

Application to the relevant planning authority

The Planning (Hazardous Substances) (Scotland) Act 1997 - Section 5(1)

The Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015 (Regulation 6)

Application for Hazardous Substances Consent

1 Applicant Address	SSE Renewables
	Inveralmond House, 200 Dunkeld Rd, Perth
Post code	PH1 3AQ
Telephone number	
Agent acting on behalf of the applicant Address	SLR Consulting Ltd.
	8 th Floor Quay West
	Trafford Wharf Road, Manchester
Post code	M17 1HH
Telephone number	

Correspondence (including any Notice) **to be sent to the agent** instead of the applicant? **Yes or No?**

Yes

If the applicant is not the person in control of the land to which the application relates, provide details of the **person in control of the land**.

Land is to be leased from the Gordonbush Estate

2 Address or other location details of application site	
	Gordonbush Wind Farm
	Land 2180m North of Old schoolhouse, Gordonbush, Brora, Sutherland
Post code	
OS grid ref	283474 (E), 912345 (N)

3 Hazardous substance(s) covered by the application

(a) List named substances falling within Part 2 of Schedule 1 to the Regulations first, then list any substances falling within the categories in Part 1 of that Schedule; finally list substances falling within the description in Part 3.

(b) Substances falling within Parts 1 or 3 of Schedule 1 to the Regulations may be listed under the relevant category or description or named specifically. Where a substance falls within Part 1 and 2 list under Part 2 only; where a substance falls within more than one category in Part 1 list under the category which has the lowest controlled quantity. Where a substance falling within Part 1 or 2 also falls within Part 3 list under the Part which has the lowest controlled quantity. The “controlled quantity” means the quantity specified for that substance in column 2 of Parts 1, 2 or 3 of Schedule 1 to the Regulations.

Table A

<i>Name, or relevant category or description of substance</i>	<i>Part number in Schedule 1 to the Regulations, and entry number if Part 2, category if Part 1, identity if Part 3</i>	<i>Do you have a current PHS consent* in respect of this substance? (Yes/No)</i>	<i>If “yes”, state quantity for which consent granted</i>	<i>Maximum quantity proposed to be present in tonnes</i>
Hydrogen	Part 2, 15	No		17.0

*a hazardous substances consent

4 Manner in which substance(s) are to be kept and used

For each substance, category or description of substance, covered by the application, provide the following information, referring to the substance location plan where appropriate.

“vessel” means any container designed or adapted to contain hazardous substances which is affixed to the land, and includes a container which forms part of plant or machinery which is affixed to the land but does not include a pipeline.

“Buried” or “Mounded” vessel includes a vessel which is only partially buried or partially mounded.

“moveable container” means any container designed or adapted to contain hazardous substances other than a vessel.

(a) Tick one box below to show whether the substance(s) will be present for storage only **or** will be stored and involved in a manufacturing, treatment or other industrial process:

Table B

<i>Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Storage only</i>	<i>Stored and involved in an industrial process</i>
Hydrogen (Part 2, 15)		X (compression)

(b) For each vessel to be used for **storing** the substance(s) give the following information:

Table C (i)

Vessel No*	Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Installed above ground† (Yes/No)	Buried (Yes/No)	Mounded (Yes/No)	Maximum capacity (cubic metres)	Highest vessel design temperature °C	Highest vessel design pressure (bar absolute)
Fixed Storage + High Pressure (HP) Piping	Hydrogen (Part 2, 15)	Yes	No	No	455 (fixed storage) + 5 (HP Piping)	60 (vessel and HP pipework)	360
Compressors (including Compression Buffer Tank (x2))	Hydrogen (Part 2, 15)	Yes	No	No	141	160	360
Generation + Low Pressure (LP) Piping	Hydrogen (Part 2, 15)	Yes	No	No	27 (generation) + 5 (LP Piping)	110 (vessel) + 60 (HP pipework)	50

* identify by reference to substance location plan

† if “Yes”, specify whether or not it will be provided with full secondary containment

- (c) For each substance, category or description of substance, state the largest size (capacity in cubic metres) of any **moveable** container(s) to be used for that substance, category or description of substances:

Table C (ii)

Substance including Part no. in Sch. 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3	Storage area on site*	Maximum capacity (cubic metres) of individual moveable containers
Hydrogen (Part 2, 15)	Refer to Document B – 1-2.5K Substance Location Plan	455 (moveable containers)

* identify by reference to substance location plan

- (d) Where a substance, category or description of substance is to be used in a **manufacturing, treatment or other industrial process(es)**, give a general description of the process(es), describe the major items of plant which will contain the substance(s); and state the maximum quantity (in tonnes) which is liable to be present in the major items of the plant, and the maximum temperature (°C) and pressure (bar absolute) at which the substance, category or description of substance is liable to be present:

Table D

<i>Substance including Part no. in Schedule 1 to the Regs, and entry no. if Part 2, category if Part 1, identity if Part 3</i>	<i>Description of process(es)</i>	<i>Major items of plant*</i>	<i>Max. quantity (tonnes)</i>	<i>Max. temp. (°C)</i>	<i>Max. pressure (bar absolute)</i>
Hydrogen (Part 2, 15)	Compression	Compressor Units	0.8	160	360 NB. Compressor system compresses 50barg Hydrogen to 360barg Hydrogen.**

* identify by reference to substance location plan

** Hydrogen from compressor is sent to the fixed or trailer storage. The ultimate location of use is away from the site.

5 Additional Information

- (a) If you have an existing PHS consent(s) as referred to in Table A, **attach a copy of each consent** to this application.
- (b) **List the maps or plans** or any explanatory scale drawings of plant/buildings submitted with this application (**as a minimum submit a site map and a substance location plan** – see **Notes** below).
- Doc B – 1-2.5K Substance Location Plan; and
 - Doc C – 1-10K OS Map Showing Site Location and Local Environment.
- (c) Provide a brief overview description of the **main activities** carried out or proposed to be carried out on, over or under the land to which the application relates.

The purpose of the plant is to produce hydrogen from wind energy using electrolysis. Bore hole water is used as feed to the electrolyser following treatment (filtration, softening, removal of iron, and deionised). The electrolysis process gives off oxygen and hydrogen. The oxygen is vented off to atmosphere and the hydrogen collected and stored in either cylinders on a trailer for transport to industrial uses in Scotland or in fixed storage cylinders. The fixed storage is a temporary storage solution before transferring the hydrogen to the trailers. The fixed storage is to be used when the trailer storage is not available.

Hydrogen will be generated at a maximum pressure of 50 bar and a compressor will be used to compress the hydrogen to a maximum pressure of 350 bar for storage in either the trailers or fixed storage cylinders.

The fixed storage cylinders will comprise of banks of long cylinders of length 10 to 15m providing a total storage capacity of 8,000kg.

- (d) Provide details of how each relevant substance is proposed to be transported to and from the land to which the application relates, for example the size and frequency of vehicle deliveries, the size or maximum flow rate of pipeline imports/exports.

<i>Substance including Part number in Schedule 1 to the Regulations, and entry number if Part 2, category if Part 1, identity if Part 3</i>	<i>How, and other details such as frequency and quantity, transported to and from the land to which the application relates</i>	
	<i>Transported to site</i>	<i>Transported from site</i>
Hydrogen (Part 2, 15)	No Hydrogen is transported to site.	8 trips per day for tube trailers, each transporting 1Te Hydrogen @350barg

- (e) Provide details of the vicinity of the land to which the application relates, where such details are relevant to the risks or consequences of a major accident (relevant details include numbers of people in neighbouring developments that could be affected by a major accident).

There are two properties approximately 1 mile from the proposed development location: one is a permanent residence; the other a holiday let.
Windfarm access track adjacent to the site has provision for authorised Vehicle access to the wind farm, and estate, and non-vehicle access for members of public (walkers, cyclists, etc).

- (f) Provide a brief overview of the measures taken or proposed to be taken to limit the consequences of a major accident.

Each main package of equipment, electrolysers, compressors, and storage systems, will all have built in safety measures including automatic shutdown of electrolysers on abnormal operation or leakage of hydrogen, hydrogen leak detection, fire detection systems, passive protection etc. During start-up and shut down process, nitrogen is used to purge the electrolyser unit to prevent explosive mixture of hydrogen and oxygen.

Passive protection shall include the installation of blast walls and fire walls which will be located at strategic locations around the site to protect personnel working on the site and prevent propagation of a fire/explosion. The location of such walls are shown on the site layout drawing. The whole facility will be fenced off to prevent access by the public and non-authorised person.

- (g) Where applicable, provide a statement that the proposal is a project or part of a project, that is subject to a national or transboundary environmental impact assessment or to consultations between Member States of the European Union in accordance with Article 14(3) of European Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances.

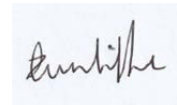
N/A

- (h) Give any further information which you consider to be relevant to the determination of this application.

It should be noted that the following COMAH dangerous substances are anticipated to be used / generated / associated with this SSE Hydrogen facility. SSE have advised that the quantities of these substances (which will be defined in the associated COMAH Notification once an equipment supplier is confirmed by SSE) are yet to be confirmed. However, these will be in sufficiently small quantities which will not exceed the controlled quantities needed to trigger the need for hazardous substances consent:

- Petroleum Products – Diesel (COMAH Named Substance, Part 2, 34c);
- Oxygen (COMAH Named Substance, Part 2, 25);
- Lubrication Oil (COMAH Category Part 1, P5b (assumed));
- Transformer Oil (COMAH Category Part 1, P5b (assumed));
- Sodium Hypochlorite (COMAH Category Part 1, E2 (assumed)); and
- Biocide (COMAH Category Part 1, E1 (assumed)).

I/We hereby apply for hazardous substances consent in accordance with the proposals described in the application



Signed: Z Cunliffe

on behalf of: SSE Renewables
(insert name of person in control of the land if different to applicant)

Date: 30th March 2022

To be accompanied by the certificate completed in accordance with regulation 5(2) of the Regulations (notice to owner by applicant), and the fee payable under regulation 55 of the Regulations.

Notes

“**Site map**” is a map, reproduced from, or based on, an Ordnance Survey map with a scale of not less than 1:10,000, which identifies the land to which the application relates and shows National Grid lines and reference numbers.

“Substance location plan” is a plan of the land to which the application relates, drawn to a scale of not less than 1:2,500, which identifies-

- (a) any area of land intended to be used for the storage of the substance;
- (b) where the substance is to be used in a manufacturing, treatment or other industrial process, the location of the major items of plant involved in that process in which the substance will be present; and
- (c) access points to and from the land.