



Botley West Solar Farm

Outline Operational Management Plan

November 2024

PINS Ref: EN010147

Document Ref: EN010147/APP/7.6.2

Revision P0

APFP Regulation 5(2)(a); Planning Act 2008; and Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations

Approval for issue

Jonathan Alsop

15 November 2024

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Prepared by:

RPS
20 Western Avenue,
Milton Park, Abingdon,
Oxfordshire, OX14 4SH
United Kingdom

Prepared for:

Photovolt Development Partners GmbH,
on behalf of SolarFive Ltd.

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1 Introduction

1.1 Overview

- 1.1.1 This document is the Outline Operational Management Plan (oOMP) for Botley West Solar Farm (the Project) and is part of the Application for a Development Consent Order (DCO) for the construction, operation and maintenance, and decommissioning of the Project. The aim of this oOMP is to provide a clear and consistent approach to the control of operational and maintenance activities within the Project Site.
- 1.1.2 This Outline OMP has been prepared by RPS on behalf of Photovolt Development Partners GmbH. (PVDP) for the Applicant, SolarFive Ltd. (SolarFive).
- 1.1.3 The operational life of the Project is anticipated to be 37.5 years. As such, a 37.5-year period for the operational phase of the development has been assessed in the Environmental Statement which accompanies the DCO application.
- 1.1.4 Likely significant effects have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Environmental Statement (ES) [EN010147/APP/6.3]. A range of 'standard' or best practice mitigation and operational management measures are accounted for in the assessments, and these will be implemented during operation of the Project. This Outline OMP details operational mitigation measures. It also sets out the monitoring activities designed to demonstrate that such mitigation measures are carried out, and to measure their effectiveness.
- 1.1.5 It is to be noted that this document does not address construction or decommissioning activities, which are subject to separate environmental management plans and procedures.
- 1.1.6 Detailed OMPs may be prepared, approved and implemented for individual parts of the Project. As such, it is recognised that there could be multiple OMPs prepared in accordance with the parts of this Outline OMP. If multiple OMPs are produced for the Project, each OMP prepared for the Project will be produced in line with this Outline OMP following the grant of the DCO and would be approved by the relevant local planning authority or authorities in advance of the date of final commissioning for the relevant phase of the Project (in accordance with the relevant DCO Requirement).
- 1.1.7 This Outline OMP is designed with the objective of ensuring compliance with the relevant environmental legislation and mitigation measures identified within the ES.
- 1.1.8 The key elements of this Outline OMP include:
- An overview of the Project and associated operational programme;
 - Identification of potential environmental effects;
 - Proposed design and other mitigation measures to prevent or reduce potential adverse environment effects;

- Monitoring and reporting of effectiveness of mitigation measures; and
- Links to other complementary plans and procedures.

1.1.9 The appointed contractor(s) will be responsible for working in accordance with the environmental controls documented in the Outline OMP and for the preparation and implementation of any OMPs subsequently produced.

1.1.10 Any additional licences, permits, or approvals that are required will be listed in subsequent OMPs produced for the Project.

1.2 The Order Limits

1.2.1 The Order Limits comprise all land falling within the Application required for the construction, operation and maintenance, and decommissioning of the Project and are shown in the ES (Volume 2, Figure 1.1 - Site Location & Order Limits Overview [EN010147/APP/6.4]) and described in the Environmental Statement (Volume 1, Chapter 2: Existing Baseline [EN010147/APP/6.3]).

1.2.2 The Project is divided across three separate land parcels, to the west and northwest of Oxford, to be connected by underground electric cables, and with a total area of approximately 1,418 ha. The proposed area of installed panels (excluding internal roads and support areas) is approximately 839ha, or 843ha if the National Grid Electricity Transmission (NGET) substation is developed outside the Order Limits.

1.3 The Project

1.3.1 The Project comprises the construction, operation, maintenance and decommissioning of a photovoltaic (PV) solar farm and associated infrastructure located in parts of West Oxfordshire, Cherwell and Vale of White Horse Districts. The Project will export electricity for connection to the National Grid at Botley West with a current grid connection offer date with NGET of October 2028. The Project aims to deliver approximately 840 Megawatt electrical (Mwe) of power to the National Electricity System.

1.3.2 The solar arrays associated with the Project (comprising all the mounting structures, frames and foundations) will be connected by underground electrical cables. The solar arrays will also be connected via underground electric cables to the substation at the grid connection point. The interconnecting cable route will largely follow the public highway and are proposed to be approximately 24.6km in length. Further details about the Project are provided in the Environmental Statement (ES) Volume 1, Chapter 6: Project Description [EN010147/APP/6.3].

1.3.3 The Project is defined as a NSIP under Sections 14(1)(a) and 15(2) of the Planning Act 2008 (Ref.1), as it is an onshore generating station in England with a capacity of more than 50 Mwe.

2 Operational Environmental Management

2.1 Introduction

2.1.1 This section sets out the environmental management activities that will be undertaken on the Sites during the operation and maintenance phase of the Project.

2.2 Operational Activities

2.2.1 During the operation and maintenance phase, activity within the Order Limits will be minimal and will be restricted principally to vegetation management, equipment maintenance and servicing, replacement and renewal of any components that fail, and monitoring of habitats and species (as set out in the Outline Landscape and Ecology Management Plan [EN01047/APP/7.6.3]). It is anticipated that maintenance and servicing would include the inspection, removal, reconstruction, refurbishment, or replacement of faulty or broken equipment to ensure the continued effective operation of the Project.

2.2.2 Along the grid connection route operational activity will consist of routine inspections (schedule to be determined) and any reactive maintenance such as where a cable has been damaged.

2.2.3 The substations on the Sites will be monitored remotely with visits (schedule to be determined) by the Applicant / operator of the Site to undertake inspection and maintenance. Operational traffic flows associated maintenance/inspection visits will be negligible.

2.2.4 Operational and maintenance staff, may require access to the Site during daylight hours, seven days a week. The undeveloped areas of the Site are designed and managed to enhance the landscape and ecological value of the area, which has been further set out within the Outline Landscape and Ecology Management Plan [EN01047/APP/7.6.3].

2.3 Operation Programme

2.3.1 Operation of the Project is expected to start following construction. The commercial Operational date (connection date) is expected to be October 2028. The Project will operate for 37.5 years (450 months), with operation expected to cease in April 2066.

2.4 Working Hours

2.4.1 The Sites will generally be unmanned during normal operation. Routine inspections and maintenance would be carried out as required during daylight hours, seven days a week. Emergency maintenance would be carried out as and when needed.

2.5 Control of Light

2.5.1 During operation, no part of the Project will be continuously lit. Lighting will be a combination of manually operated and Passive Infra-Red (PIR) motion

sensor security lighting will be utilised. The security lighting will be designed to ensure inward distribution of light and avoiding light spill onto existing boundary features.

2.6 Parking Provisions

2.6.1 It is not anticipated that dedicated parking would be required during the operation and maintenance phase.

2.7 Management of Vegetation Planting

2.7.1 An Outline Landscape and Ecological Management Plan (oLEMP) has been prepared and submitted as part of the Application **[EN010147/APP/7.6.3]**.

2.7.2 The OLEMP provide details for the long-term management and maintenance requirements of landscape and ecology elements incorporated into the proposed landscape scheme at the Botley West Solar Farm. The OLEMP details the biodiversity and landscape aims and objectives for the habitats located on the Site during the operation of the Project and sets out the proposed management actions and specifications which are designed to achieve these objectives.

2.7.3 The report also details the monitoring programme and targets which will assess the outcomes of initial habitat creation and ongoing management and defines general species protection measures that will be implemented as part of the development.

2.7.4 A detailed Landscape and Ecology Management Plan (LEMP) will be prepared in accordance with the OLEMP and will be submitted to and approved by the relevant local planning authority or authorities prior to construction. This will include provisions in respect of on-going maintenance and management of the landscape and ecology.

2.8 Security

2.8.1 The Sites will receive several security risk management threat assessments during the operation and maintenance phase. These security risk management threat assessments are to be procured by the Applicant and conducted by suitable qualified and experienced persons (SQEP) and will determine security risks.

2.8.2 The security arrangements to be present at the Site will contribute to the overall safety of all entering the Site. The security arrangements will be SQEP reviewed at identified times associated with Security Risk rating and will further assess any changes in the Security Risk Management Threat Assessment.

2.8.3 The boundaries of the Sites will be secured both by fencing and by the provision of Closed-Circuit Television (CCTV) equipment. Cameras would be placed on galvanised steel painted green poles with a maximum height of 3m.

2.8.4 Perimeter fencing used will comprise deer wire mesh and wooden post fencing with a maximum height of 2.1m. All new access tracks will be secured by gates, which will be set back from the public highway. Where existing access tracks are used that also provide access to residential properties, appropriate security

measures will be put in place in consultation with the relevant property owner(s).

2.8.5 Palisade fencing will be installed around the substations which will have with a maximum height of 2.6m.

2.8.6 Fencing associated with the Project would be regularly inspected during the operation and maintenance phase, and repaired as required.

2.8.7 Other potential security measures to be included in the Project include:

- Detection systems such as beam break, image detection etc. to raise alarm when fence breached;
- Audio announcement when intruder detected to warn alarm triggered and police on way;
- Barriers/locked gates at main entrances to the Sites;
- Steel doors on substation buildings;
- Buried cables as much as possible;
- Remote monitoring; and
- Alarm response contract with keyholder/security company.

3 Mitigation and Management

3.1 Purpose

3.1.1 This section of the Outline OMP sets out the mitigation and management measures to be included as a minimum in the detailed OMP(s). It also identifies where monitoring is proposed to assess the effectiveness of the mitigation measures.

Table 3.1: Operational Mitigation and Management Measures

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements
Climate Change		
Greenhouse gas emissions from the operational maintenance activities required during operation of Project.	<ul style="list-style-type: none"> a. Regular planned maintenance of the Project will be conducted to optimise efficiency of the Project infrastructure, such as replacement of PV modules and PCS, when required. b. Increasing recyclability by segregating waste to be re-used and recycled were reasonably practicable. c. Operating the Project in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon such as locally sourced products and materials with a higher recycled content. d. Encouraging the use of lower carbon modes of transport by identifying and communicating local bus connections and pedestrian and cycle access routes to/from the Project to all staff. e. Switching off vehicles and plant when not in use 	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the Operational Management Plan.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements
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and ensuring vehicles conform to current EU emissions standards.

Historic Environment

Visual change within the settings of heritage assets	Landscape mitigations will be established in line with measures set out in the OLEMP [EN010147/APP/7.6.3] this is also visually represented in the illustrative masterplan [EN010147/APP/6.4].	None
Night-time lighting within the settings of heritage assets	No permanent operational lighting will be installed. Lighting around the solar arrays and transformers will be a combination of manually operated and Passive Infra-Red (PIR) motion sensor lighting. Maintenance roads, required for occasional access during the operational phase, will follow routes around the edges of each solar array field and will be grass, with occasional matting where needed. Other internal maintenance routes between solar panels will use the natural ground surface.	
Operational noise within the settings of heritage assets	As set out below in the Noise and Vibration section of the table, Mitigation 13.1 ensures noise during operation of the Project will be minimised.	None

Ecology and Nature Conservation

Impacts to ecology and nature conservation from operation of the Project.	Mitigation and management measures relating to Ecology and Nature Conservation during operation are set out within the OLEMP [EN010147/APP/7.6.3].	n/a
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Hydrology, Flood Risk and Drainage

Impacts on surface and groundwater quality from site run-off and the potential for accidental spillages (e.g substations) from supporting infrastructure and maintenance activities.	The detailed OMP will include the following elements: <ul style="list-style-type: none"> Runoff from the Project will be attenuated to ensure no increase in surface water discharge rates and to provide water quality treatment of runoff water. This is detailed in the Conceptual Drainage Strategy (Volume 3, Appendix 10.2 [EN010147/APP/6.5]) There is a residual risk of contamination from solar PV modules if they are damaged. A regular schedule for visual inspection of the panels and all other solar infrastructure will be undertaken. A Pollution Prevention Plan (PPP) which sets out how to reduce/eliminate pollution at its source. This would also set out any storage procedures of any potential polluting procedures. 	To be set out in the detailed Operational Management Plan and PPP.
Potential impacts on hydrology and flood risk due to alterations in surface water runoff due to additional impervious areas.	Runoff from the Project will be attenuated to ensure no increase in surface water discharge rates and to provide water quality treatment of runoff water. This is detailed in the Conceptual Drainage Strategy (Volume 3, Appendix 10.2 [EN010147/APP/6.5]). Shallow ponds, bunds and ditch widening is proposed at an area upstream of Cassington in accordance with baseline surface water modelling. The sizing and discharge location is subject to detailed design and	To be set out at detailed design stage as part of the detailed Operational Management Plan.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements
	<p>proposed options modelling. This is detailed in the Conceptual Drainage Strategy (Volume 3, Appendix 10.2 [EN010147/APP/6.5])</p> <p>Where there are targeted areas of Type 1 aggregate for internal access roads, filter strips will be placed adjacent to these areas to manage the increase in runoff.</p> <p>There will be regular inspection and maintenance of the drainage systems, proposed Sustainable Drainage Systems (SuDS), drainage outfalls and watercourse crossings. This will be carried out in accordance with a detailed maintenance plan developed at detailed design stage prior to construction.</p>	
Risk to site users during a flood event	The detailed OMP will include a Flood Management Plan to provide details of actions for site users during flood warnings and alerts. No maintenance operatives will be on-site during periods of elevated flood risk and access to the Project will be restricted. Site users will sign up to Flood Warnings and Alerts.	To be set out in the detailed Operational Management Plan and Flood Management Plan.
Landscape and Visual Resources (including Glint and Glare)		
Impacts to Landscape and Visual Resources (including Glint and Glare) from operation of the Project.	Mitigation and management measures relating to Landscape and Visual Resources (and Glint and Glare) during operation are set out within the OLEMP [EN010147/APP/7.6.3].	n/a
Noise and Vibration		
Noise from the operation of electrical equipment associated with the Project	<p>Detailed noise calculations have been undertaken using the proposed electrical equipment associated with the development, and in the proposed locations. The assessment identifies that noise during the operational phase will not cause a significant adverse effect on noise sensitive receptors. Operational noise from the development will need to be limited so as to avoid the significant adverse effect.</p> <p>As set out in Volume 1, Chapter 13.1 [EN010147/APP/6.3], mitigation 13.1 states: <i>'The following noise control measures will be considered in the design of the Project site.'</i></p> <ul style="list-style-type: none"> <i>The orientation and layout of the substations will be designed to minimise noise levels at nearby receptors.</i> <i>Quieter equipment will be selected, where available and practicable, and mitigation measures such as acoustic barriers and enclosures will be specified where necessary.'</i> 	To be further set out in the detailed Operational Management Plan.
Noise from the operation of electrical equipment associated with the Project	Best Practicable Means (BPM) will be implemented during the design, construction, operation, and maintenance of all aspects of the Project to ensure that noise levels in all reasonably foreseeable circumstances that adverse and significant adverse	None

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements
	effects are minimised.	
Socio-Economics		
Employment & Skills	Ensuring employment and skills opportunities align with the commitments contained within the Skills & Employment Plan	Monitor supply chain and employment records
Community Food Growing	Provide space for at least two food growing community groups (up to 30ha) to operate on the Site, secured by means of an Agricultural License Agreement.	To be further set out in the detailed Operational Management Plan.
Ground Conditions		
To help avoid pollution incidents occurring - During operation, maintenance activities may involve the use of chemicals and oils.	Secure storage facilities would be provided, including a secondary containment system. A spillage control procedure would be implemented to ensure that any spillages are contained and removed.	Regular inspection of infrastructure would be undertaken and maintenance completed as necessary during the period of operation.
Waste		
Reduction in the landfill void capacity	An Operational Waste Management Plan (OWMP) will be prepared and agreed with the relevant waste planning authority prior to construction commencing. The Waste Management Plan will set out the measures for managing waste during the operations and maintenance phase. All waste generated during the operation and maintenance phase of the Project will be managed in accordance with the waste hierarchy principle and duty of care requirements. Replacement PV modules will be recovered and recycled by an authorised reprocessor as required by the WEEE Regulations 2013. This will be done in accordance with 'Best Available Treatment, Recovery and Recycling Techniques and will be undertaken by an authorised reprocessor. A list of authorised reprocessors will be established prior to the operational phase of the Project and kept up to date during operation.	The OWMP will record all waste movements from the Site including the type and quantity of waste, the method of waste management and the waste management facility.
Human Health		
Public health implications of behavioural change in use of the public right of way network.	Periodic monitoring (years 1, 5, and 15, as set out within oLEMP [EN010147/APP/7.6.3]) of PRoW use aligned with the methodologies used for the baseline surveys that are reported within the ES would determine if measures to avoid widespread behavioural change in use of PRoWs were effective and if necessary, with any additional action arising to reduce access barriers, to be agreed via the detailed LEMP.	Undertaken by the Applicant / operator of the site with detail set out in the detailed Operational Management Plan.
Beneficial health effects from educational opportunities, including learning about solar	Provide open and covered space in the solar farm for use by school field trips. An educational area could provide local schools with the basic facilities – benches and a covered area to undertake their own learning	To be further set out in detailed Operational Management Plan.

Potential Impact	Mitigation/ Enhancement Measure	Monitoring Requirements
energy.	activities. Walking to the educational site and potentially guided access to array areas would support both physical activity and learning outcomes for population health. Includes toilet (compost) and minibus parking (either provided or existing). Volume 2, Figure 16.2 provides volume 2, figure 16.2: Illustrative 3D Views of Educational Facility [EN010147/APP/6.4].	
Reducing the potential for public concern about electromagnetic fields (EMF) affecting mental health.	Continued community consultation and sharing of non-technical information relating to the project (e.g. explaining compliance with public exposure guidelines, actual risks associated with the project), to allow people to express concerns and gain awareness of actual health effects. This will partially be met through the DCO application process. Non-technical information and a point of contact for community liaison to be provided on the project website.	To be set out in the detailed Operational Management Plan.

4 Complementary Plans and Procedures

4.1.1 A suite of complementary environmental plans and procedures for the operational phase have been included within the Application and set out proposed mitigation for the operational phase, and further detailed plans will be prepared for further approval. Complementary plans and procedures include the following:

- Outline Landscape and Ecology Management Plan (OLEMP) [EN010147/APP/7.6.3].

5 Implementation and Operation

5.1.1 The subsequent OMP(s) produced for the Project will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this Outline OMP, including:

- An organogram showing team roles, names, and responsibilities;
- Training requirements for relevant personnel on environmental topics;
- Information via on-site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
- Measures to advise employees of changing circumstances;
- Communication methods;
- Document control;
- Monitoring, inspections, and audits of site operations; and
- Environmental emergency procedures.

6 Monitoring and Reporting

6.1 Monitoring

- 6.1.1 Monitoring and reporting will be undertaken for the duration of the operation and maintenance phase of the Project in order to demonstrate the effectiveness of the measures set out in the OMP(s) and related construction controls and allow for corrective action to be taken where necessary.
- 6.1.2 As part of the monitoring process, a designated Environmental Manager will observe site activities and report any deviations from the OMP(s) in a logbook, along with the action taken and general conditions at the time. In addition, the Environmental Manager will conduct regular walkover surveys which will be documented and arrange regular formal inspections to ensure the requirements of the OMP(s) are being met.
- 6.1.3 The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

6.2 Records

- 6.2.1 The Environmental Manager will retain records of environmental monitoring and implementation of the OMP(s). This will allow provision of evidence that the OMP(s) are being implemented effectively. These records will include:
- Results of routine site inspections by Environmental Manager/ Project Manager;
 - Environmental surveys and investigations;
 - Environmental Action Schedule;
 - Environmental equipment test records;
 - Licences and approvals; and
 - Corrective actions taken in response to incidents, breaches of the approved OMPs or complaints received from a third party.
- 6.2.2 The OMP(s) will be updated if it is necessary to add additional control measures, with a full review as required. Existing control measures and mitigation will not be amended without prior agreement with the local authorities.