioning	4
1.4.	Site Plan.....	5
1.5.	Timing of Works.....	7
1.6.	Site Access	7
1.7.	Dilapidation Survey	8
2.	Project Roles & Contacts	9
2.1.	Construction	9
	2.1.1. Project Manager	9
	2.1.2. Construction Site Manager	9
	2.1.3. Health, Safety and Environment (HSE) Coordinator	9
	2.1.4. EPC Contractors and Sub-contractors	10
2.2.	Operation	10
	2.2.1. Operation and Maintenance Site Manager.....	10
	2.2.2. Operation and Maintenance Contractors	10
2.3.	Project Contacts.....	11
3.	Environmental Strategy	12
3.1.	Summary of Statutory Legislation.....	12
3.2.	Communications, Reporting and Responding to Environmental Complaints	13
3.3.	Monitoring and Auditing	13
3.4.	Environmental Awareness Training	13
3.5.	Incident Reporting.....	14
3.6.	Annual Reporting	14
4.	Environmental Risk Management.....	15
4.1.	Air Quality	15
4.2.	Odour	15
4.3.	Biodiversity.....	15
4.4.	Fire and Hazards	16
4.5.	Heritage	17
4.6.	Noise & Vibration	17
4.7.	Soil and Water	17
4.8.	Traffic and Transport.....	18
4.9.	Visual Amenity & Light Spill	19
4.10.	Waste	19
4.11.	Environmental Management systems.....	20
4.12.	Sustainability and Climate	20
5.	Disclaimer	21

Appendix A Site Plan

FIGURES

Figure 1 Site Location Map.....	2
Figure 2 Site Location Aerial Map	2
Figure 3 Windy Site Plan	6
Figure 4 Peters Site Plan.....	6

TABLES

Table 1 Formal Land Descriptions..... 1

Table 2 Weather Averages from Ballarat Aerodrome (dated 30 October 2023)..... 7

Table 3 Project Roles & Contacts..... 11

Table 4 Applicable Project Noise Limits 17

**ADVERTISED
PLAN**

1. PROJECT DESCRIPTION

1.1. OVERVIEW OF PROJECT

The following Environmental Management Plan (**EMP**) framework has been prepared for the Elaine Solar Farm (**the Project**) by Urbis Pty Ltd, on behalf of Elgin Energy Pty Ltd and responds to the Request for Further Information (**RFI**) issued by the Department of Transport and Planning (**DTP**) as part of the Application for the Planning Permit of the Project (PA2302521) pursuant to section 54(1) of the *Planning and Environment Act 1987*.

It is noted that given the early stage of the development process, this plan is a framework only and is subject to change. Further details will be provided following issue of a planning permit and confirmation with the construction team on the final detail of the Environmental Management Plan. This is expected to be addressed via condition on the Planning Permit.

The Project comprises of two nearby sites known as ‘**Peters**’ and ‘**Windy**’ in Elaine, Shire of Moorabool, subject to the same Planning Permit. The proposed development will comprise a 150MW solar farm and 150MW Battery Energy Storage System (BESS) that will contribute significantly to Victoria’s renewable energy generation targets of 50% by 2030 and the reduction of greenhouse gas emissions (legislated to achieve net zero by 2050).

1.2. SUBJECT SITE

The ‘**Peters**’ and ‘**Windy**’ sites are located on the Midland Highway and Woolshed Road, respectively. The site is located near Elaine, within the Moorabool Shire Council, thus its planning assessment is subject to the Moorabool Planning Scheme. Due to the 150MW size of the proposal, the Minister for Planning is the Responsible Authority, pursuant to Clause 72.01.

Windy is located to the west of Midland Highway, is approximately 170.9 hectares, spanning one lot.

Peters is located to the south of Woolshed Road, is approximately 96.3 hectares and spans five lots. The site incorporates an access road from the unmade Government Road to the south to the subject site.

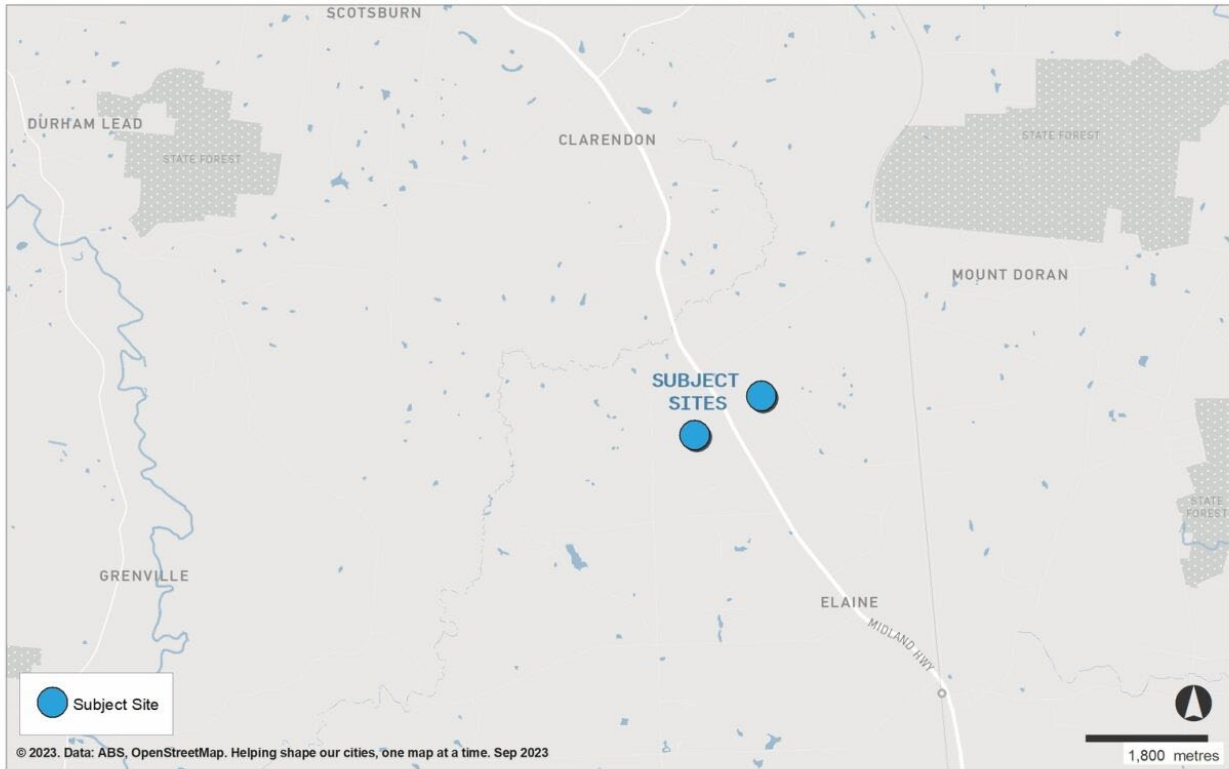
Both sites are within the Elaine, in the Moorabool Local Government Area, approximately 6 kilometres northwest of Elaine township and 23 kilometres southeast of Ballarat (Figure 1). The overall site area is approximately 267.2 hectares and spans six (6) lots, which are detailed in the table below. The proposed connection cable between the two sites runs along the road reserve.

Table 1 Formal Land Descriptions

Volume/Folio	Crown Allotment	Parish	Address	Site
07076/091	17	Parish of Narmbool	Midland Highway, Elaine	Windy
08389/061	21F	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	19B	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	21E	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	21G	Parish of Narmbool	Woolshed Road, Elaine	Peters
08389/061	50	Parish of Narmbool	Woolshed Road, Elaine	Peters
-	-	Parish of Narmbool	Woolshed Road Reserve, Midland Highway Road Reserve, Horsehill Road Reserve,	Path of connecting power line

ADVERTISED PLAN

Figure 1 Site Location Map



MIDLAND HIGHWAY AND WOOLSHED RD, ELAINE SITE LOCATION

Figure 2 Site Location Aerial Map



MIDLAND HIGHWAY AND WOOLSHED RD, ELAINE SITE LOCATION

ADVERTISED PLAN

1.3. SCOPE OF WORK

The solar facility and ancillary equipment will encompass a large portion of the overall site. Solar panels will cover approximately 43.35% of the site area on **Peters** and 82.23% on **Windy**.

The facility will consist of the following:

- The installation of approximately 256,866 ground mounted solar photovoltaic (PV) modules (panels), which use a single axis tracking solar technology. Each panel will measure approximately 2.4m (length) x 1.303m (width). Once mounted on the frames and fully tilted, the panels will be capable of reaching an overall height of no more than 3.2 metres above ground level. The PV modules will be installed through 1-string trackers, 2-string trackers and 3-string trackers depending on location throughout both sites.
 - 60,636 PV modules will be installed on **Peters** covering approximately 65 hectares.
 - 196,230 PV modules will be installed on **Windy** covering approximately 158 hectares.
 - Overall, the combined sites will achieve a minimum output of approximately 150 Megawatts.
- Installation of approximately 35 solar inverters. Inverters are installed combined, mounted on a concrete base. The inverters are approximately 2.438 (length) x 6.058m (width) x 2.896m (height) in size.
 - 15 solar inverters will be installed on **Peters**.
 - 20 solar inverters will be installed on **Windy**.
- The installation of a 33/220kV transformer and substation of a combined footprint of approximately 0.4ha with a nominal transfer capacity of approximately 150MW. The 220kV transformer is approximately 18.0m (length) x 3.7m (width) x 2.3m (height) in size.
- Installation of a Battery Energy Storage System (BESS) and housing structure on **Peters** with a nominal capacity of 150MW/300MWh, partly grouped in containerised modules on a pad of approximately 2.4ha. The BESS will comprise approximately 37 inverters.
- Installation of one (1) switch room zone on **Windy** along the northern boundary to allow for connection between **Windy** and **Peters**:
 - Installation of one (1) overhead 33kV powerline approximately 2.6km in length to connect **Windy** and **Peters** along Woolshed Road, 1.2km within the road reserve and 1.4km within the site proper. The transmission line will require approximately 25 poles, including 10 poles to be evenly spaced along the 1.2km stretch in the road reserve. These poles will be approximately 16 metres in height.
 - Installation of one (1) overhead 220kv powerline to connect from the proposed substation to the existing Elaine Terminal Station, which connects to the existing transmission line.
- Internal roads
 - **Peters** - One internal road running east-west through the site, a road around the perimeter and an access road leading to the unmade Government Road to the south.
 - **Windy** - Two internal roads running east-west through the site as well as a road around the perimeter.
- Ancillary infrastructure, including:
 - A 2.3m high chain mesh fence installed around the solar farm. The purpose of the fence is to deter theft or vandalism and prevent unauthorised access.
 - Security cameras.
 - Substation control room on **Peters** approximately 13.265m (length) x 5.840m (width) x 4.640m (height).
 - 4 x 45,000L water tanks approximately 4.5m (width) x 3.05m (height) on **Windy**.
 - 5 x 45,000L water tanks approximately 4.5m (width) x 3.05m (height) on **Peters**.
 - Compost toilet.

- Business identification signage (2 signs – 1 per site) measuring 2.4m (length) x 1.2m (height).
- Two (2) exclusion zones have been proposed throughout the site to assist with the handling of livestock on and off the site. These include:
 - **Peters** – One (1) exclusion zone at the northwestern corner, approximately 0.8 hectares in size.
 - **Windy** - One (1) exclusion zone at the northern corner, approximately 0.8 hectares in size.

1.3.1. Construction and Operation Details

Given the early stage of the development process (at permit application stage), the following details are estimates only. It is noted that further updates will be made once this information is finalised.

Construction

- Approximately 200 workers during peak construction period
- Approximately 12 months construction period
 - Site Set-Up - 2 months
 - Civil works (access track and hardstand construction) - 3 months
 - Component Delivery and Installation - 9 months
 - Substation Delivery and Installation - 4 months
 - Testing - 3 months
- There will likely be some overlap between the above stages. A total of 12 months from initial construction to commencement of commercial operations is anticipated with construction commencing in 2024.
- It is anticipated that there will be a maximum of approximately 167 construction related vehicles per day during peak construction, and up to 53 construction related vehicle movements during the site peak hour (start and end of work day).

**ADVERTISED
PLAN**

Operation

- Three permanent car parking spaces
- Up to three full time employees for maintenance

1.3.2. Decommissioning

At the conclusion of the Project's operational life, the Project site will be reinstated to its previous use, including the removal of all buildings and infrastructure.

The expected operational life of the Project is approximately 35 years and is anticipated to commence in 2025. Council and DTP will be notified within two (2) months of the solar farm permanently ceasing operation.

Following permanent cease of operation, all infrastructure, equipment, buildings, structures and works must be removed, and the site or the relevant part of the site must be rehabilitated and reinstated to the condition it was in prior to the commencement of development to allow it to be used for agricultural purposes (or any proposed alternative use). This includes, but is not limited to, all solar panels, power conversion units, operations and maintenance facility, control building, substation, switchyard, and above and below ground electrical infrastructure and equipment. Written consent of the responsible authority will be sought for the retention of any items of infrastructure or other works (such as access tracks or the control building) that are suitable for the ongoing agricultural use of the land (or proposed alternative use).

Within approximately three months of the solar energy facility permanently ceasing operation, a Decommissioning Management Plan (DMP) will be prepared by a suitably qualified and experienced person and will be submitted to, approved and endorsed by the responsible authority. The DMP will include, as a minimum:

- Identification of infrastructure, equipment, buildings and structures to be removed, and details of how these will be removed.

- Details of how the site will be rehabilitated.
- A Decommissioning Traffic Management Plan (DTMP), which will be submitted to, approved and endorsed by the responsible authority prior to decommissioning works starting. The DTMP must be approved by the relevant road management authority (or authorities) prior to submission to the responsible authority for endorsement. The DTMP must specify measures to manage traffic impacts associated with removing the infrastructure, equipment, buildings and structures from the site, to the satisfaction of the responsible authority.
- Details on how all infrastructure, plant, equipment and access tracks that are no longer required for the on-going use or decommissioning of the facility will be removed.
- Details on how any waste generation during decommissioning activities will be managed.
- Detailed measures to manage risk to the environment and human health associated to decommissioning activities, if required.
- Details on how the site, or the relevant part of the site, will be reinstated to the condition it was in prior to the commencement of development.
- Identify any other post-activity land uses, if necessary.
- A commitment that all decommissioning works identified in the DMP be completed to the satisfaction of the responsible authority as soon as practicable, but no later than approximately 12 months after the DMP is endorsed, or such other period approved by the responsible authority.
- Any other detailed measure to comply with any other relevant condition of the licence as required.

1.4. SITE PLAN

The site plan submitted as part of the Permit Application is title Site Plan – Elaine Solar Farm under Appendix B within the Application (Figure 3 & Figure 4).

**ADVERTISED
PLAN**

ADVERTISED PLAN

1.5. TIMING OF WORKS

Works are expected to be conducted over five stages and are anticipated to commence in 2024. These stages and anticipated times are listed below:

- Stage 1: Site set up – two months.
- Stage 2: Civil works for access track and hardstand construction – three months.
- Stage 3: Component delivery and installation – nine months.
- Stage 4: Substation delivery and installation – four months.
- Stage 5: Commissioning (Hold Point testing) – three months

There will be some overlap between the above stages.

Work will be undertaken during 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm on Saturdays. No work is proposed to be carried out on Sundays or Public Holidays. Timing of works will adjust to weather conditions and appropriate measures will be taken in accord to severe weather events, such as peak bushfire season, when required (Table 2).

Table 2 Weather Averages from Ballarat Aerodrome (dated 30 October 2023)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean High (°C)	25.3	25.1	22.3	17.7	13.7	10.8	10.1	11.5	13.9	16.7	19.7	22.7
Mean Low (°C)	11.0	11.5	10.0	7.5	5.7	4.0	3.2	3.7	4.8	6.2	7.8	9.5
Mean Rain (mm)	40.1	42.6	42.0	51.2	64.2	62.9	66.0	73.7	70.6	67.1	56.2	49.7
Mean number of days of rain ≥ 1 mm	4.9	4.7	5.9	8.1	11.0	12.3	13.7	14.1	12.4	11.0	8.8	7.2

1.6. SITE ACCESS

- There will be two vehicle access points to **Peters**, as outlined on the Site Plan. The primary site access point will be from a Government Road to the south and the secondary access point will be from Woolshed Road to the north.
- There will be two vehicle access points to **Windy**, as outlined on the Site Plan. The primary site access point will be provided from Horsehill Road to the north and a secondary access from Horsehill Road to the west.

Internal routes are proposed throughout both **Windy** and **Peters** to allow for safe access when required. These are broken down typically by their functions, which include:

- Site ring road/perimeter track (enabling access to all parts of the site).

- 1-2 internal access ways through each site (primarily to service the panels).

All site access points will comply with the Country Fire Authority (CFA) requirements. The entry points at **Peters** and **Windy** will be designed to accommodate (at a minimum) a CFA firefighting vehicle. All internal roads have been swept path tested using a CFA fire truck to ensure compliance. All service vehicles associated with the development will also access the site from these entry points. The specific access point for service vehicles will depend on the task being undertaken and will likely change on a day-to-day basis.

1.7. DILAPIDATION SURVEY

Before works commence, the EPC contractor will prepare a dilapidation survey including a written report and photos of any existing damage to public infrastructure, which will be submitted to Moorabool Shire Council. The condition of table drains, gravel road surfaces, seals, signs and other public infrastructure fronting the property and abutting at least two properties either side of the development will be included.

**ADVERTISED
PLAN**

2. PROJECT ROLES & CONTACTS

The following section outline the likely project roles and key accountabilities during the lifecycle of the project. In addition, the Project Team assigned to the project construction and operation by Elgin Energy as the Applicant would also be responsible and accountable for the following actions:

- Prepare and submit the EMP and other relevant management plans and strategies required under the Planning Permit and conditions of consent and submit (as required) to the responsible authority for approval.
- Engage suitably qualified personnel to manage each phase of the development.
- Maintain website and communication channels including email, postal address, and phone line.
- Notify Council and DTP of commencement and finalisation of construction.
- Notify Council and DTP, and any other relevant agency, of an incident or non-compliance.
- Identify if an amendment to the Planning Permit is required.
- Review internal environmental audit report and ensure performance is maintained.
- Where necessary, revise this EMP and other management plans and submit amendments (as required) for approval to the relevant authority.

2.1. CONSTRUCTION

2.1.1. Project Manager

The appointed Project Manager will have overall responsibility and accountability for environmental performance on the project. The Project Manager is responsible for ensuring consistency with the relevant legislative standards of Australia, including the applicable Australian Standards, along with contractual obligations.

The Project Manager also has further responsibility to procure provision of appropriate resources to ensure the effective implementation of this EMP. The Project Manager is also responsible for ensuring the compliance with Planning Permits as set out in the EPC Contract, reviewing internal audit reports and notifying Council, DTP and any other relevant agency of commencement of construction, incident reporting and non-compliance.

2.1.2. Construction Site Manager

Reporting to the Project Manager, the appointed Site Manager will be accountable for the construction project team and contractors in respect to environmental performance on site through:

- Maintain a working knowledge of the management system and environmental management plans and monitor compliance for the requirements of this EMP.
- Coordinate incident response, including ensuring incident investigation is undertaken and corrective actions carried out.
- Ensure relevant training and qualifications are completed by personnel and maintain induction records.
- Ensure that communication and reporting systems are established and maintained during the development of the project.
- Ensure that complaints are received, registered, and responded to in a proper manner as per the Community Notification Strategy.
- Participate in Environmental Auditing and implement recommendations and corrective actions.

2.1.3. Health, Safety and Environment (HSE) Coordinator

The appointed Project EHS (Environmental Health and Safety) Advisor will report to the Site Manager. The HSE Advisor will perform a key role in the implementation, maintenance, and monitoring of compliance to

this EMP, of categorical importance for the health and safety of the employees on site during the construction lifecycle. Their main responsibilities are:

- Maintain a working knowledge of the environmental management system, environmental management plans, and be aware of all environmental legislative requirements.
- Maintain working knowledge of environmental risks and impacts of the development and measures required to be put in place.
- Undertake a HSE Risk Assessment for the development.
- Carry out site inspections and maintain monitoring of environmental performance.
- Develop a Corrective Action Register.
- Maintain records of compliance with the development consent and management plans.
- Maintain Complaints Register and respond to complaints or nominate a delegate to respond.
- Monitor the Complaints Register weekly to identify any trends in complaints.
- Investigate incidents and identify preventative actions.
- Prepare incident report and implement corrective actions.
- Participate in Independent Environmental Audits and implement recommendations.

2.1.4. EPC Contractors and Sub-contractors

- Undertake works in compliance with the EMP, other management plans and strategies.
- Complete required training and attend toolbox talks where relevant.
- Notify EPC Site Manager of any non-compliance or incidents.
- All personnel are responsible for undertaking activities in accordance with this EMP.

2.2. OPERATION

Albeit due to the nature of the passive operation of the solar farm, significantly less environmentally sensitive activities are expected, the operational phase of the project is still subject to the requirements of this EMP, and all operational personnel will be responsible for undertaking all the activities in accordance with it.

2.2.1. Operation and Maintenance Site Manager

- Ensure compliance with Elgin's Integrated Management System.
- Ensure this EMP and other management plans are implemented.
- Review and update the EMP and other management plans as required.
- Carry out site inspections and environmental monitoring.
- Maintain complaints register and respond to complaints.
- Manage incident response.
- Investigate incidents and identify preventative actions.
- Notify Elgin of incidents and non-compliances.
- Participate in Independent Environmental Audit and implement recommendations.
- Responsible for overseeing HSE management of the operation activities.

**ADVERTISED
PLAN**

2.2.2. Operation and Maintenance Contractors

- Operating in compliance with the CEMP and other management plans and the conditions of the Planning Permit.

- Notifying the Site Manager of any non-compliance and incidents.

2.3. PROJECT CONTACTS

Once appointed, the following table will provide the contact information for key personnel involved in the lifecycle of the project and is an integral part of the EMP compliance, monitoring and reporting. Key personnel are to be appointed following issue of the planning permit. Concrete details will be provided as part of the EMP prior to the commencement of the project.

Table 3 Project Roles & Contacts

Project Role	Name	Company	Contact Details
Project Manager			
EPC Project Manager			
EPC Site Manager			
EPC HSE Coordinator			
O&M Site Manager			

**ADVERTISED
PLAN**

3. ENVIRONMENTAL STRATEGY

3.1. SUMMARY OF STATUTORY LEGISLATION

The following table outlines the relevant State and Commonwealth legislation relevant to this EMP and associated management plans.

Legislation	Details
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	Works to progress in accordance with requirements in order to avoid impacts on Matters of National Environmental Significance (MNES). The project is highly unlikely to impact on any MNES and thus an EPBC referral is not required.
<i>Environment Effects Act 1978</i>	Requires certain public works to have an environmental impact assessment carried out before proceeding. The Project does not trigger the need for an EES Referral.
<i>Planning and Environment Act 1987</i>	Legislation under which the Project permit would be issued if approved.
<i>Flora and Fauna Guarantee Act 1988</i>	Key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. Works to progress in accordance with biodiversity requirements in order to avoid unauthorised impacts on these matters.
<i>Wildlife Act 1975</i>	Framework for members of the community wishing to control, possess, display, breed, trade-in or interact with wildlife. An Authority to Control Wildlife (ATCW) authorisation will be required.
<i>Aboriginal Heritage Act 2006</i>	A chance finds protocol has been prepared to outline obligations under this Act.
<i>Heritage Act 2017</i>	A chance finds protocol has been prepared to outline obligations under this Act.
<i>Environment Protection Act 2017</i>	The Act defines how the Environment Protection Authority Victoria (EPA) works as an independent statutory authority. Subordinate legislation such as regulations sit under this Act.

**ADVERTISED
PLAN**

ADVERTISED PLAN

3.2. COMMUNICATIONS, REPORTING AND RESPONDING TO ENVIRONMENTAL COMPLAINTS

Urbis has been engaged to undertake consultation (on behalf of Elgin Energy) with Council, relevant agencies and the local community including affected landowners.

Urbis informed adjacent property owners of scope of works, possible impacts and main mitigation measures. Further consultation by DTP will be undertaken via the public notice of the Planning Permit application. Ongoing matters raised by stakeholders will be assessed and responded to, as required.

Elgin Energy will continue to keep direct neighbours, stakeholders and the community informed of the project approval process and pre-construction, construction, and operation phases by:

- Continuing to engage with the community about the project, its impacts, and the approval process.
- Providing information through a letterbox drop on how the community's views have been addressed.
- Enabling the community to seek clarification about the project through the two-way communication channels.

When the final EMP is approved, a complaints website and phone line will be enabled to receive any feedback from the local community if any environmental concerns are raised regarding construction or operational phases. All received complaints will be recorded to analyse possible non-compliance and will be responded, if possible, with mitigation actions to address any possible environmental and/or community impact.

3.3. MONITORING AND AUDITING

It is anticipated that a system of daily walkthrough inspections formulated for the Project will be undertaken by the EHS Advisor, accompanied by the responsible person from each contractor. The Site Manager would also participate routinely in walkthrough inspections, at least weekly.

This shall ensure daily visual inspections of all construction activities and work areas are conducted to monitor compliance with this EMS regarding operations, emergency, and risk management.

Environmental monitoring requirements are to be established prior to and during construction and during operation of the Solar Farm to include:

- Acoustic assessment to comply with operational noise criteria in accordance with *Part 2: Noise limits – Rural area method of EPA Publication 1826.4*.
- Cultural heritage finds.
- Dust generation monitoring.
- Water quality monitoring.
- Any other matters identified in the EMP.

3.4. ENVIRONMENTAL AWARENESS TRAINING

Project Managers and Project Contractors shall be responsible for ensuring that all Project personnel under their control receive both initial and ongoing environmental awareness training to ensure they are familiar with their environmental responsibilities under the EMP.

Project induction will provide all new site employees with an overview of the Project environmental management system and key aspects of the EMP prior to allowing access to the worksite. In addition, each individual contractor shall be required to provide all new employees with environmental induction training which addresses their own Integrated Management System and which at a minimum detail:

- Individual responsibilities under the plan.
- Risk management strategies for assessing potential environmental impacts and for developing appropriate management or control strategies for any activity perceived to pose an environmental risk.

ADVERTISED PLAN

- Key environmental concerns and associated control strategies.
- How hazardous or dangerous goods will be handled.
- Waste minimisation, recycling, and disposal guidelines.
- Incident and emergency response actions including reporting and recording guidelines.
- Complaint handling procedures.

The Induction Training program will be provided to Elgin's Project Manager for adequacy review prior to inductions taking place.

Project managers, contractors and the EHS Advisor shall conduct ongoing environmental awareness training for key issues throughout the Project using targeted presentations at daily job pre-starts, toolbox meetings etc, and the use of targeted literature.

Project managers and contractors shall maintain a register of all environmental training provided which records the nature of the training, dates, the names of persons trained, and trainer details as well as any refresher training, if required, after any incident or non-compliance.

3.5. INCIDENT REPORTING

All employees will be required to report environmental incidents. A computerised database should be used for the reporting and recording of these incidents. All employees should have access to the system either directly or through their supervisor. The report would cover what happened, what was done immediately to rectify or control the situation, and corrective actions to be undertaken to prevent the recurrence of the incident.

All environmental incidents shall be investigated to determine the cause and the actions to be taken. Investigations are undertaken as per the procedure, and environmental incidents and corrective actions are reviewed at team meetings.

Throughout the lifecycle of the project, the EPC Site Manager and O&M Site Manager are responsible, during their respective project stages, for reporting any incident which causes or threatens to cause direct environmental harm or through the cumulative impacts and its interaction with previous existing conditions to Council, DTP or any other relevant agency.

3.6. ANNUAL REPORTING

Within 12 months of the approval and annually thereafter an Annual Environmental Management Report is to be submitted to DTP. The report must address the matters required by the project approval plus the matters identified below.

The annual report should additionally address the following matters:

- Identify the standards and performance measures that apply to the project.
- Describe the works carried out in the last 12 months.
- Describe the works that will be carried out in the next 12 months.
- Include a summary of the complaints received during the past year and compare this to the complaints received in previous years (if any).
- Include a summary of the monitoring results for the project during the past year.
- Include an analysis of these monitoring results against the relevant:
 - Impact assessment criteria/limits.
 - Monitoring results from previous years as per relevant management plans.
- Identify any trends in the monitoring results over the life of the project.
- Identify any non-compliance during the previous year.
- Describe what actions were, or are being, taken to ensure compliance.

ADVERTISED PLAN

4. ENVIRONMENTAL RISK MANAGEMENT

4.1. AIR QUALITY

Objectives

The main objectives of this section of the EMP framework are to comply with Air Quality criterion, specifically dust risk criteria as per EPA legislation, and to perform the development in a manner that minimises dust generation, which could pose a health risk, and prevent dust affecting adjoining dwellings.

Management Strategies and Controls

To minimise impacts and potential emissions from vehicles, equipment or dust generation from work, the following mitigation measures are proposed:

- All equipment is to comply with EPA 1897 measures for machinery hygiene to reduce dust risk.
- All machinery is to be maintained and be in good working order.
- Vehicles and equipment are to be inspected prior to use daily.
- Set appropriate and site-specific speed limits to minimise generating dust.
- Unsealed roads are to be sealed or at a minimum covered with gravel, as soon as practicable.
- Truck loads are to be covered upon entering and exiting the site.
- Water tankers are to be used to control dust.
- Avoid dry sweeping of large areas.
- Rehabilitation and stabilisation through vegetation of surfaces left unsealed after the completion of works.
- Truck wheel washes or other dust removal measures to be adopted. However, if a large volume of wastewater is being generated, it should be treated as 'waste' and managed in line with the waste hierarchy, preferably capturing and reusing the waste for wetting exposed areas, if possible.
- Stockpiles to be covered or grass seeded if left unused for an extended period, as per EPA 1895.

Monitoring would be undertaken by visual observations where construction activities could generate fugitive dust emissions such as stockpiles, unsealed roads and any excavation and filling activities. The requirement for dust monitoring may be reviewed if complaints are received.

4.2. ODOUR

Objectives

The main objectives of this section of the EMP framework are to comply with criterion measures relating to Odour. As the only odour-specific element of the Project is the composting toilet, these relate to EPA 1588.1 – *Designing, constructing and operating composting facilities*. However, the toilet uses a dehydration process, resulting in an odour-free compost and collected annually for processing offsite, thus unlikely to generate any onsite strong odours. Section 1.1 of EPA 1588.1 outlines that the guidelines do not cover dehydration processes.

4.3. BIODIVERSITY

Objectives

The main objectives of this section of the EMP framework are to ensure protection of native vegetation related to the planning permit and limit impacts where possible. Noting that the majority of the subject site vegetation species are exotic, three of these species are also considered noxious weeds within the *Catchment and Land Protection Act 1994* and as such mitigation measures to avoid their propagation are also proposed. This section also relates to the landscape plan, to ensure management measures for newly planted vegetation.

ADVERTISED PLAN

Management Strategies and Controls

Subject to the final approval, it is anticipated that the following strategies and controls will be undertaken, as required:

- Before work begins, all personnel undertaking works relating to, or potentially impacting flora and fauna will be made aware of all relevant permit conditions and associated statutory requirements or approvals.
- In accordance with AS4970-2009, before any works start, including removal of native vegetation, temporary fences will be installed around areas of retained native vegetation to protect them from any accidental impacts. The fencing will be constructed of star pickets and plain wire, strong webbing, or other clearly visible and durable materials.
- Where possible, construction stockpiles, machinery, internal roads, and other infrastructure should be placed away from areas supporting retained native vegetation.
- Removal of any habitat trees or shrubs (particularly hollow-bearing trees or trees/shrubs with nests) should be undertaken between February and September to avoid the breeding season for most fauna species. If any habitat trees or shrubs are proposed to be removed, this should be undertaken under the supervision of an appropriately qualified zoologist to salvage and translocate any displaced fauna.
- Implementation of Tree Protection Zones (TPZs) to prevent indirect losses of native vegetation during construction activities.
- As indigenous flora provides valuable habitat for indigenous fauna, it is recommended that any landscape plantings that are undertaken as part of the proposed works are conducted using indigenous species sourced from a local provenance.
- Supplement the loss of hollows from the removed large trees by placing nesting boxes in the retained scattered trees in the north east.
- All construction personnel should be aware of ecologically sensitive areas to minimise the likelihood of inadvertent disturbance to areas marked for retention. Native vegetation (areas of sensitivity) should be included as a mapping overlay on any construction plans.
- If any native wildlife is found injured or stressed at the worksite, then the site supervisor should contact WIRES 1300 094 737.
- Ensure that vehicle wheels and machinery entering the site do not carry weed plant material or seeds.
- Ensure that areas with declared noxious weeds are properly cleared and treated if possible, avoiding accidental propagation of seedlings.

4.4. FIRE AND HAZARDS

Objectives

The main objectives of this section of the EMP framework are to recommend measures to mitigate and respond to bushfires and on-site fire events complying with Country Fire Authority Guidelines 2023.

Management Strategies and Controls

Subject to the final approval and input from the CFA, it is anticipated that the following strategies and controls will be undertaken, as required:

- The Emergency Management Plan must be adhered to Preliminary Bushfire Risk Assessment and regard given to the CFA's Guideline for Renewable Energy Installations.
- Safe distances are to be maintained to electricity transmission lines.
- A 10-metre-wide fire break is shown on the concept plans for the eastern and western sites around the property boundaries and switch room on the western site. This fire break incorporates a 5-metre-wide perimeter road for both sites. The fire breaks must be free of vegetation and obstacles at all times; no plant material or equipment of any kind is to be stored in the fire breaks.
- Further maintenance, especially near the overhead 33kv cable, must adhere to the annual Bushfire Mitigation Plan as part of the conditions of consent.

4.5. HERITAGE

Objectives

The main objectives of this section of the EMP framework are to implement measures regarding unexpected heritage items being encountered and ensuring they are managed appropriately to protect their historical significance.

Management Strategies and Controls

- Subject to the final approval, it is anticipated that the following strategies and controls will be undertaken, as required.
- Cultural awareness training session for all site contractors and sub-contractors prior the commencement of works.
- Site Chance Finding Protocol to be followed for the appropriate management and collection of historical objects or archaeological deposits if found on site.

4.6. NOISE & VIBRATION

Objectives

The main objectives of this section of the EMP framework are to take all necessary steps to ensure that no noise or other disturbance during construction or operation impact detrimentally to the amenity of adjoining receivers and to comply with relevant statutory requirements to noise limits.

Management Strategies and Controls

- Project noise limits must be kept in accordance with EPA 1826

Table 4 Applicable Project Noise Limits

Periods (as defined in EPA 1826)		dB level limit
Day	7:00-18:00 Monday-Saturday	49dB
Evening	18:00-22:00 Monday-Saturday 7:00-22:00 Sundays and public holidays	40dB
Night	22:00-7:00 All days	34dB

- Construction work will be undertaken, when scheduled, during 7:00am to 6:00pm Monday to Saturday. No work will be carried out on Sundays or Public Holidays unless separate approvals have been obtained.
- Within the first year of operational life after construction, a Post-Construction Acoustic Assessment will be prepared and submitted to the responsible authority.
- Consideration will be given during selection of equipment with a lower sound power level where possible.

4.7. SOIL AND WATER

Objectives

The main objectives of this section of the EMP framework are to outline measures to manage potential flood, surface water quality and stormwater run-off impacts, enable appropriate site drainage without altering flooding regimes to surrounding sites and prevent unnecessary soil disturbance.

Management Strategies and Controls

Subject to the final approval, it is anticipated that the following strategies and controls will be undertaken, as required:

ADVERTISED PLAN

- Inclusion of culverts on the northern side of the proposed south Peters access road, in accordance with Flooding Impact Assessment recommendations.
- Gross pollutant traps may be installed at the culverts to maintain water quality levels at Williamson Creek downstream. This would also work as a sediment control protection measure, as a sediment trap.
- If possible, vegetation to be planted around the culverts to provide additional biological treatment for the stormwater runoff.
- Soil disturbance is to be avoided where possible, such as through the use of handheld machinery rather than heavy machinery. Where soil is disturbed stabilisation and rehabilitation is to be undertaken, for example through vegetation, rolled erosion control products or spray-on soil stabilisers.
- In all excavation activities, subsoil and topsoil are to be separated and replaced in their natural configuration to assist revegetation.
- Topsoil is to be stockpiled appropriately to minimise weed infestation, maintain soil organic matter, and to maintain soil structure and microbial activity.
- Tree felling must avoid soil disturbance where possible.

4.8. TRAFFIC AND TRANSPORT

Objectives

The main objective of this section of the EMP framework is to maintain the surrounding road network, avoid damage to existing infrastructure and to reduce impacts of potential traffic increases and maintain a safe road network.

Management Strategies and Controls

The strategies and specific controls will be outlined in a Traffic Management Plan (TMP) prepared for the project as a condition of consent and in consultation with Council, VicRoads and any other relevant stakeholders. It is expected to include, as a minimum, measures to ensure that:

- Internal site access roads are to be constructed to the requirements of the CFA.
- Vehicle maintenance and monitoring controls to be undertaken by the EPC contractors and sub-contractors.
- Noise controls to be installed where reasonable and practicable.
- Schedule for construction vehicle movements to be consistent with the allowed working hours (7:00 and 18:00 Monday to Saturday) for all stages. Any site access required during operational period will generally be Monday to Friday between 6:00 and 16:00 but may occasionally take place on Saturdays if necessary.
- Parking sites to be provided on-site for at least 15 per cent of construction workers. Shuttle services and schedules from surrounding towns or accommodation premises as required.
- Consultation plans with the local community and monitoring of related traffic complaints (if received).
- Confirmation of expected traffic volumes generated by the solar farm for all work stages.
- Identification of all Heavy Vehicle (HV) and Over-Dimensional (OD) vehicle haulage routes for all work stages.
- A mechanism to review identified haulage route road conditions prior to the commencement of works.
- Mechanisms/agreements (if deemed necessary) to maintain haulage route roads and road infrastructure, including local public roads used by site traffic, during construction works and to reinstate roads to at least pre-construction conditions.
- Qualify any requirement for specific work stage construction traffic management plans.
- Qualify and identify any relevant mechanisms for OD vehicle permits and traffic management requirements.

ADVERTISED PLAN

- Confirm on-site the adequacy of available sight distances along all proposed site access locations and intersections.

4.9. VISUAL AMENITY & LIGHT SPILL

Objectives

The main objectives of this section of the EMP framework are to minimise glint and glare impacts to surrounding land uses during operation, minimise negative visual amenity impacts on neighbouring sites and to address any light spill impacts on adjacent sites.

Management Strategies and Controls

Subject to the final approval, it is anticipated that the following strategies and controls will be undertaken, as required:

- Due to the Project being located in a Category A2 area, it will not result in an increased lighting impact due to there being no requirements for operational lightning. However, urgent maintenance works during hours of darkness may have external security lights. Any operation during darkness hours should have consideration to lighting impacts on adjacent receivers when possible.
- All lighting installed and operated at the site must comply with AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting.
- A solar module resting angle between 5 and 60 degrees is recommended to avoid any potential glare impacts to any receptor within 1km of the site including road users and rail users in close proximity the Project's southern boundary (the resting angle for solar the tracking systems is expected to be between 45 and 60 degrees). No further operational measures are required bar to keep the resting angle over 5 degrees at all time.
- Landscaping will be implemented in accordance with the Landscaping Strategy to ameliorate any possible impacts on adjacent receivers.

4.10. WASTE

Objectives

The main objective of this section of the EMP framework is to ensure that generated waste during construction, operation and decommission is disposed responsibly and lawfully in accordance with EPA legislation.

Management Strategies and Controls

A Waste Management Plan is to be prepared as a condition of consent, detailing all measures to be taken through the lifecycle of the project, these could include, but are not limited to:

- Any waste material that is unable to be reused, re-processed or recycled will be disposed at a facility approved to receive that type of waste.
- Site induction to include waste management information.
- Recording of all waste by contractors.
- Use of pre-order and prefabricated material where possible.
- Waste recycling through separation and storage of recyclable and non-recyclable materials. Separate storage for putrescible, cardboard, and mixed recycling waster.
- Collection of waste by a licensed contractor.
- Green waste (including compost from the onsite) and topsoil is to be recycled for use in site landscaping if possible.
- Waste collection must only take place during working hours and days only.
- Any hazardous waste is to be segregated from other waste types and stored in bunded areas and managed to prohibit spills or washing off.

4.11. ENVIRONMENTAL MANAGEMENT SYSTEMS

The construction and operation of the Project must be in accordance with environmental management systems that are consistent with AS/NZS ISO 14001. This is to be undertaken by the construction team during the development of its construction methodology. Environmental management systems provide organisations with a framework and systematic approach to achieving their organisation level objectives for environmental management and sustainability and driving continuous improvement.

Environmental management systems for the Project must be consistent with Elgin's organisation level policies, plans, procedures, Project-specific management plans, and activities to provide a systematic method of managing the environmental aspects of the Project that are within each organisation's control or influence. Key components must include:

- Leadership and commitment.
- Environmental policy.
- Responsibilities and authorities for environmental management.
- Environmental risk and opportunity assessment and actions to address these.
- Requirements for setting and achieving objectives and achieving compliance with environmental legislation.
- Requirements for competency and awareness.
- Communication and reporting.
- Management of documentation and records.
- Operational control including emergency preparedness and response.
- Monitoring procedures and internal and external audit program.
- Processes for responding to incidents and non-conformance and implementing corrective and preventative action.
- Review and continuous improvement.

Contractors must develop and implement an environmental management system that is certified to AS/NZS ISO 14001. The environmental management system must be appropriate to the contractor's activities for the Project and be reviewed by Elgin Energy.

4.12. SUSTAINABILITY AND CLIMATE

Objectives

Elgin Energy has detailed its sustainability and climate objectives in its Environmental, Social & Governance (ESG) Policy. Its main goals as stated by the policy are to:

- *Incorporate structures and actions that place ESG at the centre of how the company does business.*
- *Identify and minimise ESG risks and potentially negative impacts of the company.*
- *Identify and create positive ESG impacts from the projects of the company where possible.*
- *Act in accordance with all applicable laws and regulations.*
- *Continue to improve and modify the structures and actions of the company and align with international best practice standards.*
- *Aligning the company with the United Nations Sustainable Development Goals.*

Elgin Energy has adopted a transparent policy to outline their company carbon emissions and partnered with GoCarbonNeutral to offset their carbon emissions through extensive tree-planting in Ireland.

**ADVERTISED
PLAN**

5. DISCLAIMER

This report is dated 30 October 2023 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Elgin Energy Pty Ltd (**Instructing Party**) for the purpose of an Environmental Management Plan (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

**ADVERTISED
PLAN**

APPENDIX A

SITE PLAN

**ADVERTISED
PLAN**