



**Objection**

Objector:	Mr Mark McGarry
Organisation Name:	AXIS Environmental Services
Objector Address:	Unit 3 Westlink Business Park, Clondrinagh, Limerick, Co. Limerick.
Objection Title:	Objection #OS010240 - Applicant objection for Reg No:[P0606-04]
Objection Reference No.:	OS010240
Objection Received:	06 March 2022
Objector Type:	Applicant
Oral Hearing Requested?	No

**Application**

Applicant:	SSE Generation Ireland Limited
Reg. No.:	P0606-04

See below for Objection details.

Attachments are displayed on the following page(s).



+353 61 324587



info@axisenv.ie  
www.axisenv.ie



Unit 5  
Caherdavin Business Centre  
Ennis Road  
Limerick  
Ireland  
V94 NT63

03-03-2022

Environmental Protection Agency,  
Environmental Licensing Programme,  
Office of Environmental Sustainability,  
PO Box 3000,  
Johnstown Castle Estate,  
Co. Wexford,  
Y35 W821.

#### SSE Great Island: Industrial Emissions Licence Review P0606-04

To whom it may concern,

I refer to the Agency's Industrial Emissions Licence Proposed Determination (P0606-04), issued on the 09<sup>th</sup> February 2022, regarding the above Licence review application. SSE welcome the proposed Determination in principal and look forward to complying with its conditions as set out.

We have reviewed the document in detail and would have a number of objections / clarifications to the Licence as proposed. We request that the following information is reviewed by the Agency and taken into account prior to the publishing of the Final Determination.

SSE have made this response in accordance with Section 87(5) of the EPA Act 1992 as amended. An objection fee of €253 has been paid by the Licencee to the Agency.

## 1. Site Boundary

### 1.1 Condition 1.3 Page 12: Site Boundary

We have attached a drawing of the Installation (SSE Drawing Number: 859\_0802\_0011) as operated by SSE to carry out the activity “2.1 Combustion of fuels in installations with a total rated thermal input of 50 MW or more”. The map outlines the three distinct areas of the installation:

1. The property boundary is outlined in Blue. This is the property boundary under the legal ownership of SSE. The area owned by SSE is not used in its entirety for this activity under review. Portions of this land are leased to alternative businesses which have no link to or association with the activity under licence;
2. The site boundary is outlined in Red. This is the area that is operated for and directly relates to the activity under review “2.1 Combustion of fuels in installations with a total rated thermal input of 50 MW or more”;
3. Excluded Areas are shaded. There are two areas within the red boundary line which are operated by Electrical subcontractors and the ESB. These are also excluded from the activity under licence as they are not associated with or owned by SSE.

### 1.2 Change Requested to the Proposed Determination:

We would request for the record that the drawing attached is referenced into the licence as to what portion of the installation is associated with the activity under licence review.

#### Text in the Proposed Determination:

---

1.3 “For the purposes of this licence, the installation authorised by this licence is the area of land outlined in **blue** on Drawing No. 859-0802-0011 submitted as part of the application on 07\* May 2021. Any reference in this licence to “installation” shall mean the area thus outlined in **blue**. The licensed activity shall be carried on only within the area outlined”

---

#### Text Proposed by Licensee:

1.3 “For the purposes of this licence, the installation authorised by this licence is the area of land outlined in **red** on Drawing No. 859-0802-0011 submitted as part of the application on 07\* May 2021. Any reference in this licence to “installation” shall mean the area thus outlined in **red, not including the two shaded areas marked on the drawing as “This area to be excluded”**. The licensed activity shall be carried on only within the area outlined”

## 2. Leak Detection Systems

### 2.1 Condition 3.9.7 Page 16: Leak Detection System

Whilst SSE agree with the need for leak detection systems on certain storage areas, the terminology applied in the Proposed Determination would be considered very broad, relating to **“all”** storage tanks, container and drum storage areas. This is not a standard condition or text included in historical or other Industrial Emission Licences issued in 2022 to cover storage tanks, containers and drums.

SSE have reviewed the definition provided for “Leak Detection System” in the EPA Guidance note on Storage and Transfer of Materials for Schedules Activities.

Under Section 4 of the guidance note, leak detection is defined as follows:

*“a system which will detect the presence of a leak. With automatic leak detection an alarm will be activated without user intervention and monitored by a manned control room. While the preference is for automatic leak detection, it is recognised that this may not be suitable in all cases. For instance, detecting leakage from a complex piping system is usually best completed by regular control inspections using a defined procedure and recording the results”.*

As condition 3.9 very broadly covers all storage areas at the installation including tank, container and drum storage, we would consider that this text may be better redefined for smaller containment units which are already stored in bunded locations.

SSE would use small containment units (ranging from 1 to 1,000 litres) and it would not be feasible or practical to fit all these with automated leak detection systems.

### 2.2 Change Requested to the Proposed Determination:

#### Text in the Proposed Determination:

---

3.9.7 *The licensee shall apply a leak detection system to all storage tanks, container and drum storage areas that contain liquid material other than water.*

---

#### Text Proposed by Licensee:

3.9.7 *The licensee shall apply a leak detection system to agreed storage tanks that contain liquid material other than water. This requirement will be founded on a risk-based assessment of each storage tank. Daily visual inspections will be sufficient for liquids contained in bunded areas that hold valid integrity certification”.*

### 3. Continuous Monitoring

#### 3.1 Condition 4.1.1(i) Page 18: Continuous Monitoring

The Proposed Determination has omitted 95% confidence intervals to be used in the event of operating on gas oil under Condition 4.1.1 (i).

The confidence intervals as outlined in the Large Combustion Plant Directive need to be included in P0606-04 for gas oil. These were already included in Technical Amendment C of the existing IE Licence P0606-03.

#### 3.2 Change Request to the Proposed Determination:

##### Text in the Proposed Determination:

---

4.1.1 (i) *The value of the 95% confidence intervals determined at the emission limit values shall not exceed the following percentages of the monthly average emission limit value:*

<i>Carbon monoxide (CO)</i>	<i>10%</i>
<i>Nitrogen oxides (NOx)</i>	<i>20%</i>

---

##### Text Proposed by Licensee:

4.1.1 (i) *The value of the 95% confidence intervals determined at the emission limit values shall not exceed the following percentages of the monthly average emission limit value:*

<i>Carbon monoxide (CO)</i>	<i>10%</i>
<i>Nitrogen oxides (NOx)</i>	<i>20%</i>
<i>Sulphur Dioxide (SO<sub>2</sub>)</i>	<i>20%</i>
<i>Dust</i>	<i>30%</i>

Consent of copyright owner required for any other use.  
For inspection purposes only.

## 4. Receiving Water Monitoring

### 4.1 Condition 6.19 Page 22: Receiving Water Monitoring

The Proposed Determination inserts a condition to agree a suitable monitoring location for receiving water monitoring. This location has previously been agreed and tested at this location since 2011. As this has previously been agreed with the Agency (see correspondence attached), SSE would like to formalise the location in this licence.

Further information relating to this monitoring point is also outlined in Schedule C.5 Ambient Monitoring on page 41 of the Proposed Determination.

### 4.2 Change Request to the Proposed Determination:

#### Text in the Proposed Determination:

##### 6.19 Receiving Water Monitoring

The licensee shall determine, for approval by the Agency a suitable receiving water monitoring point within six months of date of grant of licence.

#### Text Proposed by Licensee:

6.19 Receiving Water Monitoring – SSE request to remove this condition from the licence and the sampling location as already agreed with the Agency be listed in Schedule C.5 as outlined below.

#### Text in the Proposed Determination:

##### Schedule C.5 Ambient Monitoring

##### Receiving Water Monitoring

Location: ASW1 – To be agreed by the Agency <sup>Note 1</sup>

Parameter	Monitoring Frequency	Analysis Method / Techniques
Trichloromethane	Quarterly	Standard Method

Note 1: Monitoring location is to be agreed within six months of date of grant of this licence.

#### Text Proposed by Licensee:

##### Schedule C.5 Ambient Monitoring

##### Receiving Water Monitoring

Location: ASW1 – (268772 N, 114417 E)

Parameter	Monitoring Frequency	Analysis Method / Techniques
Trichloromethane	Quarterly	Standard Method

## 5. Auxiliary Boiler

### 5.1 Amending Auxiliary Boiler Requirements

The Proposed Determination has incorporated the auxiliary boilers under the Medium Combustion Plant Directive - Directive (EU) 2015/2193 (MCPD) into the licence.

Operation time of the auxiliary boilers is largely based on start-up of the CCGT. As SSE are notified to start up and shut down the plant, this operating condition would not normally be at a time arranged by SSE. There are significant difficulties in arranging an ISO 17025 accredited test house at short notice to test these boilers.

In addition, these boilers do not operate for extended periods of time. There were historical attempts made to measure the emissions from these boilers, however the operation was unable to operate the boilers continuously or for a significant length of time as the trip points were reached. To obtain a continuous 30-minute sample will be exceptionally difficult. Interpretations in Condition 4 for non-continuous monitoring require 60-minute mean values to be compared against hourly average emission limit values. This could not be achieved on auxiliary boilers which operate for c. 10 minutes at a time depending on demand.

The Medium Combustion Plant emission limit values are not due to come into effect under the Regulation S.I. No. 595 of 2017 until the 01<sup>st</sup> January 2025 (Article 11-2). We would request to clarify in the licence that testing is not required to commence until 2025.

Period measurements have been requested in Proposed Determination to be complete on an annual basis. In line with Schedule 3 Part 1 of the said Regulation, periodic measurements are required every three years for medium combustion plants with a rated thermal input equal to or greater than 1 MW and less than or equal to 20 MW. As the auxiliary boilers are within this range and are not classed as 'new' plant (subject to the MCPD Article 4 aggregation rule), we would request the test frequency be reduced from an annual requirement to once every 3 years. The thermal input of each boiler is 15.21MW.

It is extremely important to note that there are two auxiliary boilers at the installation which would both operate at the same time during start-up of the CCGT. The specifications of the boilers are attached to this response. Each boiler would have a maximum emission rate of c. 20,000 Nm<sup>3</sup>; a combined emission of 40,000 Nm<sup>3</sup>. The flow limit as applied in this Proposed Determination is 20,000 Nm<sup>3</sup> which would not be sufficient to cover the emissions during a start-up event.

### 5.2 Change Request to the Proposed Determination:

**Text in the Proposed Determination:**

---

#### **Condition 4.2.2 Page 19: Interpretation**

Auxiliary boiler - Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen content for liquid and gaseous fuels.

---

**Text Proposed by Licensee:**

#### **Condition 4.2.2 Page 19: Interpretation**

Auxiliary boiler - Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen content for liquid and gaseous fuels. For any parameter where, due to sampling/analytical limitations, a 30-minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.

### 5.3 Change Request to the Proposed Determination:

#### Text in the Proposed Determination:

##### Schedule B.1: Emissions to Air

Emission Point Reference No: A3-1 Auxiliary Boiler Stack  
Location: E268912, N114563  
Volume to be emitted: Maximum rate per hour: 20,000 m<sup>3</sup>  
Minimum discharges height: 30 m above ground

Parameter	Emission Limit Value (mg/m <sup>3</sup> )
Nitrogen oxides (as NO <sub>2</sub> )	200

#### Text Proposed by Licensee:

##### Schedule B.1 Page 32: Emissions to Air

##### Schedule B.1: Emissions to Air

Emission Point Reference No: A3-1 Auxiliary Boiler Stack  
Location: E268912, N114563  
Volume to be emitted: Maximum rate per hour: 40,000 m<sup>3</sup>  
Minimum discharges height: 30 m above ground

Parameter	Emission Limit Value (mg/m <sup>3</sup> )
Nitrogen oxides (as NO <sub>2</sub> )	200

Note: See Condition 4.2.2 Interpretation

For inspection purposes only.  
Consent of copyright owner required for any other use.



#### 5.4 Change Request to the Proposed Determination:

##### Text in the Proposed Determination:

Emission Point Reference No: A3-1 Auxiliary Boiler Stack

Parameter	Monitoring Frequency	Analysis Method / Techniques
Nitrogen Oxides (as NO <sub>2</sub> )	Annually	Standard Method
Carbon Monoxide (as CO)	Annually	Standard Method
Volumetric Flow	Annually	Standard Method

##### Text Proposed by Licensee:

Emission Point Reference No: A3-1 Auxiliary Boiler Stack

Parameter	Monitoring Frequency	Analysis Method / Techniques
Nitrogen Oxides (as NO <sub>2</sub> )	Every 3 years	Standard Method
Carbon Monoxide (as CO)	Every 3 years	Standard Method
Volumetric Flow	Every 3 years	Standard Method

Note: Monitoring shall commence in 2025

For inspection purposes only. Consent of copyright owner required for any other use.

## 6. SW8 Cooling Water Screen Wash Water

### 6.1 Schedule C2.2. Page 33 and Page 37: Emission Point Reference Number SW8

In this Proposed Determination there is a volume limit of 1,970 m<sup>3</sup>/day on SW8 which must be monitored on a continuous basis.

SSE have made numerous investigations into installing a flow meter on this line but it was deemed not practical for the following reasons:

- Physical instrumentation in the water is impacted by passing fish, sea weed, silt and other items backwashed from the screens. Physical instrumentation will generate blockages in the line and restrict the movement of fish back safely to the Barrow estuary;
- Sensor technology was also assessed but found not to be practical due to the low flow rates in the line and large volume of silt, sea weed, fish, etc in the return waters invalidating results.

It is therefore not possible to practically measure flow continuously on this line. It is proposed that the flow will be determined by calculation based on the pump design and hours of operation.

### 6.2 Change Request to the Proposed Determination:

Text in the Proposed Determination:

Emission Point Reference No: SW8

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Flow	Continuous	Standard method or alternative to be agreed by the Agency

Text Proposed by Licensee:

Emission Point Reference No: SW8

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Flow	Calculation by pump capacity and running hours	As agreed by the Agency

## 7. SW2 and SW8 Chlorine Sampling

### 7.1 Schedule C.2.2. Chlorine Monitoring

The Proposed Determination has increased the frequency of chlorine sampling in SW2 and SW8 from weekly and quarterly monitoring respectively to daily testing. SSE would consider the requirement for daily testing to be excessive.

There are seasonal variations when chlorine would not be dosed to the water lines. When ambient temperatures drop below 12 degrees C, chlorine dosing ceases completely at the plant.

### 7.2 Change Request to the Proposed Determination:

#### Text in the Proposed Determination:

#### Schedule C.2.2 Monitoring of Emissions to Water

Emission Point Reference No: SW2

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Flow	Continuous	Calculation from pump usage with recorder
Temperature	Continuous	Temperature probe with recorder
Chlorine	Daily Grab Sample <sup>Note 1</sup>	Standard Method

Note 1: Sampling shall take place at an appropriate interval after chlorine dosing. The interval to be used shall be agreed in writing by the Agency.

Emission Point Reference No: SW8

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Chlorine	Daily Grab Sample <sup>Note 1</sup>	Standard Method
Flow	Continuous	Standard Method or alternative agreed with the EPA

Note 1: Sampling shall take place at an appropriate interval after chlorine dosing. The interval to be used shall be agreed in writing by the Agency.

Text Proposed by Licensee:

Schedule C.2.2 Monitoring of Emissions to Water

Emission Point Reference No: SW2

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Flow	Continuous	Calculation from pump usage
Temperature	Continuous	Temperature probe with recorder
Chlorine	Weekly Grab Sample <small>Note 1 / Note 2</small>	Standard Method

Note 1: Sampling shall take place at an appropriate interval after chlorine dosing. The interval to be used shall be agreed in writing by the Agency;

Note 2: Chlorine is not required to be tested when chlorine dosing is not in operation. Sufficient records shall be maintained for inspection to record when chlorine dosing is carried out.

Emission Point Reference No: SW8

Control Parameter	Monitoring Frequency	Analysis Method / Techniques
Chlorine	Weekly Grab Sample <small>Note 1 / Note 2</small>	Standard Method
Flow	Continuous	Calculation from pump usage

Note 1: Sampling shall take place at an appropriate interval after chlorine dosing. The interval to be used shall be agreed in writing by the Agency;

Note 2: Chlorine is not required to be tested when chlorine dosing is not in operation. Sufficient records shall be maintained for inspection to record when chlorine dosing is carried out.

If you have any queries in relation to any of the information included as part of this submission, please do not hesitate to contact me,

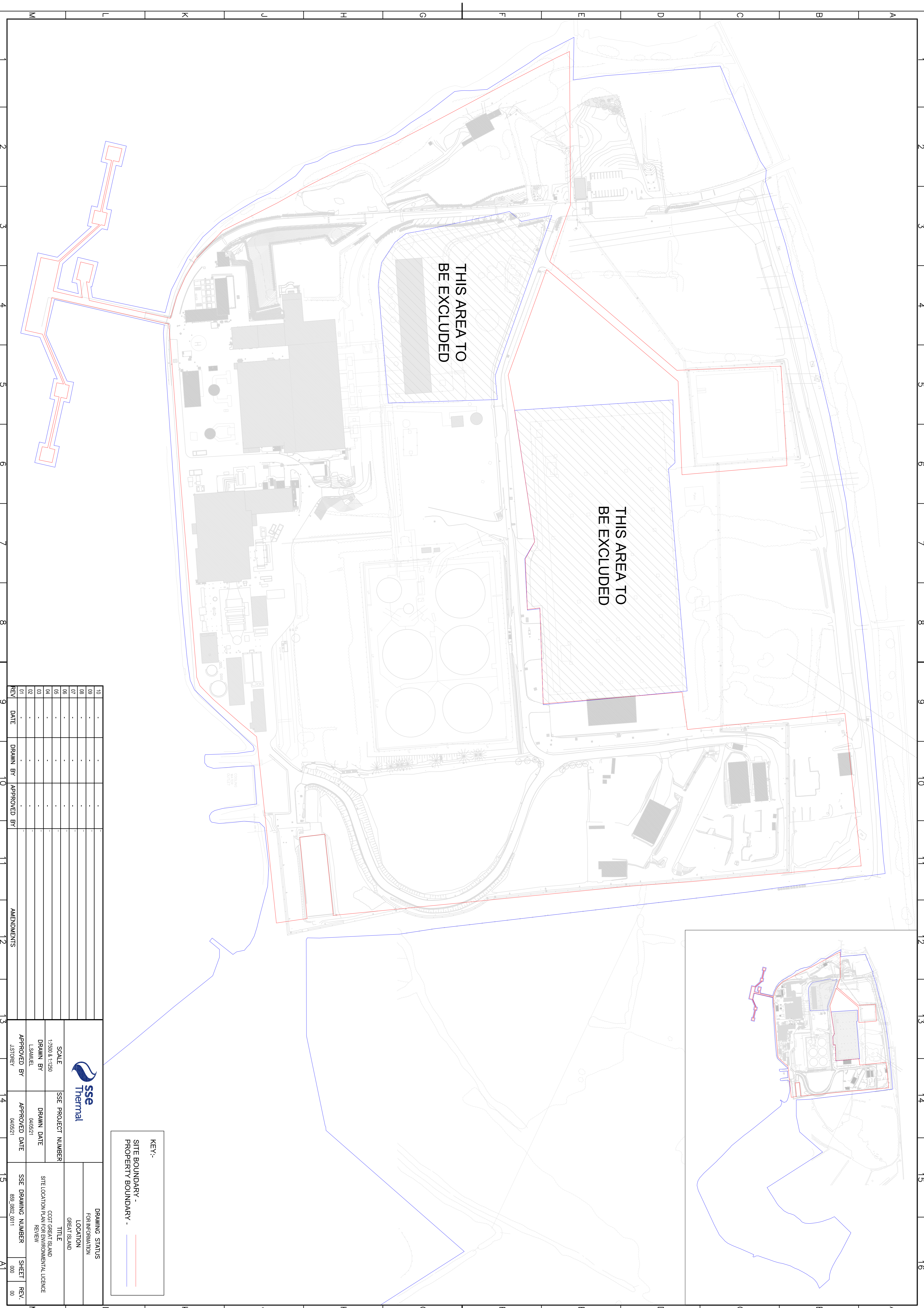
Yours Sincerely,



Mark McGarry  
Managing Director.

Appendix I – Site Drawing

For inspection purposes only.  
Consent of copyright owner required for any other use.



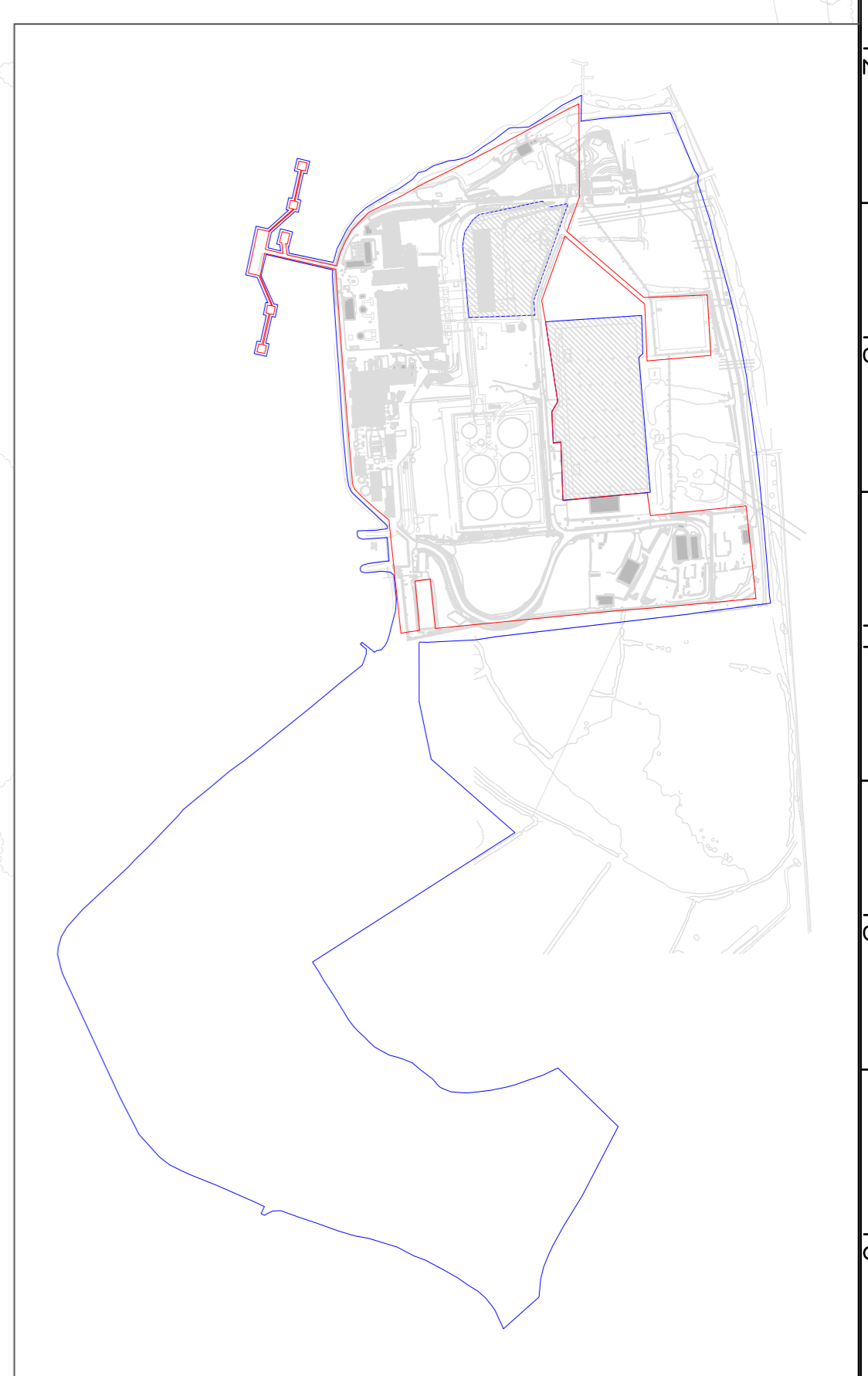
THIS AREA TO BE EXCLUDED

THIS AREA TO BE EXCLUDED


KEY:-  
 SITE BOUNDARY - —  
 PROPERTY BOUNDARY - —

REV	DATE	DRAWN BY	APPROVED BY	AMENDMENTS
10	-	-	-	-
09	-	-	-	-
08	-	-	-	-
07	-	-	-	-
06	-	-	-	-
05	-	-	-	-
04	-	-	-	-
03	-	-	-	-
02	-	-	-	-
01	-	-	-	-

		<b>DRAWING STATUS FOR INFORMATION:</b>	
SCALE	1:7500 & 1:1250	SSE PROJECT NUMBER	
DRAWN BY	L.SAMUEL	DRAWN DATE	04/05/21
APPROVED BY	J.STOREY	APPROVED DATE	04/05/21
<b>TITLE</b> CO2 GREAT ISLAND SITE LOCATION PLAN FOR ENVIRONMENTAL LICENCE REVIEW		<b>SSE DRAWING NUMBER</b> 859_0802_0011	<b>SHEET REV.</b> 000 00



## Appendix II – Auxiliary Boiler Specifications

		<b>PROJECT:</b> <b>GREAT ISLAND CCGT PROJECT</b> <b>AUXILIARY BOILER DATA SHEET</b>		DOC N°	GIS-04-42-QH-MH-UMI-001
				SHEET N°	1
		REV.	BY	DATE	
		4	JLJ	24/04/2013	
<b>1 AUXILIARY BOILER</b>					
1.1	ITEM N°	04QHA10 AK001 and 04QHA20 AK001	Denomination	Auxiliary Boilers	
1.2	Service	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	Type	Firetube	
1.3	Model	UMISA SMS-45R (8)	N° of pass	3	
1.4	Number of Units	2 x 50 %	Fuel	Natural Gas / Gasoil	
2	<b>DESIGN PARAMETERS</b>		<b>SPECIFIED</b>	<b>REMARKS</b>	
2.1	Applicable code		EN 12963:2003 "MANUFACTURER'S STANDARDS"		
2.2	Category		IV	Applied category in acc. to article 3 and annex II directive 97/23/EC	
2.3	Conformity evaluation		Module G	Conformity assessment procedures in acc. to article 10 directive 97/23/EC	
2.4	Steam production at terminal point				
	Minimum for both fuels	kg/h	3.600	With 2 Auxiliary Steam Generators	
	Maximum for both fuels	kg/h	36.000	With 2 Auxiliary Steam Generators	
2.5	Fuel consumption for one boiler (Natural Gas)				
	Minimum	Kg/h	160		
	Maximum	Kg/h	1.171	Mass flow rate with two Auxiliary Steam Generators at full load Q=2342 kg/h (LHV=46772 KJ/Kg, rho= 0.7958 Kg/Nm3, Pop at TP=2-5 barg, Top at TP=10°C).	
2.6	Fuel consumption for one boiler (Gasoil)				
	Minimum	Kg/h	215		
	Maximum	Kg/h	1.283,00	Mass flow rate with two Auxiliary Steam Generators at full load Q=2566 kg/h (LHV=10200 Kcal/Kg, rho= 0.85 Kg/l, Pop at TP=0.5 barg, Top at TP=0°C).	
2.7	Efficiency for one boiler (Natural Gas / Gasoil)				
	Maximum	%	91,5 / 91,5	100% load (18.000 Kg/h)	
2.8	Combustion chamber exhaust gas temperature				
	Minimum	°C	615		
	Maximum	°C	< 1200		
2.9	Stack exit gas temperature (Natural Gas / Gasoil)				
	Minimum	°C	172 / 172		
	Maximum	°C	197 / 197		
2.10	Shell Pressure / Temperature				
	Shell Pressure design	barg	8		
	Shell Pressure operation	barg	4,5		
	Shell temperature operation	°C	155	Saturated steam	
2.11	Superheated steam				
	Steam type at terminal point		SUPERHEATED		
	Steam temperature at terminal point: 4.2 barg				
	Minimum	°C	168 ± 2°C	20% load	
	Maximum	°C	176 ± 2°C	100% load	
2.12	Feedwater temperature		°C	105	
2.13	Air temperature		°C	5	
2.14	Gas Natural L.H.V.		kJ/Nm3	46.772	
2.15	Gasoil L.H.V.		kcal/kg	10.200	
2.16	Combustion chamber heating surface (furnace + reversal chamber)		m²	58,82	
2.17	Superheater heating surface		m²	12	
2.18	Convection heating surface		m²	432,18	
2.19	Economizer heating surface		m²	N. A.	
2.20	Total heating surface		m²	503	
2.21	Boiler volume (total)		m³	53,17	
2.22	Water volume to fill boiler up to operating level		m³	39,58	
2.23	Water volume to fill boiler up to maximum level		m³	58,28	
2.24	Economizer volume		m³	N.A.	
2.25	Boiler heat load (furnace)		kcal/m²h	964.879	
3	<b>MAXIMUM CONTINUOUS RATING CONDITIONS (M.C.R.)</b>				
3.1	CO <sub>2</sub> in boiler exhaust gas (Natural Gas / Gasoil)		%	10,9 / 12,2	
3.2	Air excess (Natural Gas / Gasoil)		%	15 / 18	
3.3	Losses (Natural Gas / Gasoil)				
	Stack	%	7,93 / 7,92		
	Radiation	%	0,40 / 0,40		
	Ashes	%	0		
	Unburned	%	0		
	Total	%	8,33 / 8,32		
3.4	Total exhaust gas flow at boiler outlet (Gas Natural)		Nm³/h	18.072	
4	<b>DRUMS</b>				
4.1	Design pressure		barg	8	
4.2	Design temperature		°C	Min. 200	



Appendix III – Receiving Water Monitoring Point Agreement with EPA

Ms Melissa Morrissey  
Environmental Co-ordinator  
Endesa Ireland Limited (Great Island)  
Great Island Generating Station  
Campile  
New Ross  
Co Wexford

03/11/2011

Our Ref: P0606-03/ap01eok.doc

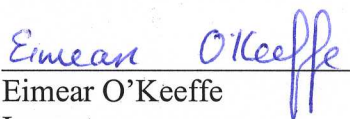
Dear Ms Morrissey

I refer to your proposal dated 29/09/2011 and further information dated 11/10/2011 received by the Agency on 03/10/2011 and 12/10/2011 respectively, in relation to proposing a location for monitoring point ASW1, in accordance with Condition 6.13 of the licence.

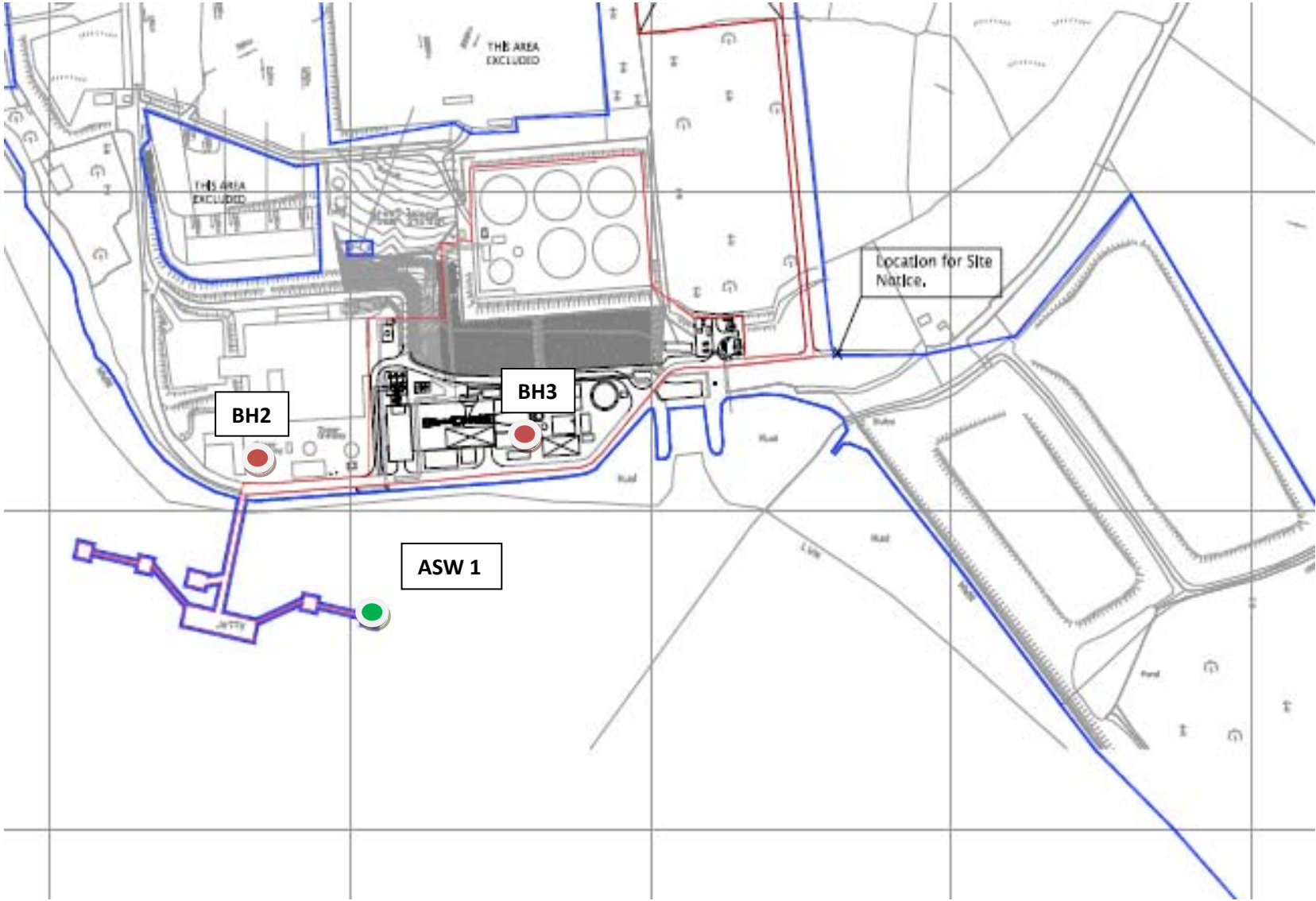
I am to advise you that the proposal submitted is to the satisfaction of the Agency. Monitoring point ASW1 shall be taken to be located on the eastern side of the jetty as illustrated on the site map included in the correspondence dated 29/09/2011, received by the Agency on 03/10/2011. The licensee shall update all relevant site maps with the location of ASW1.

The licensee shall carry out all monitoring in accordance with Condition 6.2 and Schedule C of the licence. The Agency reminds the licensee that emissions must conform to the emission limit values set out in Integrated Pollution Control licence (Reg. No. P0606-03).




Yours sincerely

  
\_\_\_\_\_  
Eimear O'Keeffe  
Inspector  
Office of Environmental Enforcement





Title:  
**Proposed  
 Monitoring  
 Point - ASW1**

Site Boundary   
 Property Boundary   
 Monitoring Point 



Endesa Ireland Ltd  
 Great Island Generating Station  
 Campile  
 New Ross  
 Co. Wexford  
 Phone: 01 5290200  
 Fax: 01 5290201

