1.0 INTRODUCTION

1.1 BACKGROUND

Greener Ideas Limited is proposing to develop a gas fired power plant with capacity to generate up to 125MW of electricity at a site located in Profile Park, Dublin 22.

This type of power plant will operate when electricity demand is higher than average, typically during morning and evening peak usage times. The plant will regularise energy provision in the electricity grid especially in the context of an increase in use of renewable energy technologies, such as wind and solar power. The plant technology allows the delivery of an efficient, safe and secure electricity system by helping to manage fluctuating electricity demands and compensate for shortages occurring from wind or solar power. This will accommodate and support Irelands transition to a low-carbon economy and mean that Ireland can continue to invest in renewable sources of power in order to meet future national and EU targets. The power plant may also have the capacity in the future to facilitate the electricity needs of data centre development in Profile Park and its surrounding areas. The design of the plant and its ultimate usage is therefore flexible such that it may provide power directly to the national electricity grid and/or to nearby data centre development. Further information on its electricity connection options is provided in Section 1.5.

Information on the design of the proposed power plant is provided in Chapter 3 'Description of the Development'. The key design characteristics include an engine hall/building comprising up to 6 no. gas engines and 1 no. exhaust stack cluster; 2 no. 110 kV electrical transformers; and a gas above ground installation (AGI). Natural gas, supplied from the Gas Networks Ireland national grid, will be the primary fuel source for the plant. However, in order to comply with Commission for Regulation for Utilities (CRU) requirements for security of energy supply, the power plant will also have capacity to operate on low sulphur diesel oil as a backup fuel in the event of interruption to the natural gas supply.

This Environmental Impact Assessment (EIA) Report has been prepared in order to inform the planning application for the proposed power plant which has been submitted to South County Council for statutory approval. It should be noted that the application seeks a 10 year planning permission. The EIA Report is also prepared in support of Industrial Emissions licence application to the Environmental Protection Agency.

1.2 APPLICANT

Greener Ideas Limited (GIL) is a joint venture company comprising of Bord Gáis Energy and Mountside Properties Limited. GIL is developing a portfolio of energy projects and has secured planning permission for gas fired power plants and battery energy storage plants in Kilkenny, Tipperary and Roscommon. It is envisaged that these plants will make a significant contribution towards Irelands renewable energy targets for 2030 and beyond as they will help regularise the electricity grid and facilitate additional renewables integration onto the grid in line with EirGrid's DS3 Programme (refer Section 4.4.1).

Bord Gáis Energy (BGE) has been in operation in Ireland since 1976. Today, BGE provides gas, electricity and home care services to over 730,000 residential and business customers throughout the country. It operates the 445 MW Combined Cycle Gas Turbine (CCGT) power plant in Whitegate, County Cork. BGE's sustainable principles include:

- To provide products and services to customers that support a low carbon future;
- To support the creation of a sustainable low carbon energy system for Ireland; and
- To strive for a net zero internal carbon footprint from our own corporate operations.

In 2014, BGE became part of the global Centrica plc Group. Centrica is a leading international energy services and solutions provider. Centrica supplies energy and services to over 26.2 million customer accounts mainly in Ireland, the UK and North America through its brands including BGE, British Gas and others.

Mountside Properties Limited are shareholders in the operation of the 400 MW CCGT power plant in Tynagh, County Galway.

1.3 SITE LOCATION

The site of the proposed power plant is located in Profile Park, Dublin 22. This is a 100 acre (40.5 Ha) fully enclosed, private business park which has been developed to the highest of standards. It is easily accessible from the major arterial roads in the city including the M50, M7 and M4, and is served by excellent public transport links.

Within Profile Park the proposed power plant will be located on greenfield lands immediately adjacent to the existing Digital Realty data centre. The site of the proposed power plant has been identified by South Dublin County Council in its County Development Plan 2016-2022 as Zoning Objective 'EE' which is 'To provide for enterprise and employment related uses'. The siting of a power plant in Profile Park would bring additional opportunity to further accommodate data centre development. In this context it should be noted that Profile Park is connected directly onto the Dublin metropolitan fibre network called the T50. The T50 is a multi-duct fibre carrying system which extends over 44 km and provides connectivity to 24 business parks and from these into the global networks through.

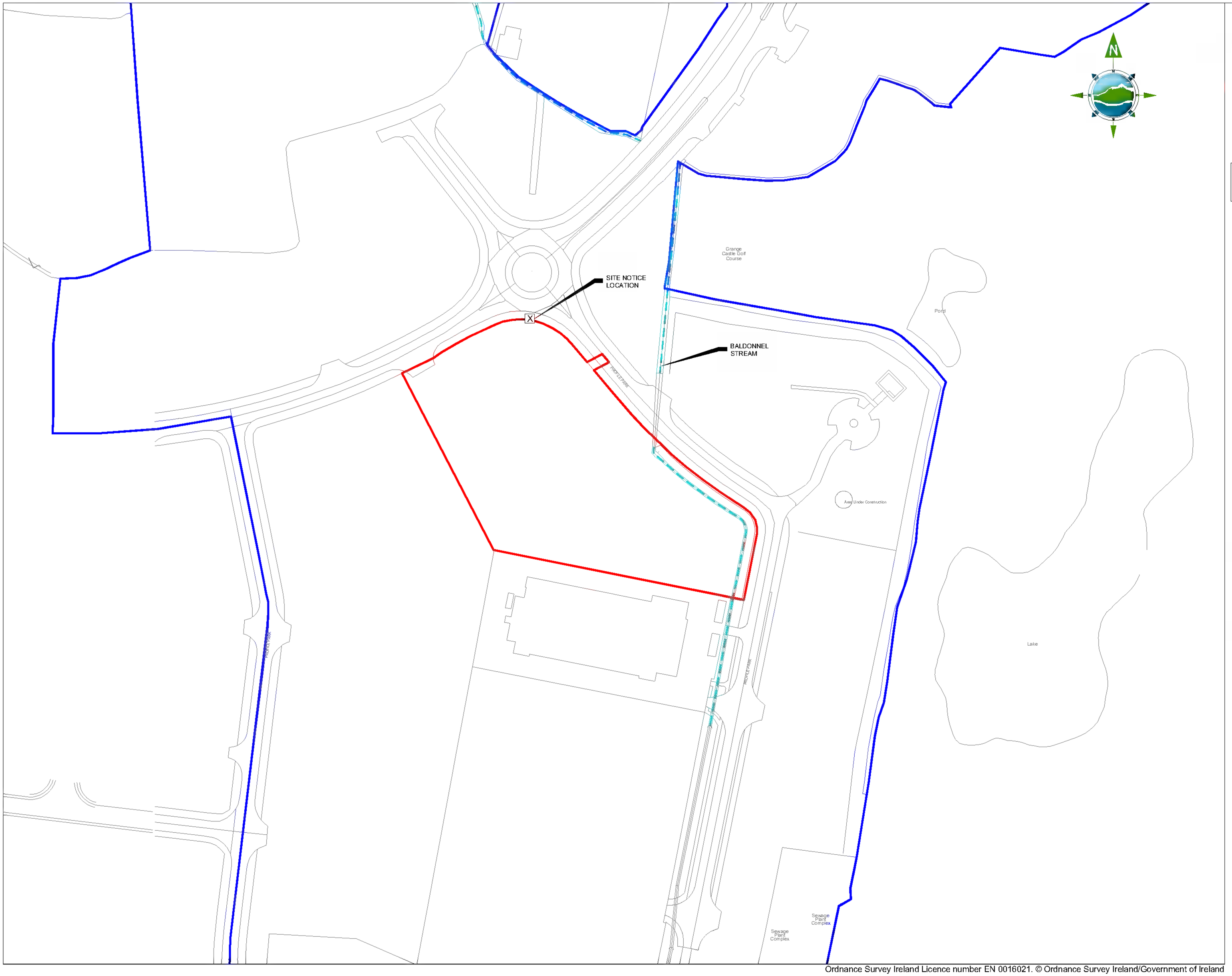
Existing tenants within Profile Park and the surrounding business and enterprise parks include Google, Microsoft, Digital Realty Trust, Telecity and others. Immediately adjacent to Profile Park is the Castlebaggot 110 / 220 kV substation which provides electrical transmission connectivity to the national electricity transmission grid system.

The nearest residential properties are located some 400m to the south of the site and some 450 m to the north east. Grange Castle Golf Course is located approximately 120m east of the site and Baldonnel Aerodrome 450m south of the site.

The proximity of both the transmission grid and local data centre development are key drivers for the siting of the proposed power plant. The location of the proposed power plant is indicated on Figure 1-1 and Figure 1-2.

1.4 LAND OWNERSHIP

Moffash Ltd. is the owner of the site on which the proposed power plant will be located. Documentary evidence in relation to the owners consent for the submission of the planning application for this power plant to South Dublin County Council has been provided with the planning application documentation.



Ordnance Survey Ireland Licence number EN 0016021. © Ordnance Survey Ireland/Government of Ireland

THE INFORMATION ON THIS DRAWING IS TO THE ORDNANCE SURVEY IRELAND ITM COORDINATE SYSTEM

GENERAL LEGEND

PLANNING APPLICATION BOUNDARY

APPLICANT'S LANDHOLDING

SITE NOTICE LOCATION [X]

A second Site Location Map is provided as 11069-2002 In order to indicate the full extent of Landownership and also the location of the second Site Notice;.

As agreed with South Dublin County Council in the pre-application consultation meeting the final finishes, including cladding materials and colour codes, will be agreed with the Council post planning through planning condition. Greener Ideas Limited will ensure only Council approved finished are applied on site.

NOTES:

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER/EMPLOYERS REPRESENTATIVE, AS APPROPRIATE, TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE ACTUAL LOCATION OF ALL SERVICES/UTILITIES, ABOVE AND BELOW GROUND, BEFORE ANY WORK COMMENCES
5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

CO. DUBLIN

OSI 1:2,500 Sheet No's: 3325-B, 3325-D, 3326-A & 3326-C.

20m 0 20m 40m 60m

Rev	Date	Description	By	Chkd
A	18.06.21	PLANNING ISSUE	MN	MMcC

Client: Greener Ideas

Project:

FIGURE 1.2
PROFILE PARK
POWER PLANT

Title:

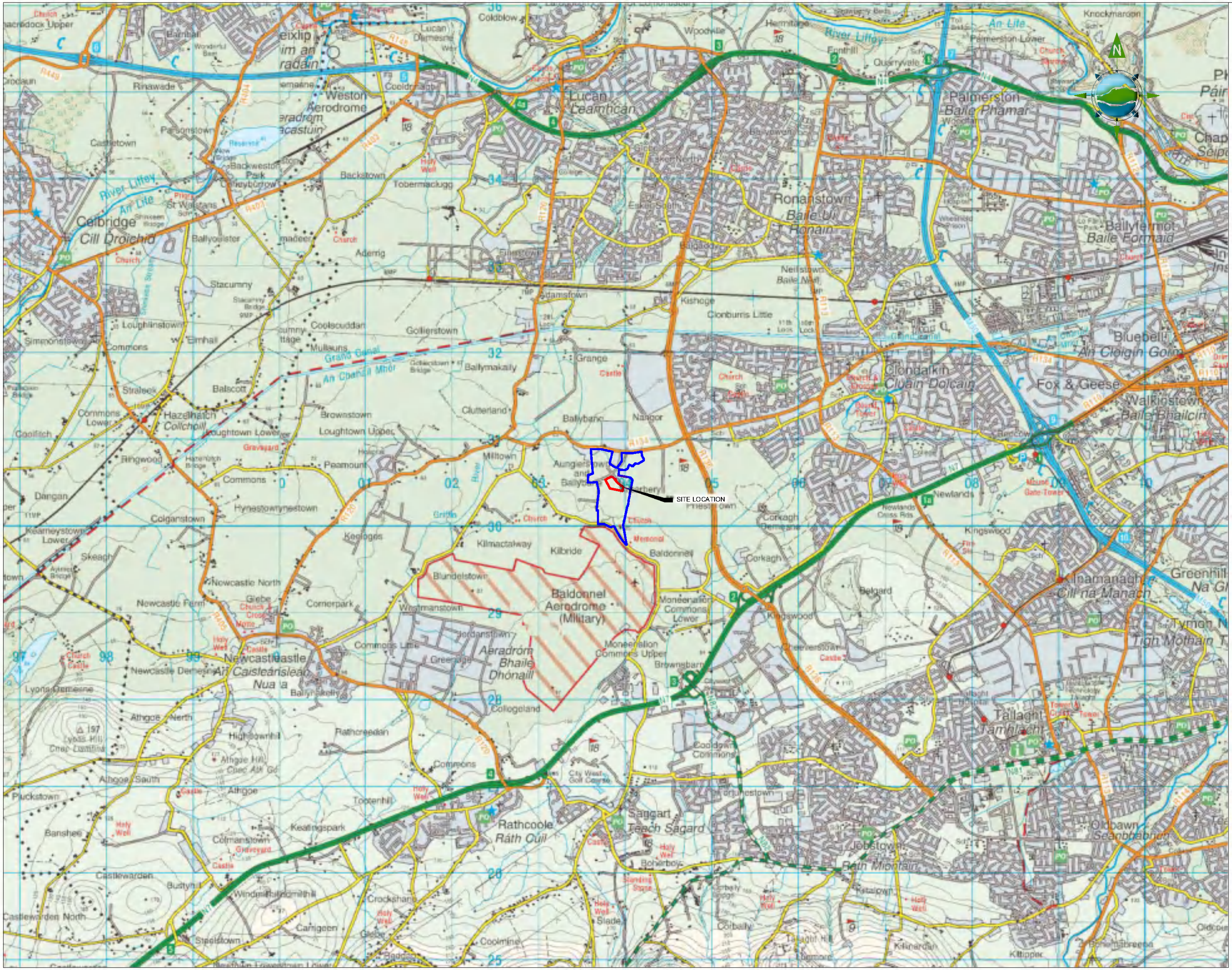
SITE LOCATION MAP
AT 1:1,000

Scale @ A1:	1:1,000	
Prepared by: M. Nolan	Checked: M. McCarthy	Date: June2021
Project Director:	S. Tinnelly	
Drawing Status:	Planning	

TOBIN
CONSULTING ENGINEERS
Block 10-4, Blanchardstown Corporate Park,
Dublin 15, Ireland.
tel: +353-(0)1-8030406
fax:+353-(0)1-8030409
e-mail: dublin@tobin.ie
www.tobin.ie

Drawing No.: 11069-2001

Revision: A



THE INFORMATION ON THIS DRAWING IS TO THE ORDNANCE SURVEY IRELAND ITM COORDINATE SYSTEM

GENERAL LEGEND

PLANNING APPLICATION BOUNDARY

APPLICANT'S LANDHOLDING

As agreed with South Dublin County Council in the pre-application consultation meeting the final finishes, including cladding materials and colour codes, will be agreed with the Council post planning through planning condition. Greener Ideas Limited will ensure only Council approved finished are applied on site.

NOTES:

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER/EMPLOYERS REPRESENTATIVE, AS APPROPRIATE, TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. THE CONTRACTOR SHALL UNDERTAKE A THOROUGH CHECK FOR THE ACTUAL LOCATION OF ALL SERVICES/UTILITIES, ABOVE AND BELOW GROUND, BEFORE ANY WORK COMMENCES
5. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

CO. DUBLIN

OSI 1:2,500 Sheet No's: 3325-B, 3325-D, 3326-A & 3326-C.

Ordnance Survey Ireland Licence number EN 0016021. © Ordnance Survey Ireland/Government of Ireland

400m 0 400m 800m 1200m

Rev	Date	Description	By	Chkd.
A	18.06.21	PLANNING ISSUE	MN	MMcC

Client: Greener Ideas

Project: PROFILE PARK POWER PLANT

Title: FIGURE 1.1 SITE LOCATION IN REGIONAL CONTEXT

Scale @ A1: 1:20,000

Prepared by: M. Nolan | Checked: M. McCarthy | Date: June 2021

Project Director: S. Tinnelly

Drawing Status: Planning

TOBIN CONSULTING ENGINEERS

Block 10-4, Blanchardstown Corporate Park, Dublin 15, Ireland.
tel: +353-(0)1-8030406
fax:+353-(0)1-8030409
e-mail: dublin@tobin.ie
www.tobin.ie

Drawing No.: 11069-2000 | Revision: A

1.5 STATUTORY CONSENT OVERVIEW

1.5.1 PLANNING CONSENTS

There are two planning consenting routes for thermal power plants. These are:

1. Strategic infrastructure development application to An Bord Pleanála under Section 34 of the Planning and Development Act 2000, as amended (hereafter referred to as 'the Planning Acts').
2. Application to a local planning authority under Section 34 of the Planning Acts.

Strategic infrastructure developments are those listed in the Seventh Schedule of the Planning Acts. These generally relate to major energy, transport, environmental and health infrastructure. Seventh Schedule projects provide generally for applications for permission/approval for specified private and public strategic infrastructure developments to be made directly to An Bord Pleanála and not to a local planning authority.

In relation to Class 1 (Energy Infrastructure) the following development type identified in the Seventh Schedule is considered directly relevant to the proposed power plant:

A thermal power station or other combustion installation with a total energy output of 300 megawatts or more.

The proposed power plant at Profile Park is a thermal power plant which will have total energy output of approximately 120 MW. This is below the above threshold and therefore the power plant does not fall within this threshold. As such, the power plant is not a Strategic Infrastructure Development and its planning application will be submitted to South Dublin County Council in accordance with Section 34 of the Planning Acts.

Other notable Class 1 (Energy Infrastructure) developments include:

An industrial installation for the production of electricity, steam or hot water with a heat output of 300 megawatts or more.

An industrial installation for carrying gas, steam or hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables, where the voltage would be 220 kilovolts or more, but excluding any proposed development referred to in section 182A(1).

In relation to the above developments, these relate to industrial installations and not thermal power plants or combustion installations which are subject to the first development type as described previously[1]. It should also be noted in the context of the statement '*transmission of electrical energy by overhead cables by 220kV or more'* that that the proposed electrical connection considered in this EIAR will be an underground 110 kV cable and not an overhead cable. Electrical power will be exported from the power plant's main transformers to the existing Castlebaggot 220 / 110 kV Substation which is operated by EirGrid or to a new proposed 110 kV substation in Profile Park. No confirmed details of this potential new substation were available for consideration as part of this EIAR.

[1] Greener Ideas Limited would refer to An Bord Pleanála's recent strategic infrastructure consultation request relating to the Modifications to Lough Ree Power plant (ABP Reference: 301594-18, Inspectors Report pg 11/13) which reinforces this interpretation.

1.5.2 S182A(1) – STRATEGIC INFRASTRUCTURE DEVELOPMENT

Under the strategic infrastructure provisions of the Planning Acts, electricity transmission development referred to in section 182A(1) is strategic infrastructure development.

Section 182A (1) to (3) and subsection (9) of the Planning Acts provide as follows:

1) *Where a person (hereafter referred to in this section as the 'undertaker') intends to carry out development comprising or for the purposes of electricity transmission, (hereafter referred to in this section and section 182B as 'proposed development'), the undertaker shall prepare, or cause to be prepared, an application for approval of the development under section 182B and shall apply to the Board for such approval accordingly.*
2) *In the case of development referred to in subsection (1) which belongs to a class of development identified for the purposes of section 176, the undertaker shall prepare, or cause to be prepared, an environmental impact statement or Natura impact statement or both of those statements, as the case may be, in respect of the development.*
3) *The proposed development shall not be carried out unless the Board has approved it with or without modifications. […]*
9) *In this section 'transmission', in relation to electricity, shall be construed in accordance with section 2(1) of the Electricity Regulation Act 1999 but, for the purposes of this section, the foregoing expression, in relation to electricity, shall also be construed as meaning the transport of electricity by means of—*
    a. *a high voltage line where the voltage would be 110 kilovolts or more, or*
    b. *an interconnector, whether ownership of the interconnector will be vested in the undertaker or not.*

"Transmission" is defined in subsection 2(1) of the Electricity Regulation Act 1999 as follows:

"transmission", subject to section 2A, in relation to electricity, means the transport of electricity by means of a transmission system, that is to say, a system which consists, wholly or mainly, of high voltage lines and electric plant and which is used for conveying electricity from a generating station to a substation, from one generating station to another, from one substation to another or to or from any interconnector or to final customers but shall not include any such lines which the Board may, from time to time, with the approval of the Commission, specify as being part of the distribution system but shall include any interconnector owned by the Board.

"electric plant" is defined as follows:

"*any plant, apparatus or appliance used for, or for purposes connected with, the generation, transmission, distribution or supply of electricity, other than—*

a) *an electric line,*
b) *a meter used for ascertaining the quantity of electricity supplied to any premises, or*
c) *an electrical appliance under the control of a consumer".*

As described previously, it should be noted that that the proposed electrical connection considered in this EIAR is an underground 110 kV cable from the plant's main transformers to the existing Castlebaggot 220 / 110 kV Substation which is operated by EirGrid or to a new proposed 110 kV substation in Profile Park. It should be noted that planning permission is not sought for these connections as part of the power plant application to South Dublin County Council. Either Greener Ideas Limited or EirGrid will be responsible in the future for securing the necessary planning permission for these electrical connections. Similarly, in the event that

Greener Ideas Limited and a data centre operator agree for a private power supply to be provided then this would also be subject to its own separate consenting process.

1.5.3 INDUSTRIAL EMISSIONS LICENSE PERMIT

The proposed power plant will require an Industrial Emissions Licence from the Environmental Protection Agency (EPA) as its operations fall into the categories of industrial activity referred to the First Schedule of the *Environmental Protection Agency Act 1992*, as amended.

Section 2.1 of the First Schedule of the Act states that an Industrial Emissions Licence is required for:

'Combustion of fuels in installations with a total rated thermal input of 50 MW or more'.

Greener Ideas Limited will submit an Industrial Emissions Licence application to the EPA as required in the above legislation.

1.5.4 CRU AUTHORISATIONS AND LICENCES

The Electricity Regulation Act, 1999 provided for the establishment of the Commission for Energy Regulation (CER), renamed to the Commission for Regulation of Utilities (CRU), and the necessary powers to licence and regulate the supply, distribution, transmission and supply of electricity in Ireland.

In order to construct a power plant, it is necessary to have an Authorisation to Construct. Similarly, it is necessary to have a Licence to Generate in order to generate electricity. It is the CRU's role to grant, monitor the performance of, modify, revoke and enforce these Authorisations and Licences.

Greener Ideas Limited will apply to the CRU for the necessary Authorisations and Licences following receipt of planning permission for the proposed power plant.

1.6 STRUCTURE OF EIA REPORT

The structure of this EIA Report is set out in Table 1-1 below:

Table 1-1: Structure of EIA Report

Chapter No.	Chapter Title
1	Introduction
2	EIA Report Methodology
3	Description of Development
4	Need for the Development
5	Consideration of Alternatives
6	Planning Policy
7	Population and Human Health
8	Land, Soils and Geology
9	Hydrology and Hydrogeology

Chapter No.	Chapter Title
10	Air Quality and Climate
11	Noise
12	Biodiversity
13	Cultural Heritage
14	Landscape and Visual
15	Traffic and Transportation
16	Material Assets
17	Major Accidents and Disasters
18	Interactions of the Foregoing