

# 11 Material Assets

## 11.1 Introduction

This Chapter provides an assessment of the potential impacts to Material Assets arising from the proposed modifications to the West Offaly Power (WOP) Station and associated ash disposal facility (ADF) to facilitate the continued operation of these facilities and phased transition of that station to exclusive firing with biomass. As the existing development is subject to the condition that all existing activity ceases in December 2020 the potential impacts of the continued operation of WOP Station and the ADF will also be assessed. This will subsequently be referred to as the 'proposed development'.

As required this chapter will specify any mitigation measures required in order to minimise potential impacts on Material Assets.

The potential indirect environmental impacts associated with peat harvesting and the supply of biomass, as they relate to Material Assets, are also considered.

## 11.2 Methodology

The assessment was carried out in accordance with the following guidance and tailored accordingly based on professional judgement:

- EPA Guidelines on the Information to be Contained in Environmental Impact Statements (EPA, 2002) (and revised draft guidelines 2017);
- EPA Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA, 2003) (and revised draft advice notes 2015).

In developing this chapter, consideration was given to the guidance provided on project types and consideration of material assets as outlined in the EPA advice notes. The Material Assets to be considered as part of this assessment include:

- Energy and Fuel Supply.
- Major Utilities.
- Ownership and Access.

Other Material Assets which have the potential to be impacted by the proposed development are addressed in the following EIA chapters;

- Landuse (Chapter 5, Population and Human Health).
- Social Amenities (Chapter 5, Population and Human Health and Chapter 14, Landscape and Visual ).
- Non Renewable resources (Chapter 6, Biodiversity and Chapter 4 Description).
- Transport Infrastructure (Chapter 12, Traffic and Transport).

- Cultural Heritage (Chapter 13).
- Landscape and visual amenity (Chapter 14).

In order to inform this chapter a desk-based assessment has been undertaken with consideration for the location of the project, publicly available information and the construction methodology set out in Appendix 4.1.

## 11.3 Study Area

The below sections outlines the study area considered for the Material Asset assessment.

### 11.3.1 West Offaly Power Station including ADF

The study area for the consideration of Material Assets is WOP Station and ADF and its immediate environs. The location of these are as outlined on **Figure 1.1** in **Chapter 1**. The WOP Station is located within the townland of Cloniffeen and the ADF and its proposed extension and access road is located within the townlands of Leitra, Clonfinlough, Clondelara and Derrylahan.

### 11.3.2 Peat Supply to West Offaly Power Station

Peat is exclusively supplied to the WOP Station from Bord na Móna and harvested, under licence, from a defined number of existing supply bogs as detailed in Chapter 4 of this EIAR. In order to assess the potential indirect impacts, consideration will be given to overall impacts in relation to Bord na Móna's peat supply activities.

### 11.3.3 Biomass Supply to West Offaly Power Station

As detailed in **Chapter 4** of this EIAR, the type of biomass that will be used for electricity generation at WOP Station will comprise both indigenous (native) sources and imported biomass. Biomass will be principally from imported sources until such a time as indigenous biomass is available to meet the demand of the project. In order to assess the potential indirect impacts high level consideration will be given to overall impacts on Material Assets in relation to the biomass supply activities.

## 11.4 Receiving Environment

### 11.4.1 Energy and Fuel Supply

The WOP Station is currently a peat-fuelled generation station with an installed capacity of 150 MWe. WOP Station is currently fired on milled peat supplied by Bord na Móna Energy Limited with a start-up and combustion support facility for

firing standard refinery fuel oil. In 2017 WOP exported 928,876 MWhrs of electricity to the national grid equivalent to the needs of approximately 220,000<sup>1</sup> households.

The quantities of fuel used, energy generated and ash disposed of to the ADF for the 2017 is provided in **Table 11-1**. Data is derived from the Annual Environmental Report (AER)<sup>2</sup>.

**Table 11-1: Annual energy generation, fuel use and ash disposal at WOP**

Energy Generation, Fuel use, and ash disposal	2017
<b>Total Energy Generated (MWhrs)</b>	1,032,084
<b>Electricity Consumption (MWhrs)</b>	103,208
<b>Nett Export of energy (MWhrs)</b>	928,876
<b>Light Fuel Oil (m<sup>3</sup>)</b>	353.5
<b>Peat (metric tonnes)</b>	1,243,220
<b>Peat Ash to Landfill (metric tonnes)</b>	46,566

#### 11.4.2 Major Utilities at WOP Station and ADF

The station currently has an installed capacity of 150MWe and is capable of exporting c. 137MWe to the National grid. WOP Station is connected to the National grid via five 110kV lines and one 220kV line.

The WOP Station was commissioned in 2005. Existing utilities and services include;

- Electricity: WOP station is primarily self-sufficient in terms of power demands. However when the station is off load, power is imported through the 110KV network. This only supplies a power capacity in the region of 1MW and is only used for light, heat and power within the station itself and cannot be used to run any plant.
- Telecommunications: This is provided via fibre from nearby Shannonbridge radio site.
- Wastewater Services: WOP Station has its own Proprietary wastewater treatment system and is completely independent of the Town Sewerage scheme. Further details are provided in **Chapter 8** of this EIAR.
- Water supply and surface water drainage: The station itself is served by the public water supply with abstraction of water from the Shannon for the purpose of condensing, cooling of plant and manufacture of water for steam

<sup>1</sup> Based on CRU average of 4,200kWhrs/year per household, 2017, [https://www.cru.ie/document\\_group/review-of-typical-consumption-figures-decision-paper](https://www.cru.ie/document_group/review-of-typical-consumption-figures-decision-paper)

<sup>2</sup> Note this AER has been resubmitted to the EPA in November 2018

cycle. Further details in relation to water supply and surface water drainage are provided in **Chapter 8** of the EIAR.

There are no known major utilities located within the ADF. Services to which the ADF is connected include the following:

- Three phase electricity;
- Satellite broadband; and
- Mains water.

### 11.4.3 Ownership and Access

This EIAR has been prepared on behalf of ESB who are the owners of WOP Station and ADF. Bord na Móna are contracted by ESB for the transportation of ash to the ADF, the operation of the ADF and they also manage peat fuel handling operations at WOP Station.

WOP Station is currently accessed from dedicated entrances off the R357 Regional Road. Bord na Móna supply peat to the station primarily via a d private railway system which links the peat supply bogs and the on-site fuel storage and handling areas and also by road transport.

The ADF is accessed via a c. 3 km roadway linking the site with the R357. The ADF site is served by the Bord na Móna rail-line that links to the WOP station.

## 11.5 Impacts of the Development

This section considers and assesses the impact of the proposed development with regards to material assets for both the construction and operational phases.

In terms of non-renewable resources Fill, concrete and steel will be required to construct the biomass storage slabs and pellet silo. An estimate of the quantities of these materials is provided in Chapter 4. The impact on these non renewable resources would be **slight negative, localised to the source of these materials and permanent in nature.**

### 11.5.1 Energy and Fuel Supply

As part of ESB's commitment to leading Ireland's transition to a low-carbon economy the ESB intends to transition the production of energy at WOP to initial co-firing with biomass and peat in line with its Renewable Energy Feed in Tariff (REFIT 3) and subsequent firing on sustainable biomass only. As detailed in **Chapter 4** there will be a periodic stepwise reduction in peat combustion with increasing biomass combustion and with corresponding reduction in greenhouse gas emissions. From 2028 WOP Station will be fuelled on 100% renewable

biomass. No peat will be combusted at WOP Station. At this point WOP Station will be a low-carbon dispatchable energy generation station.

As detailed in Chapter 1 of this EIAR, the proposed development has the following key objectives:

**Objective 1.** To support ESB's transition to low carbon clean energy production thereby directly supporting the de-carbonisation of the energy generation sector as a whole in line with National and EU policy.

**Objective 2.** To continue to contribute strategically to the socio-economic wellbeing of the Irish State and the Eastern and Midland Region in which West Offaly Power is situated, in line with National and EU policy.

**Objective 3.** To continue to contribute towards security of clean electricity supply into the future through diversification of fuel source and utilisation of indigenous fuel supply in line with National and EU policy.

The proposed development represents a rational use of existing infrastructure. The continued operation of the station has demonstrable positive impacts associated with delivering dispatchable energy generation capacity to the grid with minimal additional physical development and is therefore considered to have a positive, not significant and long-term effect.

### 11.5.2 Major Utilities at WOP Station and ADF

The proposed development does not require alterations to any major existing utilities and services at WOP Station, ADF or outside the boundaries of the sites themselves during the construction or operational phases and it is therefore considered that there will be no effects on major utilities.

Details of requirements for wastewater, water supply and surface water drainage are detailed in **Chapter 8** of this EIAR.

### 11.5.3 Ownership and Access

Traffic and transport infrastructure is dealt with in **Chapter 12** of this EIAR. At the WOP Station, all development work will take place on lands within the ownership of ESB. Road access arrangements will continue as presently – by means of the public road along the eastern boundary and leading northwards to the R357 Regional Road and via the Bord na Móna works access to the east.

Bord na Móna will supply peat to the station primarily via a dedicated private railway. The ADF site will continue to be served by the Bord na Móna rail-line that links to the WOP Station. At the ADF site, the ESB will enter into arrangements to secure additional lands from Bord na Móna in order to facilitate the development. It is therefore considered to have no impacts on ownership and access.

#### 11.5.4 Decommissioning Phase

The WOP Station will be decommissioned in accordance with the EPA approved Decommissioning Management Plan (DMP). Following site decommissioning the generating station may undergo demolition in accordance with any planning requirements that may be imposed.

During the decommissioning phase WOP Station will no longer require a peat fuel supply or deliver dispatchable energy generation capacity to the grid and major utilities would remain in place for as long as required. It is not envisaged that there would be any alteration to ownership and access during the decommissioning phase.

The ADF will be decommissioned in accordance with the EPA approved Closure Restoration and Aftercare Management Plan (CRAMP) as required by IE Licence. Further details are provided in Chapter 4 of this EIAR.

#### 11.5.5 Peat Supply to West Offaly Power Station

The indirect impacts of the development in relation to the peat supply bogs, in the context of Material Assets, include the ongoing use of a non-renewable fuel resource (peat) until end 2027.

There will be no requirement for the development of any new raised bog areas within the supply bog estate, but the ongoing peat supply to the WOP Station is associated to the continued operation of the Bord na Móna peat supply bogs identified in Chapter 4. Peat will continue to be delivered to WOP Station via the existing rail and road network. In terms of Material Assets, as this is a continuation of existing fuel supply to WOP Station and no alterations to the existing major utilities, ownership and access are required to accommodate this peat supply this is considered to have **a neutral, imperceptible and medium term effect**.

The maximum peat quantities to be utilised on an annual basis to the end of 2027 is provide in Chapter 4 also. The impact on this non renewable resource would be **negative, moderate localised to the peat supply sources and permanent in nature**.

#### 11.5.6 Biomass Supply to West Offaly Power Station

Biomass will be transported to the WOP Station via the existing road network. Sustainable biomass is a renewable resource and by 2028, WOP Station will be a low-carbon dispatchable energy generation station. In terms of Material Assets, as this is the introduction of a renewable fuel supply to WOP Station and no alterations to the existing major utilities, ownership and access required to accommodate this biomass supply this is considered to have **a positive, imperceptible and long term effect**.

### 11.5.7 Do-Nothing Scenario Impact

The “do nothing” scenario would see the closure of the WOP Station at the end of 2020 and it would cease to be a source of electricity. The WOP Station would be decommissioned in accordance with the current Decommissioning Management Plan (DMP) and the ADF will be closed in line with existing Closure and Restoration and Aftercare Management Plan) (CRAMP) as required. Following site decommissioning the generating station would undergo demolition in accordance with current planning requirements. For energy supply, as this is the loss of use of existing generating infrastructure it is considered to be **negative, moderate and long term effect**. In term of major utilities the potential impact is considered to be the same as that as considered for construction. Potential impacts on ownership and access are considered to be negative, slight and long term as the lands may be sold.

### 11.6 Mitigation

During the construction phase it will be standard practise to ensure that there is no disruption to the existing major utilities at both the WOP Station and ADF. This requirement and the measures put in place to ensure this does not occur is detailed in the construction methodology provided in **Appendix 4.2** of this EIAR. No other specific mitigation measures are required in relation to material assets.

### 11.7 Difficulties Encountered in Compiling Information

No difficulties were encountered during this assessment.

### 11.8 Residual Impacts

As no specific mitigation measures are required it is concluded that the proposed development will have no residual negative impacts.

### 11.9 Cumulative Impact

The cumulative impact of the proposed development and other permitted developments in the area was assessed by taking into account the existing baseline environment and the predicted impacts of this and other proposed development in the area. It is considered that there is no cumulative impact in relation to Material Assets.

The peat bogs that supply WOP are as detailed in **Section 11.5.5** of this Chapter, and cumulative impacts in terms the peat as a fuel supply is detailed therein.

Permission has been granted to develop a 100MW battery electricity storage (Lumcloon Energy Ltd.) adjacent to WOP station with connection to the

transmission grid in the area. This will not have any cumulative impacts with Material Assets as outlined in this chapter.

The Lough Ree Power (LRP) Station will also be subject to a planning application in relation to the transition of the station from peat to biomass. Edenderry Power Limited (EPL) is an existing development located approximately 60 km from the proposed development and utilises peat and biomass as a fuel supply. LRP Station and EPL are not located in proximity to the WOP Station and ADF therefore no cumulative impacts are anticipated in relation to the Material Assets listed in this chapter.

Other peat harvesting activities are carried out by Bord na Móna in relation to LRP and EPL and Bord na Móna also harvest peat for other end uses (e.g. horticulture). Third-party harvesting of peat also occurs on bogs throughout the Midlands, ranging from small scale turbarry for domestic fuel to commercial scale peat removal for horticultural purposes. It is considered unlikely that there will be any cumulative impacts on the material assets listed in this chapter.

There are no other known development proposals within the study area that could result in a cumulative impacts.

## 11.10 References

- Commission for Regulation of Authorities, 2017, [https://www.cru.ie/document\\_group/review-of-typical-consumption-figures-decision-paper](https://www.cru.ie/document_group/review-of-typical-consumption-figures-decision-paper)
- West Offaly Power Industrial Emissions Licence P0610-02 and associated licence documents