Kintore Hydrogen Plant

Environmental Impact Assessment Report
Chapter 1: Introduction

Date: June 2024

Environmental Impact Assessment Report

Volume 2

Chapter 1

Version: Final

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This report is also downloadable from the Kintore Hydrogen website at:
https://www.kintorehydrogen.co.uk/

Qualifications

Prepared by: Millie Potter

Contributors: -

Checked by: Tom Dearing

This document has been prepared by Millie Potter BSc (Hons), MSc, an Associate Member of the Institute of Environmental Management and Assessment, who has two years' experience of environmental impact assessment.

It has been checked by Tom Dearing, a Chartered Environmentalist and full Member of the Institute of Environmental Management and Assessment, who has 14 years' experience of environmental impact assessment.

Kintore Hydrogen Limited

4th Floor

80 Victoria Street

London

SW1E 5JL

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Summary

This document introduces the applicant and the Environmental Impact Assessment Report (EIAR), describing the purpose of the EIAR and its structure.

1 Project Overview

1.1 Introduction to the proposed development

1.1.1 Kintore Hydrogen Ltd (Kintore Hydrogen or 'the applicant') proposes to develop a hydrogen production plant on land next to Kintore Substation in Aberdeenshire. The hydrogen plant would be a facility for the production of hydrogen from water by electrolysis using mainly renewable energy. This is sometimes called 'green hydrogen'. Hydrogen is a zero carbon fuel at the point of combustion.

1.1.2 The hydrogen would initially be supplied for blending with natural gas in the existing high-pressure gas network in order to aid in decarbonising industrial uses that rely on gas fuel in the UK, with potential in future to supply a dedicated National Gas hydrogen pipeline.

1.1.3 The electricity would be supplied from Scottish and Southern Electricity Networks' Kintore Substation, which provides transmission capacity for the increasing wind power generation in Scotland among other renewable sources. Producing hydrogen using excess renewable power generation (which might otherwise be curtailed or have capacity not fully realised) provides a solution to storing and transmitting this energy, in a form that can readily be used for industry and heating, making best use of existing natural-gas-adapted infrastructure.

1.1.4 The raw water would be supplied from the River Don, which has sufficient capacity under a range of flow conditions to support the water demand of Kintore Hydrogen. Kintore Hydrogen has been issued an abstraction licence by SEPA under the Controlled Activity Regulations for this water supply.

1.1.5 The location of the proposed development has therefore been chosen due to being adjacent to the newly expanded capacity of Kintore Substation (not requiring a new overhead transmission line), close proximity to the National Gas National Transmission System pipelines (requiring a connection pipeline of less than 3 km) and proximity to a more than sufficient raw water supply from the River Don.

1.1.6 Kintore Hydrogen intends to develop the facility and introduce its hydrogen supply in phases, starting with production capacity from 500 megawatts of electricity (MWe) and then developing further phases to reach a planned 3,000 MWe capacity in total.

1.1.7 The application boundary and location of the proposed development are shown in Figure 1.1. Further details of its design and the surrounding environment are provided in Chapter 2: Project Description and Site Setting.

1.2 The applicant

1.2.1 Kintore Hydrogen is a subsidiary of Statera Energy Limited, a private British company that develops, builds and operates flexible energy generation and storage technologies to help balance the grid. Statera Energy was established with the aim of delivering increased flexibility for the UK electricity system to assist in the transition to a low carbon economy in the future.

1.3 Project timeline

1.3.1 The expected timeline for consultation, decision-making and (if consent is granted) development of Kintore Hydrogen Plant is as follows.

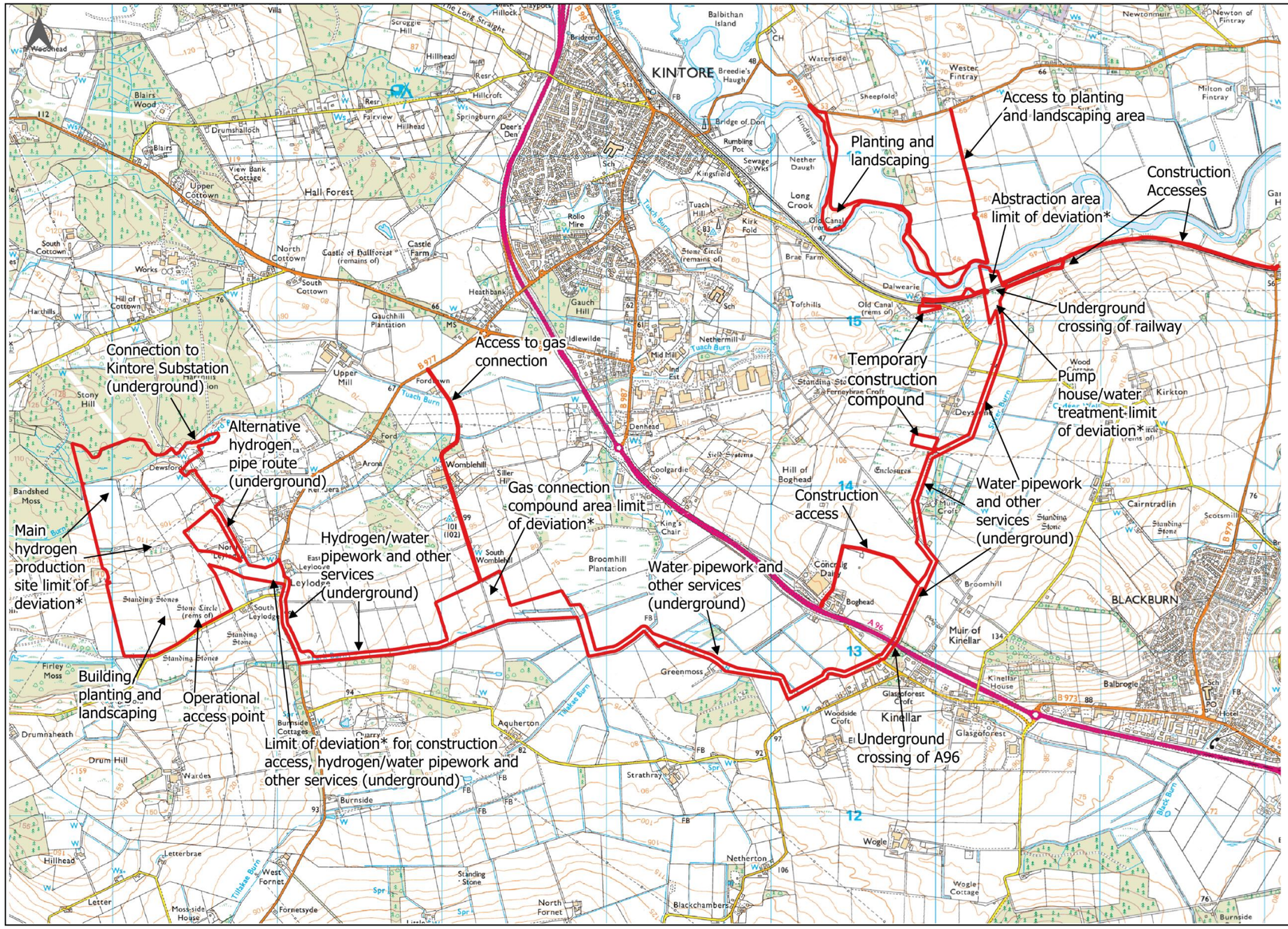
- Pre-application public consultation (completed) – summer 2024
- Submission of Planning Permission in Principle application – autumn 2024
- Start of construction – 2026 (with possible enabling works in late 2025)
- Operation of first phase of the plant – around 2029
- Construction and operation of subsequent phases – in the 2030s

1.4 Planning policy and legislative context

1.4.1 A Planning Application in Principle has been prepared and submitted in accordance with the Town and Country Planning (Scotland) Act 1997, The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, and associated Planning Circular guidance from the Scottish Government.

1.4.2 The Planning Statement accompanying the planning application provides details of the applicable policy and how this is met by the proposed development. In summary, the relevant policy and guidance on energy has been reviewed and Kintore Hydrogen Plant is considered to contribute to policy objectives in improving the vitality and competitiveness of the UK energy market (therefore improving the UK's security of energy supply), tackling climate change, providing skilled employment, and providing for environmental protection and enhancement.

1.4.3 Key planning policy includes the National Planning Framework 4 (NPF4), which provides the national context for policy and decision making by local planning authorities, and the Aberdeenshire Local Development Plan 2023. These both establish the need for policies and decisions to support action to tackle climate change and adaptation. Kintore Hydrogen Plant would use renewable electricity to generate hydrogen, a zero-carbon fuel at the point of combustion, for supply to energy users in Scotland and the wider UK. The transition towards hydrogen as a form of energy and away from natural gas is a key action to tackle climate change.



KINTORE HYDROGEN PLANT

Date:	20-08-2024
Paper size:	A3
Scale:	1:26,000

0 100 200 300 400 m

Key:

Planning application boundary

* Where reference is made to a limit of deviation, this is an area in which the described plant is proposed to be sited. However, the actual footprint of the described plant in this area will likely be significantly smaller than the limit of deviation. The limit of deviation enables the flexibility for design that is necessary for phased development such as this for which planning permission in principle is being sought.

Kintore Hydrogen
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Proposed development application boundary and overview – OS map

Status:	Final
Revision:	V2
Drawn by:	MP
Approved by:	TD

Figure 1.1: Proposed development application boundary and overview

2 Purpose and Structure of the EIAR

2.1 Requirement for Environmental Impact Assessment

2.1.1 The Environmental Impact Assessment Report (EIAR) documents the process and findings of the environmental impact assessment work undertaken for Kintore Hydrogen Plant. The EIAR accompanies the Planning Permission in Principle application for the proposed development.

2.1.2 Certain categories of development are required by legislation to be the subject of Environmental Impact Assessment (EIA). Kintore Hydrogen has voluntarily submitted this EIAR, making the proposed development EIA development under regulation 6(2)(c) of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Kintore Hydrogen has sought and received a formal EIA Scoping Opinion from Aberdeenshire Council, which is discussed in Chapter 5.

2.1.3 EIA is a systematic and objective process through which the likely significant environmental effects of a project can be identified, assessed and, wherever possible, avoided or mitigated. EIA aims to improve the environmental design of a development and provide decision-makers with sufficient information about the environmental impacts of a proposal.

2.1.4 This process and its outcomes are then reported in an EIAR to the local planning authority, its advisors, and the public.

2.2 Purpose of this Environmental Impact Assessment Report

2.2.1 The purpose of the EIAR is to provide the environmental information that has been gathered and to describe the likely significant environmental effects of Kintore Hydrogen Plant.

2.2.2 The EIAR specifically:

- provides statutory and non-statutory consultees with technical information to enable an understanding of the proposed development;
- provides an outline of the main project alternatives considered for the proposed development and indications of the reasons for the development selection made by Kintore Hydrogen;
- describes the methodology used in the EIA process;
- presents the existing environmental baseline information, established from desktop studies, field surveys and consultation;
- indicates any difficulties encountered during the compilation of the environmental information, including the acknowledgement of any data gaps or deficiencies and confidence in the information gathered;
- presents the potential environmental effects arising from the proposed development, based upon the baseline information and data gathered and the assessment of impacts;
- describes the designed-in mitigation for such impacts; and
- where applicable, puts forward further mitigation measures that could prevent, minimise, reduce or offset potential negative environmental effects identified.

2.3 Structure of this Environmental Impact Assessment Report

2.3.1 This EIAR sets out the assessment of environmental aspects in separate chapters supported by technical appendices which contain supporting information such as baseline survey results. The EIAR comprises the following:

- Volume 1 – Non-Technical Summary (NTS) and glossary, acronyms and units
- Volume 2 – EIAR environmental topic chapters; and
- Volume 3 – Technical appendices and additional figures.

2.3.2 Table 2.1 details the structure of the EIAR.

Table 2.1: Structure of the EIAR

Volume	Chapter	Title
Volume 1	n/a	Non-Technical Summary
	n/a	Glossary, acronyms and units
Volume 2	1	Introduction
	2	Project Description
	3	Consideration of Alternatives
	4	Environmental Impact Assessment Methodology
	5	Scoping and Consultation
	6	Landscape and Visual
	7	Archaeology and Cultural Heritage
	8	Ecology and Biodiversity
	9	Transport and Access
	10	Noise and Vibration
	11	Air Quality

Volume	Chapter	Title
	12	Climate Change
	13	Soils, Geology and the Water Environment
	14	Population and Health
	15	Socio-Economics
	16	Summary of Inter-related Effects
	17	Summary of Cumulative Effects
	18	Summary of Mitigation, Monitoring and Residual Effects
Volume 3	n/a	Technical appendices
	n/a	Additional figures

2.4 Document availability

2.4.1 A Non-Technical Summary (NTS) document has been produced which describes the proposed development, its location and the likely environmental effects in non-technical language. The EIAR and NTS (and all other application documents) can be viewed and downloaded free of charge from https://www.kintorehydrogen.co.uk/.

2.5 Post-application publicity and consultation

2.5.1 Following submission of the Planning Permission in Principle application to Aberdeenshire Council, accompanied by this EIAR, the Council will have publicity and consultation duties under Part 5 of the EIA Regulations.

2.5.2 Should interested parties wish to make representations to Aberdeenshire Council concerning the planning application or content of this EIAR, they can be made by email to planningonline@aberdeenshire.gov.uk or in writing to:

ePlanning team
Aberdeenshire Council
Viewmount
Arduthie Road
Stonehaven,
AB39 2DQ

2.5.3 Alternatively, representations can be made online by using the ‘make a comment’ function from the application on the planning register:

https://upa.aberdeenshire.gov.uk/online-applications/