Integrated Pollution Prevention and Control (IPPC) Licensing

Application Form

EPA Reg. Nº: *(Office use only)*	

Environmental Protection Agency
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ABOUT THIS APPLICATION FORM

This form is for the purpose of making an application for an Integrated Pollution Prevention and Control (IPPC) Licence under the Environmental Protection Agency Acts, 1992 and 2003. There is a separate application form for applicants who wish to apply for the Pig & Poultry sector.

The Application Form **must** be completed in accordance with the instructions provided in the *IPPC Licensing Application Guidance Note.* The Guidance Note gives an overview of IPPC Licensing, outlines the licence application process (including number of copies required) and specifies the information to be submitted in the application. The Guidance Note and application forms are available to download from the IPPC Licensing pages of the EPA's website at www.epa.ie. A valid application for an IPPC licence must contain the information prescribed in the Environmental Protection Agency (Licensing) Regulations, 1994 to 2004. Article 10 of the Regulations sets out the statutory requirements for information to accompany a licence application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in Article 10. In order to ensure a legally valid application in respect of Article 10 requirements, please complete the Article 10 Checklist provided in Annex 2.

This Application Form does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Environmental Protection Agency Acts, 1992 and 2003 and the Environmental Protection Agency (Licensing) Regulations 1994 to 2004. While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantees, undertakings and warranties concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation contained in the accompanying Guidance Note, then the requirements in this Application Form shall take precedence.

SECTION A: NON-TECHNICAL SUMMARY

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the carrying on of the activity/activities, and describe mitigation measures proposed or existing to address these impacts. This description should also indicate the normal operating hours and days per week of the activity.

The following information must be included in the non-technical summary:

A description of:

- the installation and its activities,
- the raw and auxiliary materials, other substances and the energy used in or generated by the installation,
- the sources of emissions from the installation,
- the environmental conditions of the site of the installation (e.g. soil and groundwater, air, noise, surface water),
- the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation,
- where necessary, measures for the prevention and recovery of waste generated by the installation,
- further measures planned to comply with the general principles of the basic obligations of the operator i.e.

  (a) all the appropriate preventive measures are taken against pollution, in particular through application of the Best Available Techniques (BAT);
  (b) no significant pollution is caused;
  (c) waste production is avoided in accordance with Council Directive 75/442/EEC of 15 July 1975 on waste; where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;
  (d) energy and other resources are used efficiently;
  (e) the necessary measures are taken to prevent accidents and limit their consequences;
  (f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

- measures planned to monitor emissions into the environment.

Supporting information should form **Attachment Nº A.1**

RESPONSE

The non-technical summary for this application is appended to Attachment A.1.

SECTION B: GENERAL

B.1. Owner/Operator

Name*:	Endesa Ireland Limited
Address:	3 Grand Canal Plaza, 5th Floor,
	Grand Canal Street Upper,
	Dublin 4.
	Ireland
Tel:	+353 (0)1 5228300
Fax:	+353 (0)1 5228301
e-mail:	info@endesaireland.ie

* This should be the name of the applicant which is current on the date this IPPC Licence Application is lodged with the Agency. It should be the name of the legal entity (which can be a limited company or a sole trader). A trading/business name is not acceptable.

Name and Address for Correspondence
Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Name:	Peter Gavican
Secondary Contact	Miguel Gonzalez
Address:	Endesa Ireland Limited
	3 Grand Canal Plaza, 5th Floor,
	Grand Canal Street Upper,
	Dublin 4.
Tel:	+353 (0)1 5228300
Fax:	+353 (0)1 5228301
e-mail:	peter_gavican@endesaireland.ie
e-mail 2o	miguel.gonzalez@endesaireland.ie

Address of registered or principal office of Body Corporate (if applicable)

Address:	Endesa Ireland Limited
	3 Grand Canal Plaza, 5th Floor,
	Grand Canal Street Upper,
	Dublin 4.
	Ireland
Tel:	+353 (0)1 5228300
Fax:	+353 (0)1 5228301
e-mail:	info@endesaireland.ie

If the applicant is a body corporate, the following information must be attached as **Attachment B1**:

a) a Certified Copy of the Certificate of Incorporation.
b) the Company's Registration Number from the Companies Registry Office.
c) Particulars of Registered Office of the Company.

Name and address of the proprietor(s) of the Land on which the Activity is situated (if different from applicant named above):

Proprietor's Name:	Not Applicable Endesa Ireland Ltd are the owners
Address:	
Tel:	
Fax:	
e-mail:	

Name and address of the owner(s) of the building and ancillary plant in which the activity is situated (if different from applicant named above):

Name:	Not Applicable Endesa Ireland Ltd are the owners
Address:	
Tel:	
Fax:	
e-mail:	

B.2. Location of Activity

Name:	Great Island Power Station
Address*:	Great Island
	Campile
	New Ross
	Co Wexford
Tel:	051 860525
Fax:	
Contact Name:	Padraig Dunleavy
Position:	Station Manager
e-mail:	padraig.dunleavy@endesaireland.ie

* Include any townland.

National Grid Reference (12 digit 6E,6N)	E268907, N114574

Location maps (≤A3), appropriately scaled, with legible grid references should be enclosed in **Attachment B.2.** The site boundary must be outlined on the map in colour.

Geo-referenced digital drawing files (e.g. AutoCAD files) in Irish Grid projection of the site boundary and overall site plan, including labelled emission, monitoring and sampling points, are also required. This data should be provided to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

Name of geo-referenced digital drawing files	IPPC Licence Application : Geo referenced digital drawing files
Name of CD-Rom with digital drawing files	IPPC Licence Application: Endesa Ireland Limited

B.3. Class of Activity

Identify the relevant activities in the First, Third or Fourth Schedule of the PoE Act 2004 to which the activity relates:

Schedule	**Class**	**Description**[Note 1]
First	2.1 Energy	The operation of combustion installations with a rated thermal input equal or greater then 50MW

Note 1: In order to give a precise identification **select only those words** from the description of the class or classes that best describes the nature of the activity for which the licence is being applied for.

B.4. Employees/ Capital Cost

Give-

(i) In the case of an established activity, the number of employees and other persons working or engaged in connection with the activity on the date after which a licence is required and during normal levels of operation, or

(ii) In any other case, the gross capital cost of the activity to which the application relates.

Number of Employees (existing facilities):	38
Gross Capital Cost (new proposals) €	€250 million

B.5. Relevant Planning Authority

Give the name of the planning authority in whose functional area the activity is or will be carried out.

Name:	Wexford County Council
Address:	Spawell Road
	Hillstreet Main Entrance
	Wexford Town
	Co Wexford
Tel:	00353 (0)53 9176500
Fax:	00353 (0)53 9143406

Planning Permission relating to this application:

has been obtained		***is being processed***	√
is not yet applied for		***is not required***	

Local Authority Planning File Reference Nº:	PL 26. PA 0016 An Bord Pleanala Reference number as this project was deemed as strategic in nature the application has been made directly to An Bord Pleanala

Attachment B.5 should contain all planning permissions, including a copy of ***all*** conditions, and the required copies of any EIS should also be enclosed. For existing

activities, **Attachment Nº B.5** should also contain all licences and permits past and present in force at the time of submission.

RESPONSE

A copy of the current application and all existing planning applications in relation to Great Island are contained in Attachment B.8 of this application. Three hard copies and 18 electronic copies of the Environmental Impact Statement are enclosed with this application.

B.6. Relevant Sanitary Authority.

In the case of a discharge of any trade effluent or other matter to a sewer of a sanitary authority, give the name of the sanitary authority in which the sewer is vested or by which it is controlled.

Name:	Not Applicable (there will be no discharges to sewer from the facility)
Address:	
Tel:	
Fax:	

In the case of a discharge of any trade effluent or other matter to a sewer not vested by a sanitary authority, the applicant must supply as **Attachment Nº B.6**; (a) the name and address of the owner(s) of the sewer and the waste water treatment plant to which the sewer discharges and who are responsible for the quality of the treated effluent discharging to waters and (b) a copy of the effluent regulations and the agreement between the applicant and the aforementioned.

Name:	Not Applicable (there will be no discharges to sewer from the facility)
Address:	
Tel:	
Fax:	

B.7. Relevant Health Board Region

The applicant should indicate the Health Board Region where the activity is or will be located.

Name:	Health Service Executive
Address:	Environmental Health Service
	Wexford Local Health Office
	Whitemill Industrial Estate
	Wexford
Tel:	+353 (0)53 9123522
Fax:	+353 (0)53 9142068

B.8 Site Notice, Newspaper Advertisement and Planning Authority Notice.

Attachment Nº B.8 should contain a copy of the text of the site notice, a map (no larger than A3) showing its location on site (in accordance with Article 7 of the Regulations) and a copy of the newspaper advertisement. A copy of the notice given to the Planning Authority should also be included.

RESPONSE

Copies of the site notice (ana map showing its location on site), newspaper advertisement and planning authority notices are appended to attachment B.8. of this application.

B.9 Seveso II Regulations

State whether the activity is an establishment to which the EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations (S.I. No. 74 of 2006) apply.

If yes, outline how the process comes under these regulations.

Supporting information should be included in **Attachment Nº B.9**.

RESPONSE

The facility is considered to be a lower tier Seveso site. A copy of the Quantitative Risk Assessment – Land Use Planning Report, submitted to the HSA as part of the planning application, and a response from the HSA to An Bord Pleanala are appended to B.9. of this application.

B.10 IPPC Directive

Specify whether the activity is a category of industrial activity referred to in Annex I of the IPPC Directive (2008/1/EC) and if yes specify the category.

Supporting information should be included in **Attachment Nº B.10**.

RESPONSE

The facility is classified as a Category 1, Section 1.1 Activity under Annex I of the IPPC Directive 96/61/EC:

Combustion installations with a rated thermal input exceeding 50MW

SECTION C: MANAGEMENT OF THE INSTALLATION

C.1 Site Management & Control

Details should be provided on the management structures for the activity. Organisational charts and all relevant environmental management policy statements, including provisions for on-going assessment of environmental performance, are required.

C.2 Environmental Management System (EMS)

Indicate whether an Environmental Management System has been developed for the installation. If yes, specify which standard and include a copy of the accreditation certificate.

C.3 Hours of Operation

Provide details of the hours of operation for the installation, including:
(a) Proposed hours of operation.
(b) Proposed hours of construction and development works and timeframes.
(c) Any other relevant hours of operation expected.

This information should form **Attachment Nº C**.

RESPONSE

Information relating to the Management of the Installation is included in Attachment C.

SECTION D: INFRASTRUCTURE & OPERATION

D.1. Operational Information Requirements

Describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems, and operating procedures for the activity, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the activity. Maps and drawings must be no larger than A3 size.

A development and operational history of the site should be included here.

Attachment Nº D should contain a list of all unit operations (processes) to be carried out, including flow diagrams of each with any relevant additional information.

RESPONSE

Information relating to Infrastructure and Operation is included in Attachment D.

SECTION E: EMISSIONS

E.1. Emissions to Atmosphere

E.1.A. Details of all point emissions to atmosphere

Details of all point emissions to atmosphere should be supplied. Complete Table E.1(i) for Boiler Emissions and Table E.1(ii) and E.1(iii) for all other main emission points. Complete Table E.1(iv) for minor emission points.

A summary list of the emission points, together with maps and/or drawings (no larger than A3), and supporting documentation should be included as **Attachment Nº E**. Plans of emission elevations, relevant roof heights, etc., should also be included, as should detailed descriptions and schematics of all abatement systems.

The applicant should address in particular any emission point where the substances listed in the Schedule of S.I. 394 of 2004 are emitted.

For emissions outside the BAT guidance limit, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s). These notes can be found on the EPA website at www.epa.ie.

E.1.B. Fugitive and Potential emissions

Give summary details of fugitive and potential emissions in Table E.1(v).

In relation to activities listed in the Schedule of Council Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations;

- specify the relevant category of activity in the Schedule
- specify how the requirements in relation to fugitive emissions will be met.

Full details and any supporting information should form **Attachment E.1.B**

E.2 Emissions to Surface Waters

Tables E.2(i) and E.2(ii) should be completed.

A summary list of the emission points, together with maps/drawings (no larger than A3) and supporting documentation should be included as **Attachment Nº E.2**.

The applicant should address in particular any emission point where the substances listed in the Schedule of S.I. No. 394 of 2004 are emitted.

Details of all List I and List II substances listed in the Annex to EU Directive 76/464/EEC (as amended), contained in any emission must be presented. All surface water runoff and storm water drains discharging to surface water bodies must be included. A National Grid References (12 digit, 6E, 6N) must be given for all discharge points. The identity and type of receiving water (river, ditch, estuary, lake, etc.) must be stated.

For emissions outside the BAT guidance limit, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s).

E.3 Emissions to Sewer

Tables E.3(i) and E.3(ii) should be completed.

A summary list of the emission points, together with maps and/or drawings (no larger than A3) and supporting documentation should be included as **Attachment Nº E.3**. Details of all List I and List II substances listed in the Annex to EU Directive 76/464/EEC (as amended), contained in any emission must be presented. All relevant information on

the receiving sewer**,** including any effluent treatment/abatement systems, not already described, with schematics as appropriate should also be included in **Attachment Nº E.3**.

For emissions outside BAT guidance limit (where given), a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within any limits set out in the BAT guidance note(s).

E.4. Emissions to Ground

Describe the existing or proposed arrangements necessary to give effect to Articles 3,4,5,6, and 7 of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution by certain dangerous substances.

The applicant should supply details of the nature and quality of the substance (agricultural and non-agricultural waste) to be landspread (slurry, effluent, sludges etc) as well as the proposed application rates, periods of application and mode of application (e.g., pipe discharge, tanker).

For emissions outside the BAT guidance limit, a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the BAT guidance note(s).

E.5 Noise Emissions

Give particulars of the source, location, nature, level, and the period or periods during which the noise emissions are made or are to be made.

Table E.5(i) should be completed, as relevant, for each source.

Supporting information should form **Attachment Nº E.5**

For emissions outside the EPA Guidance Note for Noise in elation to Scheduled Activities 2nd Edition (2006), a full evaluation of the existing abatement/treatment system must be provided. A planned programme of improvement towards meeting upgraded standards is required. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in the Guidance Note.

E.6 Tabular Data on Emission Points

Applicants should submit the following information for each emission point:

Point Code	**Point Type**	**Easting**	**Northing**	**Verified**	**Emission**
Provide label ID's assigned in section E	A=Atmospheric SW=Surface Water SE = Sewer GW=Groundwater N = Noise SL=Soil/Ground WS=Waste	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. SO_2, HCl, NH_3

An individual record (i.e. row) is required for each emission point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

RESPONSE

Information relating to Emissions, including relevant tables, are included in Attachment E. It should be noted that the supplier has not yet been determined for the plant, therefore maximum emission values have been provided as a worst-case assessment scenario.

SECTION F: CONTROL & MONITORING

Describe the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation/facility.

F.1: Treatment, Abatement and Control Systems

Details of treatment/abatement systems (air and effluent emissions) should be included, together with schematics as appropriate.

For each Emission Point identified complete Table F.1(i) and include detailed descriptions and schematics of all abatement systems.

Attachment Nº F.1 should contain any supporting information.

F.2: Emissions Monitoring and Sampling Points

Identify monitoring and sampling points and outline proposals for monitoring **emissions**. Table F.2(i) should be completed (where relevant) for air emissions, for emissions to surface waters, for emissions to sewers, for emissions to ground, and for waste emissions. Where **ambient** environment monitoring is carried out or proposed, Table F.2(ii) should be completed as relevant for each environmental medium.

Include details of monitoring/sampling locations and methods.

Attachment Nº F.2 should contain any supporting information.

F.3: Tabular Data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

Point Code	Point Type	Easting	Northing	Verified	Pollutant
Provide label ID's assigned in section F3	M=Monitoring S=Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. SO_2, HCl, NH_3

An individual record (i.e. row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency.

A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.2, E.6 and F.3.

Point source monitoring/sampling refers to monitoring from specific emission points (e.g. from a boiler stack or outlet from a wastewater treatment plant). Examples of ambient monitoring includes monitoring of ambient air quality (e.g. boundary or off-site) or monitoring of river quality upstream/downstream of an effluent discharge.

RESPONSE

Information relating to Control and Monitoring, including relevant tables are included in Attachment F.

SECTION G: RESOURCE USE AND ENERGY EFFICIENCY

G.1 Give a list of the raw and ancillary materials, substances, preparations, fuels and energy which will be produced by or utilised in the activity.

The list(s) given should be very comprehensive, all materials used, fuels, intermediates, laboratory chemicals and product should be included.

Particular attention should be paid to materials and product consisting of, or containing, dangerous substances as described in the EU (Classification, Packaging, Labelling and Notification of Dangerous Substances) Regulations 1994 [SI 77/94]. The list must classify these materials in accordance with Article 2 of these Regulations, and must specify the designated Risk Phrases (R-Phrases) of each substance in accordance with Schedule 2 of the Regulations

Tables G.1(i) and G.1(ii) must be completed. Copy as required.

Supporting information should be given in **Attachment Nº G.**

G.2 Energy Efficiency

A description of the energy used in or generated by the activity must be provided. Outline the measures taken to ensure that energy is used efficiently and where appropriate, an energy audit with reference to the EPA Guidance document on Energy Audits should be carried out.

RESPONSE

Information relating to Resource Use and Energy Efficiency, including relevant tables, are included in Attachment G.

SECTION H: MATERIALS HANDLING

H.1 Raw Materials, Intermediates and Product Handling

All materials should be listed in Tables G.1(i) and G.(ii) of **Section G**.

Details of the storage conditions, location within the site, segregation system used and transport systems within the site should be outlined here. In addition, information relating to the integrity, impermeability and recent testing of pipes, tanks and bund areas should be outlined.

H.2 Describe the arrangements for the recovery or disposal of solid and liquid wastes accepted into or generated by the installation/facility.

For each waste material, give full particulars of:

(a) Name

(b) Description & nature of waste

(c) Source

(d) Where stored and integrity/impermeability of storage areas

(e) Amount (m^3) and tonnage

(f) Period or Periods of generation

(g) Analysis (include test methods and Q.C.)

(h) European Waste Catalogue Code

(i) Waste Category per EC Reg 1774/2002/EC where relevant

Where any waste would be classified as Hazardous Waste as defined in the Waste Management Acts, 1996 to 2003, this should be made clear in the information provided.

Summary Tables H.1(i) and H.1(ii) should also be completed, as appropriate, for each waste. The licence/permit register number of the waste collection agent or disposal/recovery operator should be supplied as well as the expiry date of the relevant permits.

Supporting information should form **Attachment Nº H.2**

H.3 Waste disposal by on-site landfilling

For wastes to be disposed of by landfilling on-site, full details of the disposal site should be submitted (to include *inter alia,* site selection procedures, location maps, (no larger than A3) geology, hydrogeology, operational plan, containment, gas and leachate management, post-closure care).

Supporting information should form **Attachment Nº H.3.**

RESPONSE

Information relating to Materials Handling, including relevant tables, are included in Attachment H.

SECTION I: EXISTING ENVIRONMENT & IMPACT OF THE ACTIVITY

Describe the conditions of the site of the installation.

Provide an assessment of the effects of any emissions on the environment, including on an environmental medium other than that into which the emissions are made.

Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

I.1.Assessment of atmospheric emissions
Describe the existing environment in terms of air quality with particular reference to ambient air quality standards.

Provide a statement whether or not emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to the atmosphere are likely to impair the environment.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Attachment Nº I.1 should also contain full details of any dispersion modelling of atmospheric emissions from the activity, where required. When carrying out dispersion modelling, regard should be had to the "Guidelines for the Preparation of Dispersion Modelling Assessments for Compliance with Regulatory Requirements – an Update to Royal Meteorological Society Guidance" or similar guidelines from a recognised authority.

I.2. Assessment of Impact on Receiving Surface Water
Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Table I.2(i) should be completed

Provide a statement whether or not emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to water are likely to impair the environment.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment Nº I.2.**

I.3. Assessment of Impact of Sewage Discharge.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Full details of the assessment and any other supporting information should form **Attachment Nº I.3.**

I.4 Assessment of Impact of Ground/Groundwater Emissions

Describe the existing groundwater quality. Tables I.4(i) should be completed.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made. This includes landspreading, land injection etc.

Land on which material may be landspread shall be identified on a suitable scaled map (1:10,560 and 1:50,000) and submitted as no greater than A3 size. All vulnerable (as a result of ground emissions) surface water bodies must be identified on these maps. Additional information should be included in **Attachment Nº I.4**.

Landspreading of Agricultural/Non Agricultural Wastes

Tables I.4(ii) and I.4.(iii) should be complete where applicable. Further information is available in the Application Guidance Document.

I.5 Ground and/or Groundwater Contamination

Summary details of known ground and/or groundwater contamination, historical or current, on or under the site must be given.

Full details including all relevant investigative studies, assessments, or reports, monitoring results, location and design of monitoring installations, plans, drawings, documentation, including containment engineering, remedial works, and any other supporting information should be included in **Attachment Nº I.5**.

I.6 Assessment of the Environmental Impact of On-site Waste Recovery and/or Disposal.

Describe the arrangements for the prevention and recovery of waste generated by the activity.

Give details, and an assessment of the impact of any existing or proposed on-site waste recovery/disposal on the environment, including environmental media other than those into which the emissions are to be made.

This information should form **Attachment Nº I.6.**

I.7 Noise Impact

Give details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

Ambient noise measurements
Complete Table I.7(i) in relation to the information required below:

(i) State the maximum Sound Pressure Levels which will be experienced at typical points on the boundary of the operation. (State sampling interval and duration)

(ii) State the maximum Sound Pressure Levels which will be experienced at typical noise sensitive locations, outside the boundary of the operation.

(iii) Give details of the background noise levels experienced at the site in the absence of noise from this operation.

Prediction models, maps (no larger than A3), diagrams and supporting documents, including details of noise attenuation and noise proposed control measures to be employed, should form **Attachment Nº I.7.**

I.8 Environmental Considerations and BAT

Describe in outline the main alternatives, if any, to the proposals contained in the application.

Describe any environmental considerations which have been made with respect to the use of cleaner technologies, waste minimisation and raw material substitution.

Describe the measures proposed or in place to ensure that:

(a) The best available techniques are or will be used to prevent or eliminate or, where that is not practicable, generally reduce an emission from the activity;
(b) no significant pollution is caused;
(c) waste production is avoided in accordance with Council Directive 75/442/EEC of 15 July 1975 on waste; where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;
(d) energy and other resources are used efficiently;
(e) the necessary measures are taken to prevent accidents and limit their consequences;
(f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

Supporting information should form **Attachment Nº I.8.**

RESPONSE

Information relating to Existing Environment and Impact of the Activity is included in Attachment I

SECTION J: ACCIDENT PREVENTION & EMERGENCY RESPONSE

Describe the existing or proposed measures, including emergency procedures, to minimise the impact on the environment of an accidental emission or spillage.

Also outline what provisions have been made for response to emergency situations outside of normal working hours, i.e. during night-time, weekends and holiday periods.

Describe the arrangements for abnormal operating conditions including start-up, leaks, malfunctions or momentary stoppages.

Supporting information should form **Attachment Nº J.**

RESPONSE

Information relation to Accident Prevention & Emergency Response is included in Attachment J.

SECTION K: REMEDIATION, DECOMMISSIONING, RESTORATION & AFTERCARE

Describe the existing or proposed measures to minimise the impact on the environment after the activity or part of the activity ceases operation, including provision for post-closure care of any potentially polluting residuals.

Supporting information should be included as **Attachment No. K.**

RESPONSE

Information relating to Remediation, Decommissioning, Restoration and Aftercare is included in Attachment K.

SECTION L: STATUTORY REQUIREMENTS

Indicate how the requirements of Section 83(5)(a)(i) to (v) and (vii) to (x) of the EPA Acts, 1992 and 2003 shall be met, having regard, where appropriate, to any relevant specification issued by the Agency under section 5 (3) of the Act and the reasons for the selection of the arrangements proposed.

Indicate whether or not the activity is carried out, or may be carried out, or is located such that it is liable to have an adverse effect on -

(a) a site placed on a list in accordance with Chapter 1 of SI 94 of 1997, or

(b) a site where consultation has been initiated in accordance with Article 5 of the EU Habitats Directive (92/43/EEC), or

Indicate whether or not the activity is liable to have an adverse effect on water quality in light of S.I. No. 258 of 1998 (Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations, 1998).

Indicate whether any of the substances specified in the Schedule of the EPA (Licensing)(Amendment) 2004, S.I. 394 of 2004, are discharged by the activity to the relevant medium.

Fit and Proper Person

The PoE Act in Section 83(5)(xi) specifies that the Agency shall not grant a licence unless it is satisfied that the applicant or licensee or transferee as the case may be is a fit and proper person. Section 84(4) of the PoE Act specifies the information required to enable a determination to be made by the Agency.

- Indicate whether the applicant or other relevant person has been convicted under the PoE Act, the Waste Management Act 1996, the Local Government (Water pollution) Acts 1977 and 1990 or the Air Pollution Act 1987.

- Provide details of the applicant's technical knowledge and/or qualifications, along with that of other relevant employees.

- Provide information to show that the person is likely to be in a position to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying on the activity to which the application relates or in consequence of ceasing to carry out that activity.

Supporting information should be included as **Attachment Nº L** with reference to where the information can be found in the application.

RESPONSE

Information relating to Statutory Requirements is included in Attachment L

SECTION M: DECLARATION

Declaration

I hereby make application for a licence / revised licence, pursuant to the provisions of the Environmental Protection Agency Acts, 1992 and 2003 and Regulations made thereunder.

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website. This consent relates to this application itself and to any further information, submission, objection, or submission to an objection whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by: _____ **Date:** 6 [illegible] 2010
(on behalf of the organisation)

Print signature name: PETER GAUGHAN

Position in organisation: PROJECT MANAGER

Company stamp or seal:

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Page

Attachment A

A. Non-technical Summary

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the carrying on of the activity/activities, and describe mitigation measures proposed or existing to address these impacts. This description should also indicate the normal operating hours and days per week of the activity.

The following information must be included in the non-technical summary:

A description of:

- *the installation and its activities,*
- *the raw and auxiliary materials, other substances and the energy used in or generated by the installation,*
- *the sources of emissions from the installation,*
- *the environmental conditions of the site of the installation (e.g. soil and groundwater, air, noise, surface water),*
- *the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment,*
- *the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the installation,*
- *where necessary, measures for the prevention and recovery of waste generated by the installation,*
- *further measures planned to comply with the general principles of the basic obligations of the operator i.e.*

(a) all the appropriate preventive measures are taken against pollution, in particular through application of the Best Available Techniques (BAT);
(b) no significant pollution is caused;
(c) waste production is avoided in accordance with Council Directive 75/442/EEC of 15 July 1975 on waste; where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;
(d) energy and other resources are used efficiently;
(e) the necessary measures are taken to prevent accidents and limit their consequences;
(f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.
(g) measures planned to monitor emissions into the environment.

A.1 Non-technical Summary

A.1.1 General

Endesa is the leading utility in the Spanish electricity system and the number one private electricity company in Latin America. It is a significant provider in the energy sector across the European and Mediterranean region. Endesa Ireland Ltd was established as an operating company on January 8th, 2009, following Endesa's acquisition of certain generation assets from the Irish State utility the Electricity Supply Board (ESB). The assets purchased comprise of four generating sites; Great Island in Wexford, Tarbert in Kerry, Rhode in Offaly and Tawnaghmore in Mayo.

Endesa Ireland Ltd submitted a planning permission to An Bord Pleanala for a Combined Cycle Gas Turbine Generating Station (herein referred to as CCGT) on December 3rd, 2009. The development is to be located within the boundary of the current Great Island generation site. The planning application has been submitted under section 37A of the Planning and Development (Strategic Infrastructure) Act 2006. The site is currently brown field in nature with the current plant remaining available until the new plant is commissioned and operational. The current plant is operated under an IPPC licence, (register reference P0606-02), located at Great Island Generating Station, Campile, New Ross, Co Wexford. It is anticipated that the new plant will become operational in early 2013. Endesa Ireland Ltd is submitting a formal application to the Environmental Protection Agency for a "Review" of the current IPPCL to accommodate the proposed new CCGT power plant. The proposed location of the new CCGT power plant is within the boundaries of the Great Island site which is subject to compliance with the current licence as referenced above. Endesa Ireland is seeking a reviewed IPPC licence to accommodate the operation of the new CCGT while ensuring operation and availability of the existing/current facility remains unchanged until the new CCGT is commissioned. It is important therefore that any of the conditions which are in force for the HFO plant should remain unchanged during the construction period of the new facility. Once the CCGT is commissioned the existing HFO plant will be decommissioned in accordance with the Residuals Management Plan approved by the Environmental Protection Agency under the current IPPC licence.

The proposed development is classified as a Category 1, Section 1.1 Activity under Annex 1 of the Integrated Pollution Prevention and Control (IPPC) Directive 96/61/EC, i.e. *Combustion Installations with a rated thermal input exceeding 50MW*. As such the Operator, Endesa Ireland Ltd, is required to submit an application for a review of the current operational licence (P0606-02), i.e. an IPPC licence, with the Environmental Protection Agency (EPA) for the inclusion of the proposed CCGT.

The development is located on the site of the existing generation station in the townland of Great Island, approximately 3.5 kilometres west of Campile village and approximately 15 kilometres south of New Ross. The location of the site is illustrated in Figure A.1.1 while the site layout is illustrated on Figure A.1.2.

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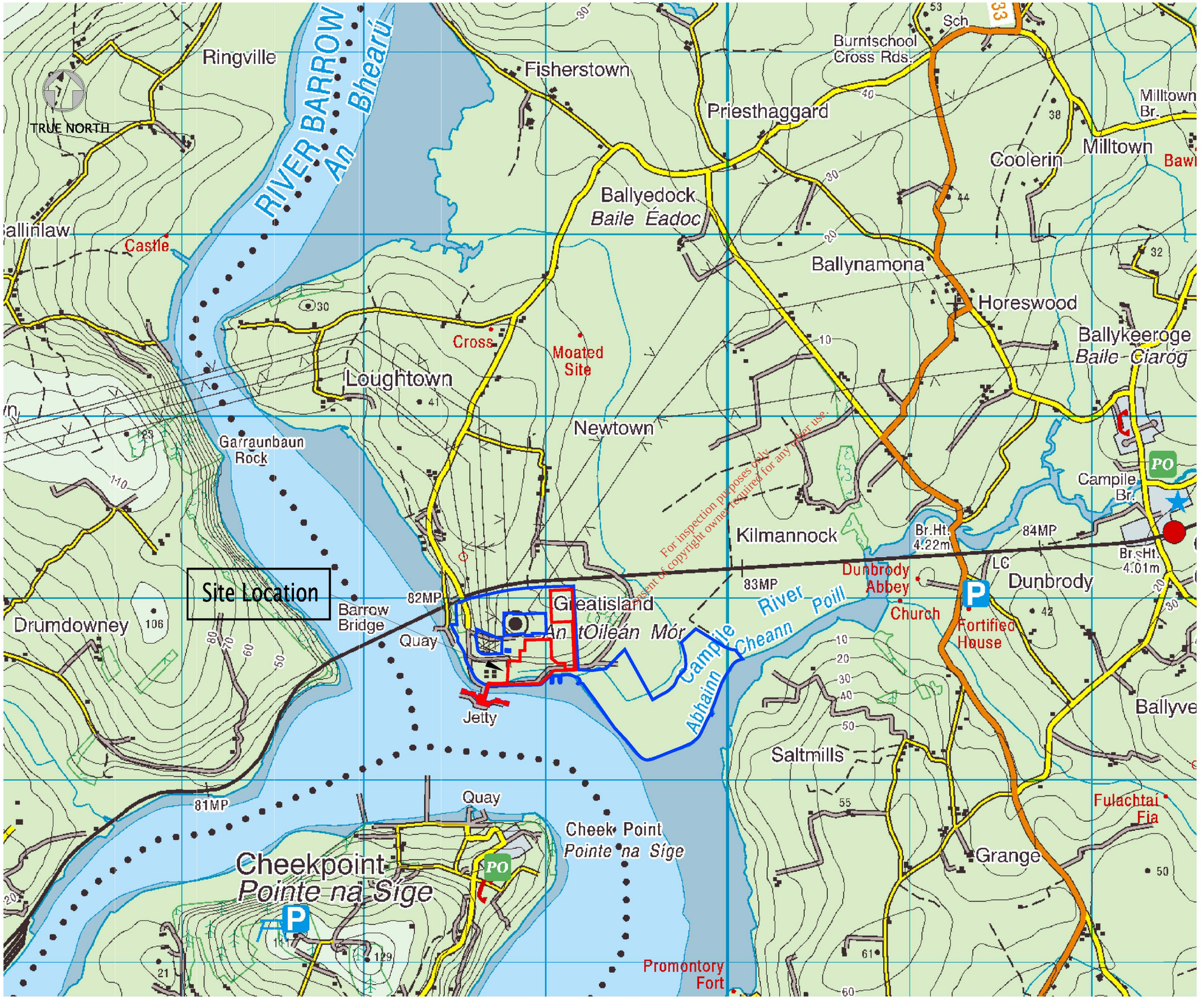

Notes

1. ORDNANCE SURVEY IRELAND LICENCE NO. EN0034509
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2. ALL CO-ORDINATES SHOWN RELATE TO IRISH NATIONAL GRID CO-ORDINATES.
3. ALL SITE LEVELS REFER TO MEAN SEA LEVEL VERTICAL DATUM AT POOLBEG.
4. GENERAL SITE LEVEL IS +7.00M O.D.

Site Boundary

Property Boundary

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	06/05/10	VF	Issued for IPPCL	KMc	DMc

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Title

Combined Cycle Gas Turbine (CCGT)
Great Island, Co. Wexford

Site Location Plan

Designed	-		Eng.Chk.	B.Kinsella	
Drawn	V.Farrell		Coordination	B.Kinsella	
Dwg.Chk.	V.Farrell		Approved	B.Kinsella	
Scale	1:10000	Project	257554		Status APR
		CAD file	A.1.1		
Drawing No	A.1.1				Rev P1

TRUE NORTH

Great Island Power Station

14

20

Road

HFO STRIP TANK

Overhead Piperack 6m Clearance

LAYDOWN AREA

LAYDOWN AREA

Security Fence

ANALYSER KIOSK

METERS

HEAT EXCHANGER

INSTRUMENT HOUSE

PIG TRAP

BOILER HOUSE

REGULATOR HOUSE

CW OUTFALL

Mud

Notes

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4. GENERAL SITE LEVEL IS +7.00M O.D.

Legend:

Boundary for New Power Station

1	GAS TURBINE AND STEAM TURBINE BUILDING
2	GAS TURBINE
3	STEAM TURBINE
4	AIR INLET FILTER TO GAS TURBINE
5	ELECTRICAL ANNEX & CONTROL ROOM
6	HEAT RECOVERY STEAM GENERATOR (HSRG)
7	CCW SKID
8	OIL SEPERATOR (RELOCATED)
9	GAS FUEL TREATMENT SKID
10	DEMINERALISED WATER SUPPLY PUMPS (NOX ABATEMENT)
11	GENERATOR TRANSFORMER
12	UNIT AUXILIARY TRANSFORMER
13	NATURAL GAS COMPOUND AGI
14	DISTILLATE OIL STORAGE TANK
15	GAS COMPRESSOR
16	DEMIN WATER STORAGE TANK (1 x 6,000m³)
17	WATER TREATMENT PLANT BUILDING
18	MAIN STACK
19	FIRE PUMP HOUSE (INSIDE EXISTING BUILDING)
20	DISTILLATE FUEL OIL FORWARDING PUMP SKID
21	CW CULVERT
22	GAS MAIN
23	BOILER FEED WATER PUMPS
24	FIN FAN COOLER
25	RAILS IN ROAD FOR TRANSFORMER REMOVAL
26	CHEMICAL INJECTION SKID
27	CAUSTIC STORAGE TANK WITH BUND
28	ACID STORAGE TANK WITH BUND
29	GAS TURBINE OILY WATER DRAIN TANK
30	STARTING TRANSFORMER
31	EXCITATION TRANSFORMER
32	AUXILIARY TRANSFORMER
33	SEWAGE TREATMENT PLANT
34	BOILER WASTE WATER DRAIN TANK
35	N2/H2/CO2 STORAGE
36	PROCESS WATER DISCHARGE PIT
37	BLOWDOWN VESSEL
38	AUXILIARY BOILER
39	AUXILIARY BOILER FLUE STACK
40	CONTINUOUS EMMISSION MONITORING (CEM) SYSTEM
41	CONDENSATE POLISHER
42	DISTILLATE OIL SUPPLY PIPE TO GENERATOR
43	HFO FILLING PIPE IN CONCRETE TRENCH
44	DISTILLATE OIL FILLING PIPE IN CONCRETE TRENCH

0 25m 50m

Scale 1:500

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	06/05/10	CC	Issued for IPPCL	KMc	DMc

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Title

Combined Cycle Gas Turbine
Great Island, Co. Wexford

Proposed Overall Site Plan

Designed	D. McRandal		Eng.Chk.	K. McGarvey	
Drawn	C. Cunningham		Coordination	D. McRandal	
Dwg.Chk.	K. McGarvey		Approved	D. McRandal	

Scale	1:500	Project 257554	Status APR
		CAD file A.1.2	
Drawing No	A.1.2		Rev P1

This Non-technical Summary is submitted as part of the supporting documentation for the IPPC licence application. This section provides a brief overview of the application only. It is recommended that the entire document is reviewed in order to understand fully the detailed information relating to the application.

A.1.2 Management of the Installation

Endesa Ireland Ltd will be the Owner and Operator of the plant. Endesa Ireland Ltd will have the ultimate responsibility for health, safety and environmental issues relating to the operation of the facility.

Endesa Ireland Ltd is a subsidiary of Endesa (the leading utility in the Spanish and Latin American electricity system) and therefore has access to a vast knowledge of operation and maintenance of CCGT power plants. Of the 39,656 MW of installed capacity that Endesa controls, over 17% of this is CCGT technology. In addition, the Great Island site is currently in operation with experienced staff that are very familiar with turbine technology and the Irish grid system. Similar to other CCGT power plants operating in Ireland it is envisaged that the Great Island site will be operated by Endesa Ireland Lyd while the maintenance will be carried out by a suitably qualified and technically competent Maintenance Contractor, with previous experience in operating and maintaining power plants.

All personnel will be technically competent and suitably qualified to undertake their assigned tasks. Personnel with responsibilities for operations, maintenance, health and safety and the environment will receive task specific technical training, as required. A Training Needs Matrix and Development Programme will be developed in accordance with changing training needs.

As per the current plant requirements all site personnel will receive Emergency Response and Environmental Awareness Training, incorporating resource (including waste), energy, water minimisation and noise control techniques. Site personnel will also receive environmental, health and safety training, including fire fighting and first aid as per current plant requirements and best practice systems. All external emergency services will be consulted regarding the change from HFO plant to CCGT.

The current plant has an Environmental Management System (EMS) and a new/revised site specific EMS will be developed and implemented for the new facility. The EMS will provide the framework for environmental management, compliance with appropriate regulatory requirements and the implementation of the principles of continuous improvement. The implementation of the EMS will include regular cross-functional management reviews and will be subject to both internal and external audits.

A.1.3 Combined Cycle Gas Turbine Process

The CCGT will have a nominal capacity of 440 MW and will export electricity, via an underground cable, to the on site switchyard.
The plant will normally operate on natural gas. In accordance with the requirements of the Commission for Energy Regulation (CER), distillate oil will be stored on site as a back-up fuel to be used in the event of an interruption to gas supply. The distillate oil used will have a Sulphur content of less than 0.1%.
The CCGT plant incorporates the following processes:

- A gas turbine, burning natural gas, drives a generator for electricity production.
- Exhaust gases from the gas turbine pass through a Heat Recovery Steam Generator (HRSG) to generate high-pressure steam.
- The steam generated in the HRSG drives a steam turbine, which also turns the generator providing additional electrical power.
- The steam is condensed back to water a Condenser for re-use in the HRSG.

Figure A.1.2 illustrates the infrastructure associated with the plant.

A.1.4 Emissions Control and Monitoring

High purity demineralised water will be required for use in the HRSG. Raw feedwater of drinking water quality, from the local Water Scheme will be treated in an onsite demineralisation plant. The site currently has capacity for the storage of 9,000m^3 of raw water prior to treatment in the demineralisation plant. The demineralised water will be thermally de-aerated and treated with conditioning chemicals, by controlled dosing, to prevent scaling and corrosion build-up in the HRSG.

(i) Emissions to Surface Water

The HRSG is a very specialised piece of equipment and it requires very pure water. In order to maintain the quality of the this water it will be necessary to continuously release 1% of circulating water in order to remove the build up of salts within the HRSG drums. This water is referred to as “blow-down”.

Four waste water streams will arise from the facility:

- Process waste water;
- Foul water;
- Surface water run-off
- Once through cooling for the condensor

Process waste water will comprise HRSG blow-down, condensate drain waste and waste water from the demineralisation plant. Process waste water will be discharged to a process wastewater discharge tank where its quality and temperature will be monitored prior to discharge. The pH will be monitored and adjusted, as required. Dissolved oxygen, pH, conductivity, Ammonia, Total

Organic Carbon and temperature will be continuously monitored, using an on-line analyser prior to discharge. The overall average volume of process waste water discharge is estimated to be 6.55m^3/hr. This equates to approximately 38% of the effluent discharges from the existing plant, which are of a similar physicochemical make-up.

Monitoring of specific parameters will be facilitated through the onsite laboratory. A new laboratory will be constructed, separate from the existing building.

Treatment of Foul water including domestic water-based waste from on-site welfare facilities, will be treated in a proprietary secondary treatment system prior to discharge to the estuary.

As per current plant practice, surface water run-off will drain via a silt trap and oil / water interceptor prior to discharge to the estuary. Monitoring of surface water will be undertaken in accordance with EPA requirements.

A continuous flow of cooling seawater will be required to absorb heat from the steam turbine condenser and, depending upon the final design of the plant, from other heat exchangers associated with the proposed CCGT plant. As is currently the case cooling water will be abstracted from the Barrow Estuary, utilising the existing water intake and outfall systems, with some upgrade/refurbishment works in the cooling water pump house, as required. However the overall demand will be significantly reduced from the current maximum demand. The proposed CCGT will not breach the existing IPPC licence and will provide significant benefits over the existing power station.

(ii) Atmospheric Emissions

As this plant will be the most modern in terms of equipment and system design the best available technology will be used to operate the facility ensuring optimum combustion conditions and high boiler performance that supports the minimisation of atmospheric emissions.

The main fuel used for generating electricity will be natural gas. This is a clean fuel resulting in negligible emissions of Particulate Matter and Sulphur Dioxide, the main atmospheric pollutants of concern relating to natural gas firing are therefore Nitrogen Oxides (NOx). In accordance with Best Available Techniques (BAT) technology, the gas turbine generator will be fitted with a dry low NOx burner to minimise such emissions.

As stated above and although the CCGT will normally be fuelled by natural gas, distillate oil storage and pumping facilities will also be provided per the CER secondary fueling requirements. To comply with the requirements of the CER the storage capacity of the back-up fuel supply should be such as to allow the plant to be operated for a period of 5 days, (i.e. approximately 11,000 m^3). Due to the quantity of distillate stored on site the facility is considered to be a lower tier Seveso site, as regulated by the Health and Safety Authority (HSA). Distillate oil will be stored in one of the existing 17,000m^3 bunded vertical cylindrical steel

tanks. The tank bund will be upgraded to ensure there is no risk of escape of distillate oil in the unlikely event of a catastrophic failure of the tanks. This approach was agreed with the HSA during the planning application process.

Distillate will be limited to a maximum Sulphur content of 0.1%. In accordance with BAT, and also depending on technology used, water injection will be employed when the plant is operating on distillate to further reduce NOx concentrations if required. It is anticipated that the plant will only operate on distillate for short-duration testing, estimated at three hours per annum.

Exhaust gases from the CCGT will discharge to the atmosphere via a 60 metre stack located at the outlet of the HRSG. The stack will incorporate an in-situ proprietary Continuous Emission Monitoring System, CEMS. The CEMS will continuously monitor atmospheric emissions from the facility in accordance with the requirements of the IPPC licence. Monitoring results will be documented and forwarded to the EPA in accordance with agreed timeframes.

A.1.5 Existing Environment and Impact of the Activity

The results of the atmospheric impact modelling and assessment indicate that the operation of the CCGT plant will not lead to any breaches of relevant air quality limit values. Overall, maximum short-term and long-term emissions are not considered likely to impair the environment, regardless of fuel type (Gas or distillate oil). In addition, based on the choice of technology and the type of fuel used, the plant presents a low carbon solution compared with alternative fossil fuel generation.

According to the interim 2008 Water Frame Directive classification the Barrow Suir-Nore-Estuary is classified as being of Moderate status. The WFD categorisation (and the associated Draft River Basin Management Plan for the SERBD) incorporates the discharges from the existing power plant which has been operational for over 40 years, with an established record of compliance. The NPWS considers the Barrow Nore-Suir-Estuary to be of good conservation status. The ecological status was considered to be Good, with all relevant general conditions classified as being of either High or Good status.

The interim WFD categorisation was defaulted to Moderate status due to failures in the chemical status category only, specifically BDE, Mercury, Benzo/Indeno-pyrenes, Endosulfan and Pentachlorobenzene. It should be noted that there are no known discharges from the proposed development which would introduce these elements into the receiving environment. Furthermore the current discharge from the existing HFO plant does not affect any of the substances listed above. The discharge from the proposed CCGT will be similar in make-up to the HFO plant, therefore no affect is anticipated on the *chemical status* category of the receiving water body. In addition to this the volumes of discharges proposed during the operational phase of the CCGT will be significantly reduced compared to the existing plant.

Due to the magnitude of impacts and the positive changes from the current situation, the proposed activities will not have an adverse effect on the integrity of the sites or the qualifying features of the conservation objectives of the Barrow Nore Suir estuary, which is a legally protected ecological habitat. As a consequence, the overall residual impact of the proposed development on surface waters during the operational phase is considered to be not significant, when compared with the existing situation.

The results of a Hydrodynamic Modelling report for cooling water discharges concluded (based on the analysis of a number of tidal scenarios) that the current plant is not causing a significant impact on the estuary, but also that reductions in both extent and temperature of the thermal plume once the CCGT is commissioned and the HFO plant is decommissioned will be achieved.

The impact of noise from the plant will be restricted to a relatively close area around the site. The proposed CCGT will comply with the limits set out in the current IPPC licence. A number of noise mitigation measures have been incorporated into the design of the plant to minimise the impact of such emissions. These measures include improved cladding surrounding the main noise sources; various elements of plant enclosed, optimised location of fans, etc. As is the case with the current IPPC licence, annual noise monitoring is proposed to be undertaken at various locations around the site boundary and environs.

A.1.6 Resource Use and Energy Consumption

(i) Resource Use

Raw materials used in the CCGT will include natural gas, distillate oil, water, conditioning chemicals, coolants, laboratory smalls, cleaning products and oils and greases. The use of natural gas and distillate oil will be optimised to meet the required combustion efficiencies and testing regimes.

Potable water, for use in the canteen, welfare facilities, water treatment plant and for general site cleaning is sourced from the Wexford County Council mains supply. Potable water consumption from the mains supply is currently approximately 177,161m^3/annum or 20m^3/hr, when all three Units are operating. In terms of the new CCGT development water for general use on site (i.e. canteen, welfare facilities etc.) is not expected to exceed the existing average flow of 0.86m3/hr. Therefore it is anticipated that the total amount of potable water required on site under normal operation will amount to 7.41m^3/hr. This equates to approximately 37% of the current demand of 20m^3/hr, once the CCGT plant has been fully commissioned.

Where necessary, supply of water from the County Council public water scheme will take place during low demand periods in order to minimise any potential impact on water supply in the area. As the site has large raw water storage capacity (9,000m^3) water supply from the Wexford Water Scheme can be managed effectively.

The feedwater entering the site will be of drinking water quality, this, combined with the closed loop CCGT system, further minimises water consumption and unnecessary water treatment. Dry cleaning methods will also be employed, wherever practicable.

The use of conditioning chemicals will be optimised through controlled dosing. As is the case with the current facility the use of laboratory chemicals will be determined by the on-site monitoring requirements, however their use will be minimised wherever possible. The gas turbine generator will be filled with Hydrogen as a closed circuit cooling medium. The hydrogen will be topped up by small amounts using a bottle storage system, as required. Cleaning products will be of a water based biodegradable nature, wherever possible. A hazardous detergent will however be required for compressor cleaning. Hazardous compressor cleaning products will be segregated in a locked cabinet with limited access to prevent misuse. Oils and greases will be used for the lubrication of the main mechanical components in the plant.

(ii) Energy Efficiency

CCGT technology is the most efficient form of conventional thermal power generation and in particular when once through direct cooling is used (as is the case with this development). Total electricity output will be up to 440 MW during optimum conditions. The overall generation efficiency will be approximately 58.5%, this equates to a thermal input of approximately 752 MW. An energy efficiency audit will be undertaken at the facility in accordance with the timeframe specified in the IPPC licence. Action items arising from the audit will be incorporated into the EMS.

A.1.7 Materials Handling

As is the case with the current facility, site specific operating procedures will be developed for the use, handling and disposal of raw materials and waste. Only appropriately trained personnel will be authorised to handle hazardous materials on site. All chemicals stored will be subject to a COSHH (Control of Substances Hazardous to Health) assessment and compliance with the requirements of REACH (*EC Regulation 1907/2006 for the Regulation, Evaluation, Authorisation and Restriction of Chemicals*).

Given the nature of this development, the volume of waste generated by site activities will be relatively small. Waste will be managed on site in accordance with the Waste Management Hierarchy. Where possible the generation of waste will be avoided. Where this is not possible the production of waste will be minimised and sent for recovery. Where this is not technically or economically feasible the waste will be disposed of. All waste will be managed by appropriately authorised contractors in accordance with relevant legislation.

A waste audit will take place within the timeframe specified in the IPPC licence. The waste audit process will identify all waste streams generated on site and determine opportunities for waste prevention, minimisation and re-use which will be incorporated into the EMS.

A.1.8 Accident, Prevention & Emergency Response

As is the case with the current plant, the proposed CCGT will be manned 24 hours a day, 365 days a year. Security will be managed on site by a specialist contractor and access to the site will be restricted.

All potentially polluting substances, including waste, will be stored in designated areas in appropriate UN approved containers within bunds, drip trays or spill pallets, as deemed necessary. All containers and bunds will be inspected regularly to ensure they have not become damaged or degraded. All areas on site with potentially polluting substances will be hardstanding with drainage networks directing run-off to contained areas for treatment or direct disposal off site via an approved waste contractor.

All tanks will be contained within bunds and fitted with level gauges and alarms which will be incorporated into a Planned Preventative Maintenance Programme (PPMP). Distillate oil will be stored in one of the existing on site upgraded tanks within the current tank farm. The bund for the tank farm will also be upgraded. Plant and equipment will be regularly inspected and maintained. Any faults detected will be prioritised. Faults associated with health and safety and environmental equipment will be given highest priority and action will be taken immediately. Leaks of potentially polluting substances will be repaired as soon as practicable. Drip trays will be provided immediately, if repair is not possible the leaking equipment will be appropriately contained prior to safe removal from the facility.

As per current plant procedures, accidental spillages will be contained and cleaned immediately by suitably trained personnel. Spill equipment stocks will be stored at strategic locations around the site. Stocks will be subject to regular inventory checks. Incidents, accidents and near-misses will be recorded on site and notified to the appropriate authorities in accordance with licence requirements.

Alarms and shut-off valves will be fitted along the gas supply pipeline. Where possible, the gas pipe will be welded to minimise the occurrence of leaks. Valves and flanges will be fitted with leak detection alarms connected to the manned control room. Valves on site will be fitted with manual override mechanisms. Safe shutdown programmes will be incorporated into the computerised control system.

Good housekeeping practices and regular monitoring of tanks and equipment will minimise the likelihood of leaks and spills occurring on site and ensure that if any leaks / spills do occur, they will be contained and controlled immediately.

As per current procedures, site inductions will include safety requirements and emergency evacuation procedures. Site personnel will be provided with training on accident prevention and emergency response.

Emergency drills will be undertaken as per current procedures. All the local emergency services will be consulted prior to commissioning of the new CCGT and any proposed changes in procedures will be developed in accordance with the recommendations of the local emergency services.

The current Emergency Incident Response Plan will be reviewed and revised where necessary in consultation with the local emergency services. The plan includes emergency response contact details for site personnel and emergency services, maps and plans of the facility, emergency procedures, chemical inventories and equipment lists.

The Fire Emergency Response Plan will also be reviewed and revised where necessary in consultation with the local fire department. Preliminary discussions with the Chief Fire Officer in Wexford County Council have already been initiated in this regard. Water and foam based fire protection and suppression systems will be installed on the new site in accordance with National Fire Protection Association (NFPA) guidelines. The gas turbine area will be fitted with a Carbon Dioxide suppression system. Fire alarms and fire extinguishers will be placed in all buildings on site in accordance with the recommendations of the local fire service. Training in their use will be provided by a suitably qualified specialist.

A.1.9 Remediation, Decommissioning, Restoration & Aftercare

As the new CCGT and existing HFO plant will not operate in parallel, decommissioning of each of the plants will be separately addressed.

Thus, the RMP (Residuals Management Plan) and ELRA (Environmental Liabilities Risk Assessment) documents which are currently in place and approved for the existing power plant will be implemented upon decommissioning of the existing HFO plant, in compliance with the current IPPCL.

In terms of the proposed CCGT, the plant is expected to be operational for at least 25 years. On cessation of activities the plant will either be redeveloped as a power generating facility or the site will be redeveloped in an alternative form. Considering the proximity of the site to the grid connection it is envisaged that the site will remain a power generating facility.

A detailed "Closure, Restoration and Aftercare Management Plan" (CRAMP) will be developed and submitted to the EPA within six (6) months of commencement of operations - or as otherwise agreed with the EPA - in accordance with *Guidance on Environmental Liability, Risk Assessment, Residuals Management Plans and Financial Provision, EPA (2006).*