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Decommissioning Plan

Proposed 220kV Substation and Grid Connection at Toomes and Monvallet, Co. Louth

STRATEGIC POWER PROJECTS

On behalf of

Strategic Power Projects Ltd.

Toomes and Monvallet, Co. Louth

MALONE O'REGAN ENVIRONMENTAL

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Decommissioning Plan

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Strategic Power Projects Ltd.

Contents

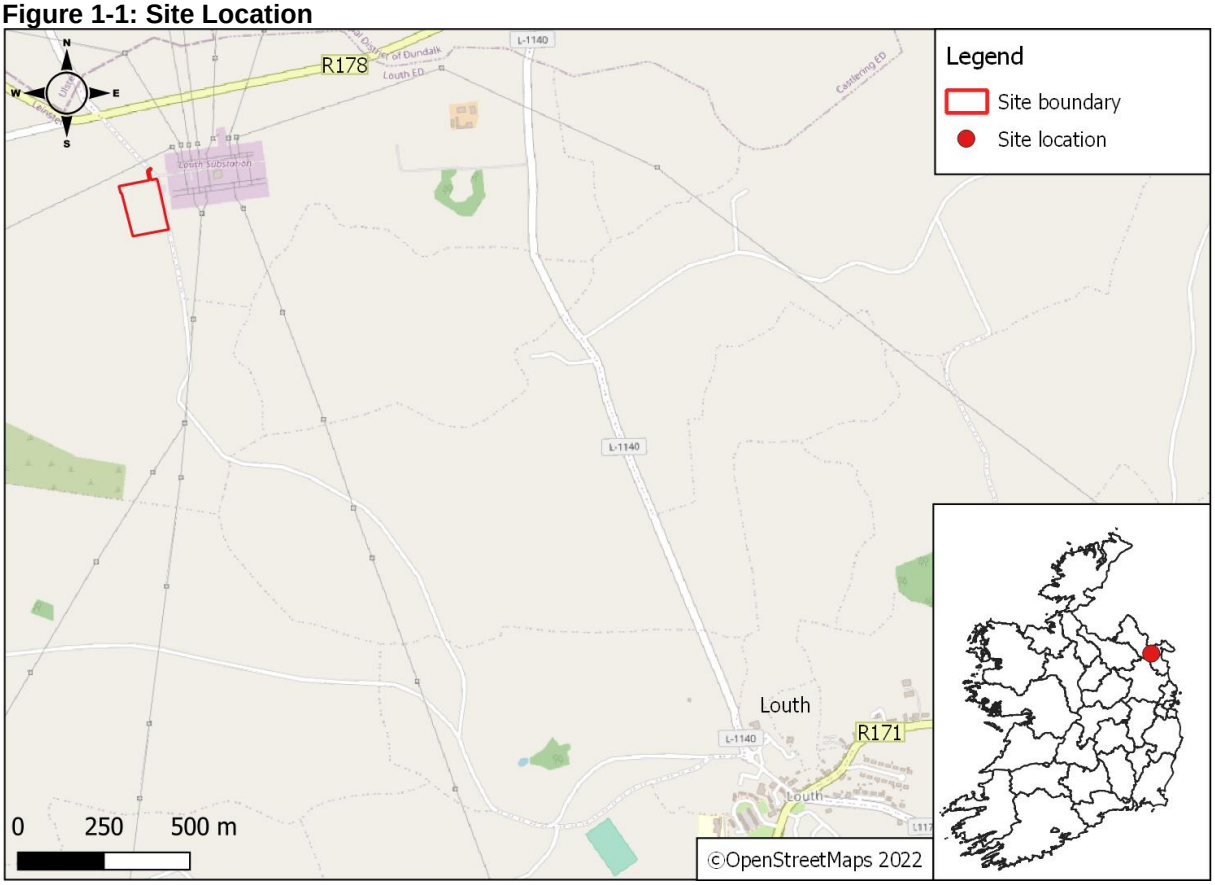
FIGURES

1 INTRODUCTION

Malone O'Regan Environmental (MOR) were commissioned by Strategic Power Projects Ltd. ('the Applicant') to prepare a Decommissioning Plan in respect of both the construction and operation of a proposed 220kV substation with associated grid connection and infrastructure (henceforth referred to as the 'Proposed Development') at Toomes and Monvallet, Co. Louth (OSI Grid Reference ITM 693889, 802864).

The Proposed Development will be located on a site that is ca. 1.8 hectares (ha) in size and is located within the townlands of Toomes and Monvallet, Co. Louth, ca. 2.5km northwest of Louth Village and is shown in Figure 1-1 ('the Site').

Figure 1-1: Site Location



1.1 Background

The Proposed Development will be critical infrastructure that will be intrinsically linked to both permitted and planned renewable energy projects, comprising of both solar and battery energy storage developments. Details of these projects are described below. These renewable energy projects will not be able to function as standalone developments as they will be reliant on connections to the Proposed Development in order to connect to the national grid.

For the purpose of this report 'Permitted Developments' will refer to Phase 1 PR 21/631 and its subsequent extension Phase 2 PR 21/1478. 'Proposed Final Phase' will refer to Phase 3 PR 22/534 as detailed below and illustrated in Figure 1-2.

Louth County Council Ref. No: 21/631 (Phase 1 - Granted)

This permitted development is for the construction of a solar PV and battery energy storage system development with associated substations and grid connections on a ca.42.23ha site.

The Proposed Development will be superseding the following elements of PR: 21/631 only:

- 2 no. 37kV sub-stations, one serving the solar PV development, the other serving the battery energy storage system development;
- 2 no. grid connections to Louth (Monvallet) 275kV substation.

Louth County Council Ref. No: PA 21/1478 (Phase 2 - Granted)

PR 21/631 was subject to an amendment and extension planning application (PR 21/1478). This permitted development will be for alterations and extension to the solar PV and battery energy storage system development permitted under PR. 21/631. This extension will increase the area to be developed by ca.32.93ha for both solar PV and battery storage to the east and northeast of PR 21/631.

The Proposed Development will not supersede any part of Phase 2, but instead will facilitate the connection of it to the national grid.

1.1.1 Proposed Final Phase

Louth County Council Ref. No: 22/534 (Phase 3 – Notification of Decision to Grant)

A 10 Year Planning Permission is currently being sought for a solar PV development to be developed as an extension of the solar PV development permitted under Ref. No. 21/631 on a site with a total area of c.81.37ha. This application is at an advanced stage of the planning process with a Notification of Decision to Grant issued by Louth County Council (LCC) on the 14/12/22.

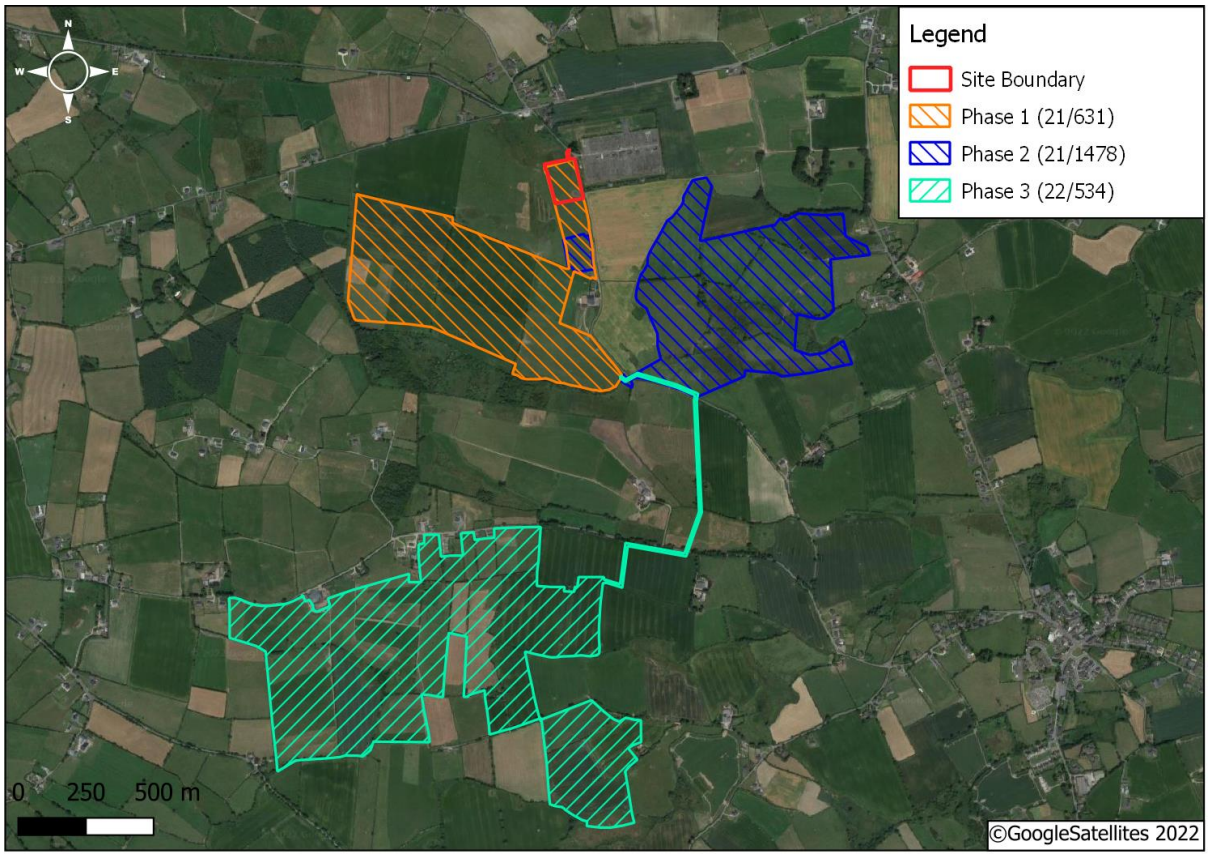
The Proposed Development will not supersede any part of Phase 3, but instead will facilitate the connection of it to the national grid.

1.2 Need for the Proposed Development

The Proposed Development will connect a large renewable energy project with the national grid. This will provide much needed green electricity to the grid to assist in decarbonising the Irish electrical network. This will include 75ha of permitted solar development providing an estimated ~65MW and 285MW from BESS. It is also intended that the Proposed Development will connect to a final phase of this solar development that, if granted planning permission, will provide an additional ~72MW, bringing the total supply from the solar development to 137MW of electricity. This amount of renewable energy requires a 220kV connection to the grid. The entire Strategic Power Project development in Monvallet, if all permitted, will utilise the full capacity a 220kV bay in the Louth 275kV substation. In order to deliver the permitted and proposed renewable energy projects there is a clear technical need for the Proposed Development.

The Proposed Development is presented in context with the Permitted Developments Phase 1 and 2 (PR 21/631 and PR 21/1478) along with the Proposed Final Phase (Phase 3) that is still subject to planning (22/534) in Figure 1-2.

Figure 1-2: Development Overview



2 DECOMMISSIONING

It is proposed that there will be a single decommissioning programme for the Proposed Development and all phases of the connected solar developments.

2.1 Description of the Proposed Development

2.1.1 220kV Substation

The proposed 220kV electrical substation will consist of:

- Internal section of access road to the sub-station buildings, compounds, parking, electrical apparatus, plant and equipment; overhead and underground electrical and communications cabling;
- 1 no IPP building (with satellite dish attached) measuring ca. 9.9m x ca.19.3m x ca. 8.0m (height), parking, compound and associated works;
- 1 no EirGrid control building measuring ca. 11.7m x ca. 13.0m x ca. 6.8m (height), House Transformer (House TX), parking, compound and associated works;
- electrical apparatus, plant and equipment; overhead and underground electrical and communications cabling and associated works;
- 1 no interface kiosk;
- Fencing, gates, 3 no lightning masts and 7 no lamp standards; and
- all associated works.

The proposed underground cabling (220kV) and ducting will extend from the proposed substation site to the existing Louth (Monvallet) 275kV ESB substation site boundary on the opposite side of the L5141 local road.

The proposed development will be an unmanned facility; however, the facility will be monitored 24 hours a day remotely by SPP's operation system and the Engineer Procurement and Construction provider. The Site will also be subject to routine inspections.

All potential negative environmental effects from the decommissioning works will be mitigated through established measures. These measures include, but will not be limited to;

- The use of erosion and sediment control measures;
- Maintenance of all existing buffers (hedge / treeline, drainage ditches etc.);
- Timing of decommissioning works to ensure that they do not interfere with wildlife breeding / nesting times; and,
- Measures which will rapidly establish a vegetative cover on any disturbed areas.

This decommissioning plan is based on current procedures and experience. However, at the time of decommissioning, all procedures will be re-evaluated to ensure that all decommissioning activities will be in accordance with all applicable guidance pertaining at that time.

2.2 Decommissioning Fund

At the cessation of electricity generation by the solar farm and within its life-span, the Proposed Development and the connected solar and battery storage facility, will be fully decommissioned and the land reinstated to its former agricultural use within 12 months. The solar farm produces clean and safe energy. It collects and converts light directly into electricity, hence there will be no hazardous waste generated or the need for complex environmental remediation. Project decommissioning is a simple and swift process owing to the method the modules and supporting structures are installed onsite. Broadly speaking, project decommissioning comprises of the dismantling and removal from the Site of all solar farm infrastructure and components. The following principles will be applied in decommissioning:

- Revenues from the sale of dismantled raw materials per weight (mainly aluminium, steel and copper) will outweigh decommissioning and restoration costs. Therefore, no reserve account needs to be set up to ensure enough financial means are available to restore the Site.
- PV panels require more special treatment: they need to be dismantled in specialised facilities to recycle the materials which are mainly glass, aluminium and silicon. Therefore, panels shall only be sourced from manufacturers which are members of the PVCYCLE initiative. This approach will ensure that panels receive a proper recycling treatment at the end of the lifetime of 35 years.
- The panels' supporting structure will consist of galvanised steel design for a lifetime of 35 years. No concrete shall be used for the foundations. Depending on the soil conditions, either earth screws or rammed profiles will be used to an approximate depth of 2m below ground level.

In order to alleviate any concerns that the Council may have in relation to these decommissioning works, prior to commencement of development, the developer shall lodge with the Planning Authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the Planning Authority, to secure the satisfactory reinstatement of the Site on cessation of the project coupled with an agreement empowering the Planning Authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be agreed in writing between the Planning Authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

2.3 Timeframe

The design life of the Proposed Development will be approximately thirty-five (35No.) years, or as determined by planning conditions. The Permitted Developments have been granted an operational lifespan of 35 years. The decommissioning tasks and removal of all solar panels from the leased land will be completed within approximately twelve months (12 months) of the cessation of electricity generation and the Site will be returned to agricultural usage.

Given the nature of the development, it is considered highly unlikely that any adverse effects to the environment would occur as a result of decommissioning works. Regardless, decommissioning works will be carried out in accordance with best practice guidelines and legalisation applicable at the time of decommissioning.

Decommissioning activities will be carried out in accordance with timeframes outlined within the applicable planning conditions.

While not expected and considered extremely unlikely, in the event that the construction or operation activities cease prior to the project completion, with no expectation of construction to restart, the development will be decommissioned as described in this report.

Also depending on energy requirements in 35 years, a potential option may be to re-power the solar farm and continue operations. If such a scenario arises the need for the proposed decommissioning works will be negated.

2.4 Equipment Dismantling and Removal

At the end of the Proposed Development's lifetime, the Proposed Development and the Permitted Developments will be disconnected from the ESB power grid. Following this, all structures, will be completely dismantled and removed (including underground electrical interconnection and distribution cables) as detailed below. All works will be undertaken in accordance with best practice guidelines and legislation applicable at the time of decommissioning.

2.4.1 PV Modules and Supporting Structures

Each individual PV module and associated equipment will be disconnected from the electrical system and the supporting structures will be dismantled. As the PV modules are removed, they will be placed in containers to be shipped for recycling and material re-use via recycling facility or sent for use in new solar modules or other solar products.

The supporting PV mounts will then be pulled from the ground by a small piling rig and will be removed and recycled offsite by an approved metals recycler.

2.4.2 Inverter Units and the Switchgear Unit

All inverter units and the switchgear unit will be disconnected from the electrical system and removed from the Site. All components will be recycled offsite by an approved recycler.

2.4.3 Onsite Substation and Battery Storage

The removal of the substation building (Proposed Development) and the control room and switch room within the battery storage facility from the Permitted Developments will require the removal of all internal Information Technology (IT) from the building. The removal of the substation and battery storage will principally be the reversal of its construction.

A fixed crane and articulated Heavy Goods Vehicles (HGVs) will be required for the removal of the battery storage containers, container switch room and containerised control room within the battery storage facility. These battery containers will be removed from the Site and the contents recycled or repositioned to an alternative site, if possible.

The cement used to secure the building foundations will be broken up and loaded onto a truck for removal from the Site. These materials will not involve significant volumes and will be transported to a licensed waste transfer station for appropriate disposal or sold as recycled concrete aggregate. Ground levels will be smoothed, compressed and levelled and restored to pre-development condition.

2.4.4 Electrical Cabling

The high voltage connection, underground electrical interconnection and distribution cables will be disconnected, removed and recycled offsite by an approved recycling facility.

All cabling will be either sent for recycling at a licensed recycling facility for further use or re-used where appropriate. In the event that cables are not in a condition to be re-used; they will be disposed of at an appropriate licensed waste transfer facility.

Underground cables will be disconnected from the local electricity transmission network and lifted from the trenching. Following the removal of the cable, trenches and ground surfaces will be immediately backfilled, compressed and restored to their former condition.

All security systems, CCTV, associated supports and wiring shall be dismantled and removed offsite for recycling by an approved recycling facility.

2.4.5 Other Components

Any above ground lines and poles will be removed along with associated equipment and holes will be infilled.

All electrical equipment will be removed and recycled offsite by an approved metals recycler.

All fences surrounding the Site will be dismantled and removed offsite for recycling by an approved metals recycler.

2.5 Drainage

Any drainage ditches which are identified as being damaged following the removal of electrical materials from the Site will be repaired following the completion of the decommissioning works.

2.6 Noise

The decommissioning works are not envisioned to create significant adverse noise effects; however, there is a possibility for temporary increases in noise levels within the immediate vicinity of the works. Overall, noise impacts during decommissioning will be localised and temporary in nature.

In addition, the noise emissions during decommissioning will not exceed a $L_{Aeq,T}$ noise level of 65dB 3-metre from the facade of any occupied residential dwelling.

All decommissioning works will take place during similar hours to those of the construction phase - 07:00 and 19:00 Monday to Friday and between 07:00 and 13:00 on Saturdays. No decommissioning works will be undertaken outside these hours or on Public Holidays without the prior agreement of the Planning Authority.

2.7 Traffic

The traffic numbers and movements will be similar to those expected during the construction phase. It is envisaged that the access routes utilised during the decommissioning phase of the Proposed Development will be the same as those used during the construction phase.

2.8 Waste

All waste generated will either be re-used, sent to an approved / licenced recycler or returned to the manufacture for appropriate recycling / disposal. All components of the development should be re-used or recycled as much as reasonably practicable.

All residual waste will be removed by a licenced contractor and transported to licenced waste facility. Due to the nature of the proposed development, there will be a very limited volume of residual (non-recyclable) waste generated.

2.9 Landscape

Overall, it is not anticipated that the removal of the structures and compounds within the developments will leave any open excavations; however, where necessary the ground will be re-graded to original contours using onsite materials.

3 SUMMARY

Given the nature of the Proposed Development and Permitted Developments, it is considered highly unlikely that any of the decommissioning activities will pose any significant environmental risks.

This plan will be updated prior to the commencement of any works to ensure that the plan will remain in accordance with all best available technology and site restoration methods.