Kintore Hydrogen

PLANNING STATEMENT

September 2024

On behalf of

Kintore Hydrogen Ltd

Kintore Hydrogen

A STATERA COMPANY

BLACKHALL & POWIS

CONTENTS

1. INTRODUCTION

1.1 Background

1.1.1 This Planning Statement has been prepared by Blackhall & Powis Ltd (B&P) on behalf of Kintore Hydrogen Limited, a subsidiary of Statera Energy Limited (the Applicant) to accompany a planning application made under the provisions of the Town and Country Planning (Scotland) Act 1997 (the TCPSA).

1.1.2 The application seeks Planning Permission in Principle (PPiP) for the construction of a green hydrogen production facility referred to as 'Kintore Hydrogen' that is proposed to be located close to the Kintore Substation that lies to the west of the town of Kintore, Aberdeenshire. The development includes both the production facility itself and ancillary development in the form of both water and hydrogen pipelines and associated infrastructure. For the purposes of the planning application the development has been described within the planning application as a *facility for the production of hydrogen through electrolysis, access, pipelines, hard and soft landscaping, and all associated works* (the proposed development).

1.1.3 Kintore Hydrogen would produce hydrogen from water by the process of electrolysis using renewable energy, commonly referred to as 'green hydrogen.' Kintore Hydrogen has a total planned hydrogen production capacity of 3GWe[1] and would be a significant hydrogen development in a UK context – being the largest currently planned green hydrogen development in the UK and one of the largest developments of its type in the world.

1.1.4 In a future Great British (GB) energy system where renewables (predominantly wind and solar) make up the vast majority of electricity generation, storage technologies will be needed to balance supply and demand and to maintain energy security. For shorter periods of excess and shortfall of electricity (i.e., 1-8 hours), batteries are the perfect solution; for medium periods (9-32 hours) pumped storage hydro is best suited. However, for extended periods of excess renewables, GB is currently paying to turn wind farms off[2], and for extended periods of shortfall, we are reliant on carbon intensive gas generation[3].

1.1.5 Long duration storage is a particular challenge in GB given the seasonal fluctuations in demand – in the winter, demand is much higher than the summer. Green hydrogen balances the grid when no other technologies can by soaking up power at times of excess, storing the energy as hydrogen, and providing low carbon electricity generation at times of shortfall. In this way, hydrogen will improve energy resilience by providing security of supply in a heavily decarbonised electricity system. The National Infrastructure Commission makes this point in its National Infrastructure Assessment[4] , where it repeatedly makes the case for large scale hydrogen production and storage to provide "*longer term (persistent) flexibility (for days, weeks and seasons)*" where shorter term solutions such as battery storage cannot. Green hydrogen is therefore critical to decarbonising the electricity system and supporting a highly electrified future economy.

1.1.6 The problem of intermittent renewable generation in the GB system is heightened by the lack of network capacity between Scotland and England to transport the electricity from wind generation to demand. National Grid Electricity System Operator (NGESO) and the transmission owners have plans for significant upgrades to the transmission system to improve network capacity. However, NGESO

[1] Gigawatt Equivalent - The electrolysis process at full capacity will consume up to 3 gigawatt-hours (GWh) of electricity

[2] National Grid ESO (2022), Network Options Assessment 2021/22, Refresh – August 2022, [download (nationalgrideso.com)]

[3] For every £1 that is spent on paying wind farms to turn off, £2 is spent on paying gas generation to turn up [Carbon Tracker Initiative (June 2023) Gone with the Wind? Analyst Report]

[4] see https://nic.org.uk/app/uploads/Final-NIA-2-Full-Document.pdf

has confirmed in its recent "Beyond 2030" report[5] that onshore pylons and subsea cables cannot solve the problem alone, saying that its "*network design has included an assumption of major strategic demand being developed in the North of Scotland throughout the 2020s and the early 2030s. This can serve to reduce the requirements for new electricity transmission network build in the 2030s and beyond if the abundant renewable electricity is consumed locally. Solutions such as green hydrogen production (electrolysis) could meet this requirement.*" Locating green hydrogen production in Scotland also allows it to produce hydrogen at the lowest cost by taking advantage of the lower electricity prices resulting from the abundance of wind.

1.1.7 Demand for hydrogen from both electricity generation and industry, is largely located in industrial clusters, such as Grangemouth and Teesside, and in England close to large demand centres, such as London and the South East. The low-cost hydrogen produced in Scotland will need to be transported to the demand, and a dedicated hydrogen backbone that connects supply, storage and demand, is the optimal method of transportation. NGESO considers that "*opportunities to locate significant hydrogen production capability in the north may also link with establishing a national hydrogen transmission system which may include repurposing of specific parts of the existing national gas transmission system which begins in the North East of Scotland. In the future, this system could deliver significant quantities of storable energy throughout Britain in the form of hydrogen*."

1.1.8 Before the rollout of a hydrogen backbone, blending hydrogen into the existing gas transmission network is necessary in order to enable hydrogen projects to locate strategically and start delivering grid balancing benefits. The Department for Energy Security and Net Zero has acknowledged the case for blending "*as it can help to optimise the location of electrolysers to help manage grid constraints (i.e. the strategic enabler role) as a precursor to regional or national hydrogen transport and storage infrastructure in certain locations*"[6] "Grey" hydrogen uses (i.e., fossil derived, such as fertiliser production) exist already and do require decarbonisation. However, these uses are distributed throughout the UK (and until a dedicated hydrogen network is available to enable transport of hydrogen to them) they are currently not well placed to encourage large-scale, strategically located hydrogen production that is needed in the near term. Co-locating small scale hydrogen production with existing demand would lead to higher hydrogen production costs, whereas blending can serve as a stepping stone to allow projects to locate where they can produce lowest cost hydrogen, in advance of dedicated network development. This will make industrial decarbonisation lower cost in the future.

1.1.9 To deliver a development of this scale therefore requires a strategic location close to major grid infrastructure in an area of high net renewable energy export for the supply of electricity needed for electrolysis. The proposed development must also be well located close to the gas transmission network required to export hydrogen to the gas grid (initially on a blended basis in advance of a dedicated hydrogen backbone being operational) and near to a reliable source of fresh water that is the core requirement of the electrolysis process. The site of the proposed development has been chosen based on fulfilling those key parameters.

1.1.10 Kintore Hydrogen aims to develop the hydrogen plant in phases with an initial phase of up to 500MWe[7] hydrogen production commencing in 2026 with first operation by 2029. Further phases would be developed to reach the full 3GWe production capacity as soon as is feasible.

1.1.11 The proposed development offers several significant benefits to the UK and would alone account for a large proportion of the UK and Scottish targets of 10GWe and 5GWe of low carbon hydrogen production capacity by 2030. The proposed development also benefits from UK Government funding under Strand 1 of the Net Zero Hydrogen Fund, being identified as a key project in driving the UK's hydrogen aspirations. The benefits of the scheme are summarised as:

[5] see https://www.nationalgrideso.com/document/304756/download

[6] https://assets.publishing.service.gov.uk/media/657a0a82254aaa0010050cde/hydrogen-blending-strategic-policy-decision.pdf

[7] Megawatt Equivalent

i. Delivering decarbonisation by installing flexible hydrogen production that allows for the maximisation of the use of renewable energy to balance the electricity grid and decarbonise the gas transmission network by displacing natural gas with low carbon green hydrogen.

ii. Increase the UK's energy security, resilience, and independence by facilitating solutions for the problem of week, month and seasonal intermittency of renewables and therefore reducing the need to import energy from overseas.

iii. Facilitate the accelerated 'scale up' of renewables as well as supporting the conversion of the national gas pipeline network to carry hydrogen.

iv. Encourage investment in the UK Hydrogen supply chain and skills and create both local, regional and UK job opportunities.

These benefits are further discussed in detail throughout this Planning Statement.

1.1.12 The applicant, Kintore Hydrogen Ltd, is a subsidiary company of Statera Energy Ltd (Statera). Statera is an established British renewable energy developer and operator with the aim of delivering increased flexibility for the UK electricity system to assist in the transition to a low carbon economy. Statera has a significant track record of both project development, delivery, and operation with over 1GW of assets in operation or under construction and plans to deliver over 7GW of flexible assets by 2030. Statera considers that hydrogen has a key role to play in supporting the energy generation transition to a more sustainable future.

1.2 The Purpose of the Statement

1.2.1 The primary purpose of this statement is to provide an assessment of the proposed development against the relevant Development Plan and any other material considerations in accordance with the requirements of Section 25 of the TCPSA. The TCPSA requires that in making any determination under the Act, decision makers must have regard to the Development Plan and the determination of the application shall be made in accordance with the Development Plan unless material considerations indicate otherwise.

1.2.2 In undertaking the assessment, the potential benefits and effects which may arise from the proposed development have been considered within this Planning Statement in order to conclude the acceptability of the proposals in planning terms in the context of the policies of the Development Plan and material considerations.

1.2.3 In doing so and in the interests of assisting stakeholders, the statement also provides a signpost to the outcomes of the assessments undertaken in respect of detailed subject matters as they relate to the relevant Development Plan policies and other material considerations. This includes those relating to the contents of the EIA Report and other associated documentation that has been prepared in order to assess the effects of the development.

1.2.4 The planning statement is structured as follows:

Section 1: **Provides an introduction to the proposed development, the purpose of this statement and provides details of the locational context of the development.**

Section 2: **Provides details of the proposed development.**

Section 3: **Sets out the regulatory regime and approach.**

Section 4: **Identifies the Development Plan and associated relevant planning policies.**

Section 5: **Identifies relevant material considerations including the wider policy background relevant to the proposed development.**

Section 6: **Provides an assessment against the Development Plan and relevant material considerations**

Section 7: **Provides a conclusion.**

1.3 Planning Submission Content

1.3.1 The Planning Submission has been made in accordance with the Town and Country Planning (Scotland) Act 1998 (as amended) and the associated regulations. The information exceeds the minimum requirements for a Planning Application in Principle as set out in The Town and Country Planning (Development Management Procedure) (Scotland) Regulations (Regulations 10 and 4A(3)). In addition to the appropriate planning fee the application is supported by:

- Application Form and Associated Certificates
- Site Location Plan (Ref SE_KIN_SLP_01)
- Planning Parameters Plan (Ref SE_KIN_PP_001)
- Pre-Application Consultation (PAC) Report

1.3.2 In accordance with the Town and Country Planning (Environment Impact Assessment Regulations) (Scotland) 1997 the application is supported by:

- Non-Technical Summary
- Environmental Impact Assessment Report and associated appendices.

1.3.3 In order to support the Local Planning Authorities in undertaking an Appropriate Assessment under the Conservation (Natural Habitats, &c,) Regulations 1994:

- A Habitat Regulations Appraisal (contained within Appendix 8.11 of the EIAR)

1.3.4 In addition, the following documents are provided in support of the assessment of the application**:**

- Planning Statement incorporating draft planning conditions (this document)
- Lighting Principles Statement
- Design Principles Statement
- Outline Construction Environmental Management Plan
- Indicative Biodiversity Net Gain Feasibility Assessment (contained within Appendix 8.15 of the EIAR)
- Outline Biodiversity Enhancement & Management Plan (contained within Appendix 8.18 of the EIAR)

1.3.5 The following documents are provided for illustrative purposes only:

- Indicative Electrolysis Site Masterplan Plan (Ref: SL260_L_X_MP Rev 2)
- Indicative Gas Connection Compound Plan (Ref: SL_L_X_WG_1)
- Indicative Water Treatment Works Plan (Ref: SL_L_X_WG_2)

1.4 Site Location and Context

1.4.1 The site, due primarily to the linear pipeline components, spans a large geographical area to the west, south and southeast of the settlement of Kintore, Aberdeenshire. The entirety of the project would be located within the administrative area of Aberdeenshire Council. Aberdeenshire Council's

administrative area is further divided into six areas. The development would be located entirely within the Garioch Area of Aberdeenshire. The red line planning boundary for the site incorporates approximately 137.2 hectares of land, which is predominantly agricultural in nature but includes some transport infrastructure and small areas of woodland. The red line site boundary is shown on the Site Location Plan incorporated as Figure 1 of this Statement.

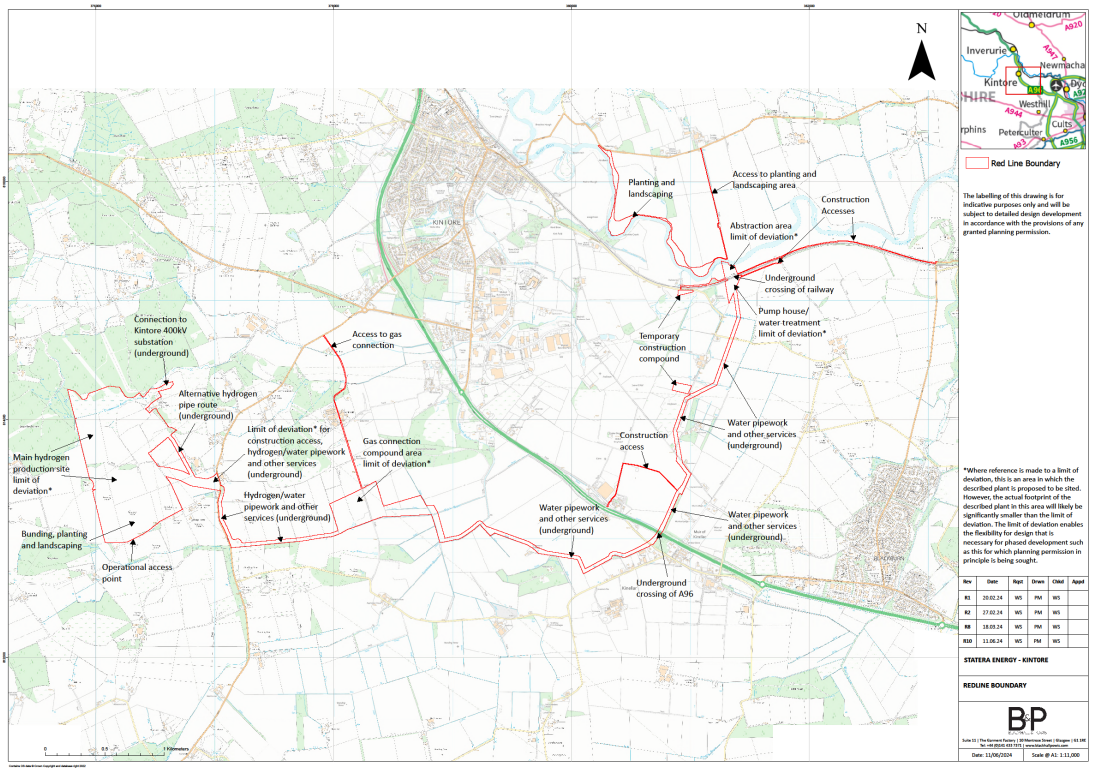

Figure 1: Project Boundary and Overview – OS Map

1.4.2 The land within the application boundary can be divided into five parts:

- the main electrolysis plant site including temporary construction access and permanent access road
- the underground hydrogen pipeline to a connection and blending point for export into National Gas's existing National Transmission System (NTS)
- the water abstraction and discharge point, pumping and treatment station, and underground water pipelines to and from the River Do.
- the riparian and other habitat creation and enhancement area on the east bank of the River Don
- the electrical connection from the SSE Kintore Substation to the electrolysis plant

1.4.3 The main electrolysis plant site and grid connection are to be located on land to the west of the existing Kintore Substation near Leylodge, approximately 2.8 km to the southwest of Kintore, Aberdeenshire, 0.3 km northwest of Leylodge and 0.5 km to the west of the B977. The circa 85.8ha site for the electrolysis plant is largely currently agricultural land with a fringe of bog woodland and gorse scrub at its northern edge where it is crossed by the Dewsford Burn. There are farm tracks, field boundaries and smaller areas of coniferous woodland in the central part of the site whilst open fields lie to the south.

1.4.4 In terms of the electrolysis plant site's topography, the area lies at approximately 100m AOD and is gently undulating, with a low east – west ridge crossing the centre of the site which separates the enclosed landscape bowl within the northern part of the site, from the more open farmland to the

south of the site. The site features multiple high voltage overhead power lines from Kintore Substation which is currently being expanded to facilitate increased renewable energy generation.

1.4.5 Partially enclosed farmland lies to the west of the electrolysis plant site whilst more extensive areas of forestry around Harthills are located to the north. The Kintore Substation is located a short distance to the east of this part of the site and there are two residential properties located to the east of the site at Dewsford. The area to the south of the site consists of more open agricultural land interspersed with dwellings with the greatest number of those being located along the B977 to the southeast.

1.4.6 The hydrogen export pipeline route corridor would run south and eastwards from the electrolysis plant site across the B977 and open farmland to a connection point with the existing National Gas NTS. The connection point would be in farmland around 1 km west of the A96 and south of the property of South Womblehill.

1.4.7 The part of the site required for the water pipeline route corridor would follow the hydrogen export pipeline and then be routed across farmland, crossing under the A96 at the north edge of Kinellar. The pipeline would then cross further farmland to a crossing of the Network Rail railway line between Aberdeen and Inverness to reach an abstraction point on the River Don. The abstraction and discharge point would be located on agricultural land located on the south bank of the Don off the minor 'Rushlach Road,' around 1.5 km south-east of the edge of Kintore near the property of Dalwearie.

1.4.8 The site includes a number of existing private accesses that would be used during construction and operation and include those from the B977 to the National Gas connection point, access from the B979 to the water abstraction point and pumping station and access directly from the minor road near Dalwearie to the same location.

1.4.9 On the northern bank of the River Don lies an additional 7.3 hectares of land identified for habitat enhancement. This forms part of the river's flood plain and is currently grassland. An existing farm access from the north is included within the site boundaries.

1.4.10 Given the large geographical extent of the site, the individual parts of the site, as graphically illustrated on Figure 1 are summarised in more detail in the context of the infrastructure proposed within Section 2 of this Statement. It is important to note that not all of this land will be utilised for development but is required to allow for construction and micro siting of the infrastructure proposed as well as planting and landscaping proposals relevant the objective of providing visual and ecological mitigation and enhancement.

1.4.11 Information on planning related designations and constraints relating to the area are discussed in Section 1.5 of the report. A summary of relevant planning history is contained within Section 5 of the report.

1.5 Designations and Environmental Constraints

1.5.1 As part of the site selection process the applicant has sought to avoid key environmental constraints and designations. The site does not contain, nor is in close proximity to any European, National, or Local statutory ecological or landscape designations. The surrounding area, outwith the site, contains few ecological designations although the site area is notably within 10km of the Loch of Skene Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site and approximately 16km from the 'Ythan Estuary, Sands of Forvie and Meikle Loch' SPA (at the closest point to the application boundary, which is a habitat creation and compensation area). Both sites are designated in part for their bird populations and notably greylag geese, goldeneye, and goosander. Certain land within the site and its corridors could be functionally linked to the SPA as overwintering geese are known to forage within agricultural land within the wider area. Given that the proposed development could result in the loss or change in use of land that may be functionally

linked to these designations, Nature Scot have confirmed that an assessment under the Habitats Regulations[8] will be required. To inform this assessment the applicant has undertaken a Habitats Regulations Assessment (HRA), and this document accompanies the application as Appendix 8.11 to the EIA Report.

1.5.2 Figure 1.3 as contained within Chapter 4: Project Description and Site Setting of the identified environmental sensitives in the vicinity of the proposed development. In terms of built and cultural heritage the only designations within the site as currently identified is a Scheduled Ancient Monument (SAM) known as South Leylodge Steading Stone Circle which is located within the far southeast of the electrolysis plant area. An additional area of SAMs collectively called the 'Aberdeenshire Canal' are located close to the site immediately to the south of the railway line near to the access point to the water abstraction point. There are other identified SAMs within 1km of the site and other non-statutory archaeological interests identified in the Historic Environment Register, including along the pipeline route and within the site itself. Those non-statutory interests are mainly of local significance.

1.5.3 The site lies outwith any designations within the Aberdeenshire Local Development Plan 2023 with the exception of a land use designation identified as P8, an area for protection of the setting of the remains of the Aberdeenshire Canal and an area of open space associated with it. This is discussed further in Section 6.9 of the Planning Statement.

1.5.4 In addition, it should be noted that:

- There are no listed buildings located within 500m of the site of any of the permanent above ground infrastructure to be installed as part of proposed development.
- Other than the water intake/discharge pipes that would take water directly from the River Don, areas of fluvial flood risk are limited to a small area of the electrolysis plant site and an area to the south of the gas connection point
- The majority of the agricultural land to be used is not considered to be Prime Agricultural Land being predominantly Class 3.2 with pockets of poorer quality soils. Prime Agricultural Land is limited to locations along the pipeline routes which are proposed as buried infrastructure
- There are no Class 1 or 2 peatland areas identified on the site. In respect of the National Importance for carbon rich soils and deep peat, there are no areas that are considered to have any potential to consist of carbon rich or peat holding soils
- With the exception of individual trees there would be minimal tree loss across the site. A number of areas of woodland close to (but not within) the site is identified as Ancient Woodland
- There are no identified core paths or rights of way across the main electrolysis plant site however there are several core path crossings along the water pipeline corridor between the A96 and the River Don
- The ecological appraisals of the site have identified site level ecological sensitivities that are further considered in the Planning Assessment

2.0 THE PROPOSED DEVELOPMENT

2.1 Purpose

2.1.1 Kintore Hydrogen seeks to deliver a hydrogen production facility with up to 3GWe of electrolyser capacity located at a proposed electrolysis plant at a site located near the town of Kintore, Aberdeenshire. The facility would be a 'green' hydrogen development and would produce hydrogen from water by electrolysis using renewable electricity. The systems used would either be a proton exchange membrane (PEM) or alkaline electrolysis technology.

[8] https://www.legilsation.gov.uk/Conservation (Natural Habitats, &c.) Regulations 1994

2.1.2 The facility, once fully operational, would have a total production capacity capable to produce nearly 200,000 tonnes of hydrogen a year. Hydrogen is a zero-carbon fuel at the point of combustion.

2.1.3 By the early 2030s, a new hydrogen transmission pipeline backbone is expected to be developed under National Grid Gas's 'Project Union'[9], enabling a pure hydrogen supply to industrial clusters across the UK as well as facilitating the use of hydrogen for long duration energy storage. One leg of this national hydrogen transmission backbone would repurpose an existing gas pipeline section from St Fergus to Aberdeen (which lies close to the Proposed Development) and beyond. The proposed development would then become a major source of hydrogen for supply via the Project Union pipeline. National Gas Transmission has submitted a letter of support for the proposed development.

2.1.4 In the nearer term, the Kintore Hydrogen project would blend hydrogen into the existing natural gas network in order to displace burning of natural gas by existing users of the network.

2.1.5 The electricity for the electrolysers would be supplied from SSEN's Kintore Substation, which is providing transmission capacity for the increasing wind power generation in Scotland among other renewable sources. Even with SSEN's proposed East Coast 400 kV Phase 2 Project, capacity to transmit Scottish renewable power to the areas of high UK demand south of the border is a key constraint. This is leading to renewable generation being curtailed[10], and ultimately could limit the benefits that can be realised from Scotland's wind, wave, and tidal power resources.

2.1.6 Producing hydrogen using 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 system resilience and industry, making best use of existing natural gas-adapted infrastructure.

2.1.7 The raw water required for electrolysis would be supplied from the River Don, which has sufficient capacity under a range of flow conditions. The applicant has already been issued an abstraction licence by SEPA under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (the Controlled Activities Regulations) for this water supply.

2.2 Site Selection

2.2.1 The applicant has gone through a staged process in identifying the site and high-level design for the proposed development and this process is fully set out in the EIA Report Chater 3: Consideration of Alternatives. Initially the first stage identified broad locations where the fundamental requirements for large scale hydrogen production could be met as summarised at paragraph 1.1.3 above. A number of substation sites were considered at a macro scale as set out in Figure 2.2 contained within Chapter 3 of the EIA Report. Kintore Substation provided an optimal location due to its proximity to the National Gas Transmission Network and to a significant source of water, notably the River Don.

2.2.2 Kintore Hydrogen has, as part of the process of identifying the application site, considered whether there are any brownfield or allocated sites suitable for the proposed development close to the grid supply point and the gas pipeline that would meet the requirements of the project. Brownfield land of the scale required to deliver the project is limited and would not be of a scale to allow for the construction of the project. Whilst some parcels of land are potentially available within the allocated employment sites identified within the Kintore Settlement Statement that forms part of the Aberdeenshire Local Development Plan 2023 (ALDP 2023). This allocated land is limited in its contiguous extent and would not be sufficiently large to construct the proposed development.

[9] National Grid Gas (2022): Project Union Launch Report. [Online] https://www.nationalgas.com/document/139641/download

[10] Defined as a temporary deliberate reduction in generation below the available capacity, due to factors such as low power demand or insufficient transmission capacity.

2.2.3 At a site level the applicant has considered options for location of the various elements of the Proposed Development including specific aspects of design, scale, technology, and opportunities for environmental enhancement for the proposed development. Matters raised within the consultation and engagement undertaken by the applicant have also informed this process.

2.2.4 The site for the main electrolysis plant has been chosen as it provides a degree of natural existing topographical and landscape screening in an area with relatively few environmental constraints and with a short grid connection route. Other greenfield sites within the area would be significantly more exposed than the application site.

2.2.5 The applicant has undertaken further master-planning within the electrolysis plant area to understand how the site may be developed. This has focused on avoiding impacts at a site level wherever possible by identifying areas of constraint and implementing standoff distances, areas of habitat retention and areas for planting and landscaping as well as preferable areas within the site for aspects of the hydrogen plant. This has resulted in a Planning Parameters Plan and indicative designs for the electrolysis plant area that is further discussed in Section 2.3 and provided as Figure 3.

2.2.6 Several options for the water abstraction, hydrogen pipeline and water pipelines have been considered. This is evidenced by the route options noted in the project's EIA Scoping Opinion. The final location and route choice for the infrastructure set out in the application has been driven by efforts to lessen environmental effects and disruption during construction. The consideration of alternatives is fully described in the EIA Report Chapter 3: Consideration of Alternatives.

2.3 Description of Development Components

2.3.1 As noted in Section 1, The proposed development can be considered to have a number of component parts. The proposed development involves construction of the following main elements which are also identified spatially within Figure 1 (Project Boundary and Overview – OS Map), and which are detailed further in this section of the statement:

- The main electrolysis plant and associated development that will be developed in phases
- Water supply and discharge infrastructure for connecting the hydrogen production facility to the River Don in order to provide a water supply to the hydrogen production facility and discharge water following electrolysis. This incorporates abstraction infrastructure including a pumping station and discharge point to the River Don
- Hydrogen gas pipeline infrastructure connecting the electrolysis plant site to the National Transmission System
- Grid connection infrastructure consisting of underground cable works to the grid supply point
- An area of 'off site' habitat creation located to the northeast of the River Don

2.3.2 A full description of the electrolysis process and the operation of the various components to allow the development to produce hydrogen are contained within the EIA Report Chapter 2: Project Description and Site Setting although a summary of the key components have been incorporated into this section of the Planning Statement. Chapter 2 also includes a set of maximum design parameters that are set out in Table 2.1 Maximum Design Envelope Parameters (electrolysis plant site main buildings), Table 2.2 Maximum Design Envelopment Parameters (development areas). These tables set out the maximum parameters for each aspect of the Proposed Development. These parameters have been used for the assessment set out in the EIA and corresponding documentation including this Planning Statement.

Main Electrolysis Plant Site

2.3.3 The site of the main electrolysis plant is described in Section 1 of this Report and is shown in more detail within Figure 2. Of the circa 85.8ha site for the main electrolysis plant buildings, equipment and access are expected to require up to approximately 60% of the overall area of the available site,

with the remaining 30ha being used for landscaping, along with retained and enhanced areas of habitat, overhead line corridors and drainage infrastructure.

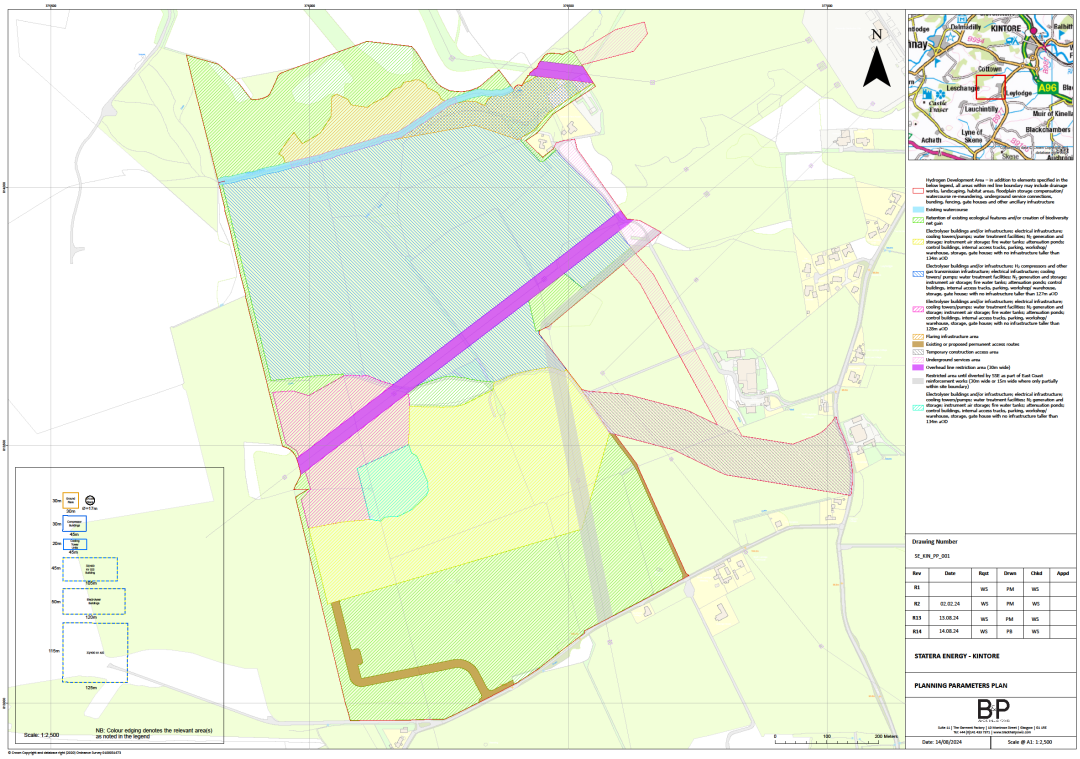

Figure 2: Planning Parameters Plan

2.3.4 Figure 2 (also provided as Figure 2.2 within EIA Report Chapter 2) shows the Planning Parameters Plan. The intention of this plan is to provide clarity over the areas of the electrolysis plant site that are intended to be utilised for the different components of that part of the proposed development in the absence of a detailed layout. The Planning Parameters Plan should be read in conjunction with the maximum design envelope parameters tables noted in paragraph 2.3.2.

2.3.5 In overview, the buildings, structures and equipment of the electrolysis plant would comprise:

- electrolyser cells and associated infrastructure (including gas treatment equipment) either inside or external to buildings, and oxygen vent pipes
- electrical switchyard with 275 or 400 to 33 kV transformers
- hydrogen scrubber (only applicable for the alkaline technology)
- hydrogen compressors and auxiliaries for export
- an enclosed ground flare for hydrogen
- nitrogen generation and storage
- compressed air generation and storage
- external cooling system with cooling towers and pumps
- water treatment building and tanks
- firewater tanks
- control room, workshop and stores buildings
- gatehouse, internal access and circulation roads and parking
- site drainage, runoff attenuation ponds and underground services
- perimeter security fencing, lighting and CCTV

2.3.6 Most of the main equipment would be located on development platforms that would sit at different Ordnance Datum (mAOD) levels depending on the part of the site they are to be located on.

Concrete raft foundations would be used for the buildings and pads for freestanding equipment. The development platform levels of the site would be established based on the topography, with the intention to achieve an overall cut and fill balance. This may include a cut into the south side of hill known as the 'The Knock' to establish a platform height lower than the ridgeline, with a bank or retaining wall structure. To allow for flexibility during detailed design, maximum height parameters for various parts of the site have been developed**Error! Reference source not found.** These parameters are expressed in absolute terms as meters above Ordnance Datum to allow for final infrastructure and platform levels to be developed within these maximum parameters. These parameters are noted on the Planning Parameters Plan.

2.3.7 In order to assist with understanding how the proposed development may be developed, an illustrative masterplan for the electrolysis plant site has been included as Figure 2.2 within the EIA Report Chapter 2 and provided as Figure 3 within this Planning Statement. This illustrates the approximate relative footprints of buildings and equipment and gives an indication of how they could be laid out on the site, making best use of the more visually screened northern half. However, this masterplan is indicative only. The planning application is made on the basis of a parameters-based design, with details reserved to be approved at subsequent AMSC stage and in accordance with the Planning Parameters Plan accompanying the planning application.

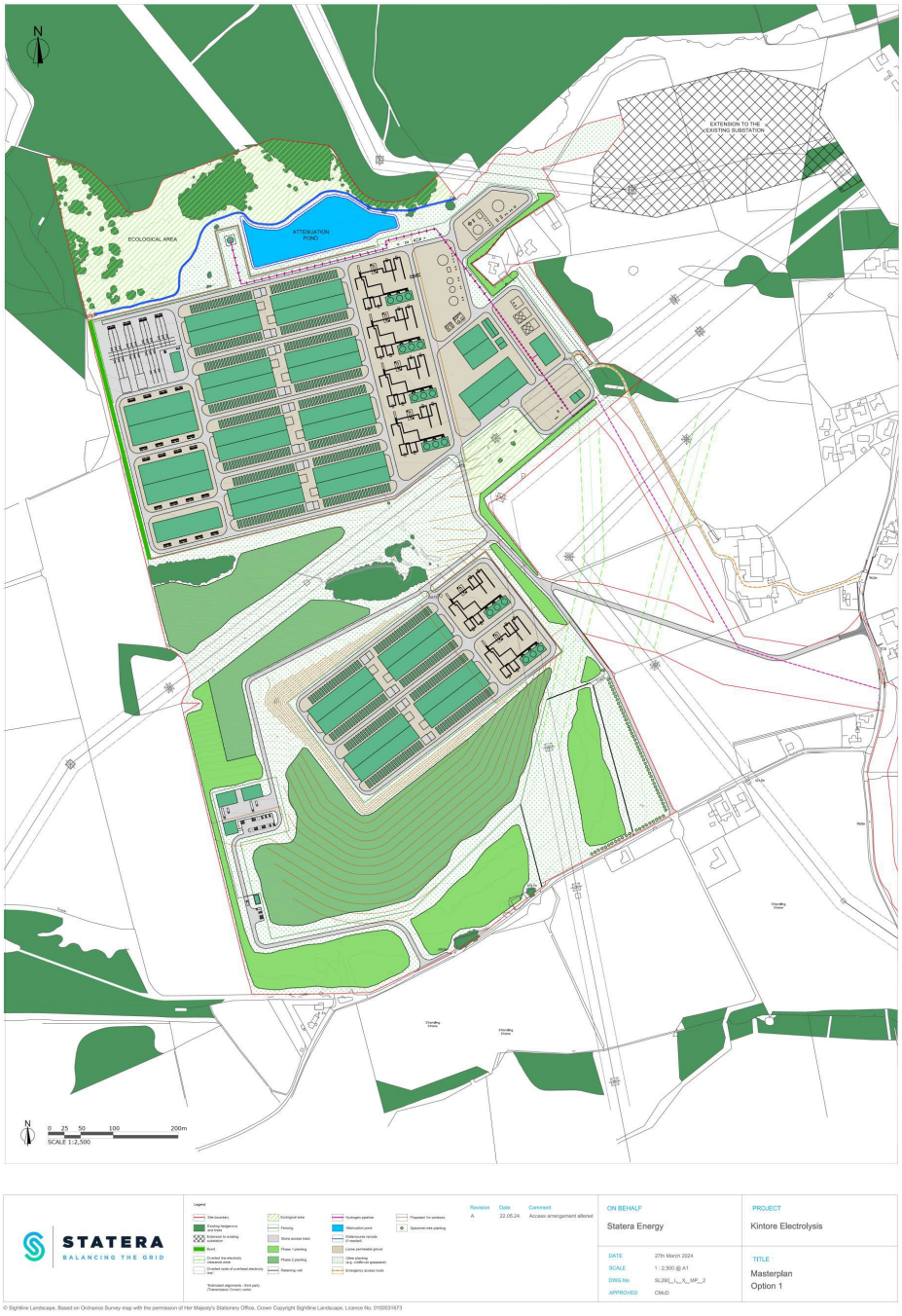

Figure 3: Illustrative electrolysis plant site masterplan

Buildings and External Equipment

2.3.8 If buildings are used for the electrolyser units, these would be a series of steel-framed and steel-clad structures of up to around 16 m height to the ridgeline. Each building would contain electrolyser modules with typically around 240 MWe capacity, partitioned internally for fire safety. Vent pipes for the oxygen from the electrolysis process may be required to be located on the roof or walls of the electrolyser buildings and would require around a 4m clearance of the roofline (and therefore may be up to 20m in maximum height). If electrolysis and gas treatment equipment is external to the buildings (including any vent pipes), it would be up to around 12 m in height.

2.3.9 Other ancillary buildings such as the workshop, stores, control room and gatehouse would be single storey structures that are lower in height than the electrolyser buildings, no more than 10 m and typically lower.

2.3.10 The high-pressure hydrogen export compressors would be housed in a sound attenuating structure with ventilation system. The compressors with enclosing structure for sound attenuation would have a footprint equivalent to a GIA of 3,600 m^2 and height of up to 20 m.

2.3.11 Other freestanding equipment within the electrolysis plant site would comprise hydrogen dryer and chiller systems, nitrogen generators and storage tanks, compressed air generators and storage tanks, potassium chloride storage tanks and firewater tanks, all with associated pipework. These would be located externally and typically around 5 m to 10 m in height.

Hydrogen Flare

2.3.12 An enclosed ground flare is the preferred solution to safely manage hydrogen both smaller quantities of low-pressure hydrogen on a routine basis and in the abnormal event where the high-pressure elements of the system need to be de-pressurised and the hydrogen inventory removed, such as National Gas requiring a pause in export of hydrogen to the National Transmission System. An enclosed ground flare is a relatively short but wide structure, up to 17 m in diameter and 30 m in height that unlike an elevated flare stack places the burners themselves close to ground level rather than at the top of an elevated flare stack; the enclosure is a circular heat- and windshield around the flame, largely or fully hiding it. This would be located to the north of the site.

Water Treatment and Cooling

2.3.13 Further water treatment and cooling plant is also required. A water treatment plant would filter and demineralise raw water supplied from the River Don to produce deionised water for use in the electrolysis. The water treatment plant would have a discharge water stream post-treatment that would be returned to the River Don. This is discussed further below. The treatment plant building(s) would be up to 10 m in height. The filtering stage may be located at the main electrolysis plant site or located at the intake. If located at the intake this would require structures up to 7 m in height and would require an area of around 0.6 ha.

2.3.14 A cooling water system is required to keep the electrolysis cells at a stable temperature for efficient operation and also to cool the hydrogen between various stages of compression for export to the gas grid. Cooling towers of up to 15 m in height are expected to be required, with a footprint equivalent to a GIA of 4,200 m^2.

Electrical Equipment

2.3.15 An external electrical switchyard would have high voltage transformers, busbars and associated switchgear to supply high voltage AC power from the underground cable grid connection to the electrolyser buildings. The switchyard would also contain further transformers to supply other power loads on and off the site including the compressors, cooling system and abstraction water pumps. The electrical switchgear may be either an air-insulated system (AIS, with equipment not enclosed in buildings) or may include gas-insulated switchgear (GIS) inside buildings, or a combination of both for different phases of the development. The maximum height of AIS equipment would be up to 12 m (although much of it is lower) with a footprint equivalent to a GIA of up to 43,125 m^2. The maximum height of GIS buildings would be up to 8 m with a GIA of up to 14,175 m^2.

2.3.16 Power distribution within the site would be by underground cabling, and an underground cable along the water pipeline route would also supply the abstraction pump. Adjacent to the electrolyser buildings, further smaller transformers and rectifiers would be used to step down the voltage and provide DC power to the electrolysis cells.

Access

2.3.17 Operational access to the electrolysis plant site would be via a security gatehouse and private road in the south of the site, from a new junction to be constructed on the unclassified road off the B977 near Leylodge. The B977 is a two-lane road providing ready access to the A96 via the B994 and B987.

2.3.18 During construction, a temporary access junction off the B977 closer to Kintore Substation would be used, which is discussed further within paragraph 2.4.2

2.3.19 Within the electrolysis plant site, internal circulation roads would be provided for staff and access during maintenance. Parking spaces for up to 40 staff and visitors would be provided within the site, which would be equipped for electric vehicle charging to at least the required level in Aberdeenshire Council development guidelines. Reduced parking spaces are intended to promote modal shift and Kintore Hydrogen proposes to provide a staff shuttle bus service during construction and operation as described in the Transport Assessment (Appendix 9.1 in the EIA Report). Priority bays for people with mobility impairments and secure and covered cycle storage for cycles would be provided, with changing facilities.

2.3.20 The location of the operational access is identified on Figure 1 and Figure 2. Further details of the operational access can be found within the Transport Assessment.

Drainage

2.3.21 There would be three aspects to the site drainage systems on site. Drainage systems would be implemented to deal with surface water runoff from both clean surface water and potentially contaminated drainage (from process areas) as well as foul drainage from sanitation. Surface water runoff would be managed to ensure no increase in the greenfield runoff rate during a 1 in 200-year rainfall event with a 37% uplift as allowance for climate change. The conceptual drainage strategy and design are set out in the Drainage Impact Assessment (DIA) contained within Appendix 13.3 of the EIA Report.

2.3.22 Runoff from impermeable areas in the north of the site would drain to Dewsford Burn. The discharge rate would be managed via attenuation ponds to maintain the greenfield rate. Runoff from the impermeable areas in the south of the site would either be managed with soakaways or attenuation to watercourse discharge depending on further investigation.

2.3.23 Foul drainage from staff facilities would be managed by an on-site packaged treatment plant, directed to the drainage attenuation system for discharge. To avoid the risk of potential contamination from firewater runoff, in the event of a fire, to Dewsford Burn or groundwater, the surface water attenuation ponds in the north of the site would be provided with a penstock valve enabling discharge to the burn to be halted; and the ponds would be sized to accommodate firewater in addition to the necessary clean surface water discharge attenuation capacity. Similarly, an interceptor pond with penstock valve would be provided before the soakaways/discharge to watercourse in the south of the site, enabling any firewater from this area to be contained.

2.3.24 A separate drainage system would be provided for all process and storage areas where there is potential for spills or leakage to cause contamination. Drainage from these areas would have isolation valves enabling it to be closed off should any spillage occur.

Landscaping and Habitat Creation

2.3.25 Landscaping and environment management would form part of the proposed works within and around the electrolysis plant and would include tree and hedgerow planting to aid in the screening of the proposed development.

2.3.26 This would be implemented in the initial phases of the proposed development to provide the maximum time for maturity of the landscaping. Existing trees and hedgerows would generally be retained, where removal is required, these would be replaced and enhanced.

2.3.27 Further details are also provided within the Design Principles Statement (incorporating Illustrative Landscape Masterplan) and Outline Biodiversity Enhancement & Management Plan (BEMP) appended as Appendix 8.18 of the EIA Report. The Outline BEMP identifies indicative biodiversity enhancement including planting and habitat creation measures that would be finalised during the submissions at the AMSC stage. The Illustrative Landscape Masterplan within the Design Principles Statement and further drawings contained within the Outline BEMP at page 2 identify how those measures could be applied to the electrolysis plant site. It is proposed that a Landscape Management Plan would be provided prior to construction in order to secure the implementation and management of the proposals during the construction and operation of the proposed development.

Security Fencing

2.3.28 The site would be fenced using perimeter security fencing and associated CCTV cameras. Details of this are to be confirmed at a later AMSC application stage.

Water Supply and Discharge Infrastructure

2.3.29 The water supply and discharge infrastructure will include the following infrastructure:

- intake and pumphouse located close to the River Don
- potentially, a water treatment plant for raw water (settling and filtration) located close to the River Don
- pipelines running to and from the electrolysis plant and associated water infrastructure at the electrolysis plant

2.3.30 As shown on Figure 1, the water pipelines would be routed from the River Don to the southeast of the electrolysis plant site. The intake and discharge point would be located on the south bank of the River Don. The buried pipelines would exit the riverbank below the normal river water level through a self-cleaning fish and debris screen with a concrete structure to support it. No weir impinging on the river is required but works will be required to the riverbed and bank to construct the pipes, screens and supporting structure. The elevation difference between the River Don and the electrolysis plant site is around 85 m, requiring a pumped supply but allowing gravity return.

2.3.31 From the intake point, the two intake pipelines would run to a buried pumphouse located outside the flood plain area (1 in 200-year flood extent). The pumphouse would be a vertical shaft belowground with a sump at the buried pipeline level, and pumps located in a building up to 7 m high at ground level.

2.3.32 Depending on further design work of the pump system and ongoing monitoring of sediment loads in the river, it is possible that an initial filtration and settling stage of water treatment at the abstraction end of the water pipelines would be required, to reduce the risk of sedimentation in the pipelines. If required, this would comprise structures of up to 7 m in height in an area of up to around 0.6 ha, including pumphouse.

2.3.33 The pipeline will cross the railway through a tunnel bored under the track. There is an existing access across the railway from the B977 (The Rushlach Road) close to this location via a box tunnel, but its constrained dimensions would not allow HGVs or larger construction plant to pass. In addition to

this access point, alternative temporary construction accesses and haul roads north and south of the railway to the east are therefore shown in the proposed development boundary, off the B979. Subject to agreement with Network Rail, these could utilise an existing user-worked farm level crossing. Again, subject to agreement, a crane could also possibly also be used to lift plant and equipment across the railway, although this is unlikely to be required.

2.3.34 The pumphouse and (if required) settlement plant would be located south of the railway. An indicative plan of the pumphouse and associated infrastructure is appended to the planning application (Plan Reference: Indicative Water Treatment Works Plan Ref SL_L_X_WG_2). Landscaping is also to be provided around the compound as noted within the Indicative Landscaping Plan contained within Figure 4.3 of Chapter 6 of the EIA.

2.3.35 As well as the farmland that makes up the majority of the land required for the routing, the pipelines would cross existing transport infrastructure and the gas pipeline infrastructure referred to elsewhere in this document. Crossings of watercourses, minor roads, the A96 and the railway may use trenchless techniques such as horizontal directional drilling (HDD) where required, as described above for the gas pipeline. Temporary access points, hedgerow removal, working compounds, pipeline laydown areas and drilling machinery compounds if HDD is employed are likely to be required along the pipeline route during construction.

2.3.36 The routing would also require the crossing of some identified Core Paths formed by sections of access tracks and minor roads close to the abstraction point. The routing largely avoids woodland is located adjacent to some areas of Ancient Woodland. Sensitive management of these receptors during construction is identified within the Outline CEMP.

2.3.37 The water pipelines will require trenches of approximately 6 m width with a depth of around 1.1-1.7 m which would then be backfilled and may require a working corridor of around 30 m during construction. The water supply pipelines would be laid parallel, with each pipeline being around 610 mm diameter. The return for water discharge will be via a similar single 610 mm diameter pipe laid in parallel with the supply. The water would be discharged to the River Don slightly downriver of the abstraction point.

Hydrogen Export Infrastructure

2.3.38 The hydrogen pipeline infrastructure includes the gas compression equipment located within the facility and pipelines connecting the facility with the National Transmission System (NTS) gas network. The hydrogen pipeline would share the initial routing of the water pipeline to a connection to the gas network located around 2 km to the east of the location of the electrolysis plant. This would involve crossing agricultural land and local road infrastructure and the construction of a small compound located at a site at South Womblehill.

2.3.39 Hydrogen export would be via up to two stainless steel pipelines each of up to 510 mm outer diameter (though only one will likely be needed), connecting the electrolysis plant site to the above-ground installation (AGI) where a blending point with the National Gas NTS would be located. The hydrogen pipelines would be primarily laid in trenches at around 1.5–2.0 m depth with soil cover of at least 1 m reinstated above the pipes and may require a working corridor of around 30 m during construction. At the connection point where the pipeline tees into gas transmission network, equipment above ground will be required contained within a fenced compound.

2.3.40 The compound of up to around 1.6 ha in size. Within this would be sections of pipeline above ground where the hydrogen is blended into the natural gas, to enable access for maintenance and inspection, together with monitoring equipment. The monitoring and maintenance equipment would require a small stores room and instrumentation kiosks. These would be single-storey structures or containers of up to around 7 m height. A buried power supply and fibre-optic cable for telemetry would be provided along the pipeline route back to the electrolysis plant control room. An indicate layout for the proposed compound (Indicative Gas Connection Compound Plan Ref SL_L_X_WG_1) at the gas blending location has been provided for illustration only and is appended to the Planning Application

2.3.41 Construction and operational access to this area is provided via the existing private road off the B977. This may require resurfacing, but no major road upgrades are likely to be required. Landscaping is also to be provided around the compound as noted within the Indicative Landscaping Plan contained within Figure 4.2 of Chapter 6 of the EIA.

Grid Connection Infrastructure

2.3.42 Electricity supply would be via underground cable from Kintore Substation. The underground cables would supply high voltage AC power from the substation. These would be routed from the west side of the substation to the electrolysis plant, a distance of up to around 300-400 m (depending on the exact connection point within the substation site and electrolysis plant site), avoiding residential properties. The cables would typically be buried in a trench or conduit at around 1–1.5 m depth with soil cover of around 1 m reinstated above the cables. Deeper trenchless techniques such as horizontal directional drilling (HDD) would be used where appropriate to avoid disturbance to existing structures or areas of retained trees.

Off Site Habitat Creation

2.3.43 A further area extending to approximately 7.3 ha is also included in the application site boundary located on the north side of the River Don. This area would be utilised for habitat creation and management. The goal of this is to provide high quality riparian habitat with wildflower grassland and lowland woodland, contributing to biodiversity net gain achieved by the proposed development.

2.3.44 Access to this area is also shown via the existing track from the public road. The initial proposals for this are set out in the Outline Biodiversity Enhancement and Management Plan (Outline BEMP) contained within Appendix 8.18 of the EIA.

2.4 Construction Phases and Temporary Works

2.4.1 Full details of the construction phases of the development are covered in EIA Report Chapter 2 - Project Description and Site Context. As noted elsewhere, it is the intention to develop the electrolyser plant site in at least two phases with the initial 500MWe phase being operational by 2029. Construction of this phase is likely to take around 36-48 months and includes the water and hydrogen pipeline infrastructure. The second phase would nominally be complete by 2032 but the precise timescales for delivery of further phases is subject to change.

2.4.2 Details of the components likely to be required for this initial phase are further set out in Chapter 2 Project Description of the EIA Report within Section 2.9 of the Chapter. During the construction phases of the electrolysis plant a direct construction access from the B977 will be utilised and construction compounds will be required to the electrolysis plant site for the duration of any construction works. The access road Bellmouth would be retained (closed to traffic) in case it is needed to bring a large load in as part of site maintenance, but the route of the construction access would be removed following the end of the construction period. Although final details of the Bellmouth accesses are to be provided at a later stage, plans showing the access are included within

Annexe A: Proposed Site Access Drawings of the Transport Assessment which is contained within Appendix 9.1 of the EIA Report.

2.4.3 Both the water and gas pipelines would be laid in trenches as noted above. Both pipelines may require a working width of up to 30 m during construction to allow for machinery access and topsoil storage along haul roads. Other trenchless techniques such as horizontal directional drilling (HDD) may be utilised to cross infrastructure. In the event of pipelines being laid in the road the pipelines would be lain in a trench in the road and backfilled with the road being suitably resurfaced.

2.4.4 Construction access requirements to the pipelines will be either via the minor public road network and farm tracks or via temporary haul roads established off these accesses (or a mix of the above) as noted in this Statement. Temporary haul roads will be reinstated post completion of the respective works. Construction accesses for the compound at the gas injection point and for the pumping station would are as noted in the previous paragraphs.

2.4.5 To limit construction impacts it is proposed to limit working hours to between 8am to 6pm Monday to Saturday with no working on Sundays or holidays other than for work undertaken in buildings and for specific plant deliveries that may be require outside of main working hours (such as abnormal load movements). Should there be any construction activities that, for technical or safety reasons, require working outside these main working hours, any extended hours would be agreed in advance with the LPA as noted in the Outline CEMP (Section 3). Due to the number of people on site during construction (around 857FTE and 1432 FTE at peak) further measures to minimise travel impacts of both workers and construction vehicles are proposed via a variety of measures to be contained within a Construction Worker Travel Plan and Construction Traffic Management Plan. Outline measures for construction traffic management are set out in the Outline Construction Traffic Management Plan in EIA Report Appendix 9.1.

2.4.6 Details of the construction related traffic associated with the development are set out in Chapter 9 - Transport and Access of the EIA Report. General construction effects are considered within each relevant chapter of the EIA.

2.5 Operational Phases

2.5.1 During operation, the proposed development will need to be capable of 24-hour operation although hydrogen production is anticipated to only occur around 30% to 40% of the time over the course of a year in order to correspond to renewable energy generation peaks. During operation, the proposed development would produce only emissions of oxides of nitrogen to air, noise emissions, and clean water discharge. These are fully assessed in the EIA and noted within Section 6 of this statement.

2.5.2 The main electrolysis site would be staffed in a shift pattern with employees holding a variety of skillsets for operating the control room, undertaking maintenance and providing site security and administration. An operational workforce of typically 30-50 full-time equivalent (FTE) staff in total, across two or three shifts, is expected for the initial 500 MWe phase of development. For the full 3GWe development this is expected to rise to 200 FTE staff.

2.5.3 The above-ground installation for the gas network connection and the water abstraction pumping station (discussed below) would not typically be staffed but would require occasional access for inspection and maintenance, which would be undertaken by staff based at the main electrolysis plant site.

2.6 Decommissioning

2.6.1 The proposed development is intended to be permanent however should the facility no longer be required the facility could be decommissioned with all above ground structures removed from the site and recoverable materials and equipment re used or recycled.

3. REGULATORY FRAMEWORK AND APPROACH TO THE APPLICATION

3.1 General

3.1.1 Although the regulatory regime for hydrogen infrastructure in Scotland, the UK, and the EU is still emerging and evolving, at the present time the proposed development falls to be considered under Section 32 of the Town and Country Planning (Scotland) Act 1997 (as amended) and as such the primary consent required for the proposed development is by way of an application for planning permission under that Act.

3.1.2 The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations) set out the requirements for applications made under the Town and Country Planning (Scotland) Act 1997 (as amended) in terms of EIA. Although the development falls under Schedule 2 to of those regulations the applicant has chosen to undertake a voluntary EIA as further discussed in Section 3.2 and 3.3 of this Statement and an EIA Report accompanies the application.

3.1.3 The applicant has chosen to submit an application for Planning Permission in Principle (PPiP) that would, if granted provide a framework for the further design work required for the various phases of the development. The assessments undertaken have been based on design parameters for the development area that create a 'Rochdale envelope' as the proposals are not as yet at a stage to be finalised.

3.1.4 As the proposed development is to be considered under the TCPSA, the proposed development will fall within one of the categories of development described by The Town and Country Planning (Hierarchy of Development) (Scotland) Regulations 2009, This includes classification of applications into National, Major and Local Development categories.

3.1.5 National developments are established by the National Planning Framework 4 whilst major developments are based on criteria set out in regulation[11]. Kintore Hydrogen is not specifically identified as a National Development by National Planning Framework 4 (NPF 4). Kintore Hydrogen is categorised as a Major Development as the proposed development exceeds the thresholds required to identify it as Major Development. This is further explained in Section 4 of this Statement. Aberdeenshire Council have confirmed the view that the proposed development is a Major Development through the pre application discussion.

3.1.6 In addition to the above, Aberdeenshire Council's governance arrangements for planning applications contained within the Council's Scheme of Governance - Part 2 Planning Delegations[12] relating to planning applications indicates that different types of applications will require different governance arrangements. It is the applicant's view that the proposed development is of Regional Significance (criteria C.2.1 of the Scheme) due to the potential benefits of the scheme as discussed further in this Statement.

3.1.7 In addition to the requirements of the TCPSA for planning permission to be obtained, other consents and permits may be required for the development. The applicant has already been granted a Controlled Activities Regulations (CAR) authorisation by SEPA for the water abstraction. The granting

[11] https://www.legislation.gov.uk/The Town and Country Planning (Hierarchy of Development) (Scotland) Regulations 2009
[12] https://www.aberdeenshire.gov.uk/Aberdeenshire Council Scheme of Governance - List of Planning Delegations

of this licence is relevant to the principle of development as sufficient water abstraction has been permitted to allow for the maximum 3GWe of hydrogen production.

3.1.8 Other consents, permits and licences will generally be sought following the grant of PPiP once further design definition is available. Those consents will include but are not limited to any requirements under The Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015, the Control of Major Accident Hazards Regulations 2015 (COMAH regulations), Pollution Prevention and Control (Scotland) Regulations 2012 (the permitting regulations), Building Regulations and any works under the relevant Roads Acts. Other environmental permitting and licensing for may also be required in relation to protected species or surface and foul water discharge.

3.2 The Applicant's Approach

3.2.1 The applicant is seeking to obtain planning permission in principle (PPiP) that will allow for the phased implementation of the development. Further 'Approval of Matters Specified in Conditions' (AMSC) applications would be sought to discharge the details required for the phases of development.

3.2.2 In order to support the application, the applicant has provided the stipulated drawings required to identify the site of the development. In addition, the applicant has provided a number of further supporting drawings intended to assist the consideration of the application on illustrative basis only.

3.2.3 In order to provide a basis for assessment of the application, both from an EIA and Town and Country Planning perspective, the applicant has provided 'Maximum Design Envelope Parameters' which reflect both the potential maximum extent and operational parameters for the various elements of the development. The Maximum Design Envelope Parameters for the various components required for the development are contained within EIA Chapter 2: Project Description Tables 2.1-2.3 and are summarised in Section 2 of this report.

3.2.4 In respect of the electrolysis plant area these parameters should be read in conjunction with Figure 2: Planning Parameters Plan. The Planning Parameters Plan is a spatial plan showing the broad areas identified for the plant and equipment within the electrolysis plant site. The Planning Parameters Plan has been provided to ensure that the relative impacts of the development can meaningfully assessed within the EIA. The Plan would also provide a mechanism for the LPA to control the parameters of the layout and design of the development based on the spatial and design parameters set out in the Maximum Design Envelope Parameters and Planning Parameters Plan.

3.2.5 As set out in Section 1.3 the applicant has also provided further outline documentation to support the consideration of the application and help define the parameters for the detailed design of future phases of the development. These include:

- Outline Construction Environmental Management Plan
- Design Principles Statement incorporating Illustrative Landscape Masterplan and management principles for landscape planting
- Lighting Principles Statement
- Indicative Biodiversity Net Gain Feasibility Assessment
- Outline Biodiversity Enhancement & Management Plan

3.2.6 This approach to allowing assessment at a PPiP stage is well established with the use of the 'Rochdale Envelope[13] or 'Design Envelope' approach being applied to numerous projects within Aberdeenshire and at a within the last few years. The approach allows for a robust assessment of an application whilst allowing for flexibility with the final implementation of the project subject to the

[13] https://www.gov.uk Guidance - Nationally Significant Infrastructure Projects - Advice Note Nine: Rochdale Envelope, July 2016

Planning Authority's further approval. This 'staged' approach also allows for further consultation with stakeholders during the refinement of a development prior to the submission of those details.

3.2.7 Given the scale of the project and the evolving nature of electrolysis technology the applicant considers that establishing the principle of development in the first instance will provide confidence in developing the project phases subject to the approval of further detailed matters. Although it is envisaged that the first phase of development will include an electrolysis plant capable of around 500Mwe of hydrogen production (as set out in Section 3 of this Statement) along with the associated water and hydrogen pipelines, this may change and the exact capacity of future phases of electrolysis production may vary, within the control of the overall Design Envelope Parameters and Planning Parameters Plan.

3.2.8 The applicant wishes to seek sufficient allowance within any PPiP that is granted to allow for the phasing of the development. This would include allowing for an extended period of time beyond those set out in the TCPSA[14] in order to submit details of future phases of the development flexibly. The applicant has requested a period of 10 years due to the scale and complexity of the project which may be delivered over multiple phases. Given the advice provided by Planning Circular 3: Development Management Procedures that states *'Planning authorities should consider carefully the nature and phasing of the proposed development and issues such as the prevailing economic climate and reach a view on whether the default duration time limits are appropriate in the circumstances of the case or whether they should specify an alternative period'.* This period is considered reasonable and would allow for certainty around project delivery should there be any unforeseen delays associated with future phases of the development.

3.2.9 The applicant requests that planning conditions are drafted in order to provide the necessary flexibility to deliver the development on a phased basis whilst allowing the Planning Authority to retain sufficient control of the development. This includes ensuring that the associated design detail and mitigation measures that are required to minimise any adverse effects resultant from the development and/or to ensure compliance with the relevant policies set out in the Development Plan can also be submitted on a phased basis.

3.2.10 As set out in the Planning Circular 4/1998: The Use of Conditions in Planning Permissions, seeking to control matters subject to other controls set out within planning legislation or other separate legislation are normally not necessary. The applicant notes that other necessary consents and permits would be required in order to construct and subsequently operate the proposed development with consent already being obtained for the water abstraction as noted in paragraph 2.1.7 of this Planning Statement. Those consents and permits as noted in paragraph 3.1.8 would provide regulatory controls in respect of those aspects of the proposed development.

3.2.11 The applicant is seeking a permanent permission for the proposed development; it is not intended to be temporary in nature or operation. Should the proposed development no longer be required it could be decommissioned with all above ground structures removed from the site and recoverable materials and equipment re used or recycled. Should it be considered necessary it is expected that the Planning Authority could utilise a condition to ensure that the proposed development is appropriately decommissioned in the event it reaches the end of its operational life and is no longer required.

3.2.12 Although the effects of the proposed development are assessed within the EIA and Section 6 of this Statement, it is important to note that the proposed development is being promoted on the basis that the two residential properties located at Dewsford that lie in between the new 400kV Kintore Substation and the site proposed for the electrolysis plant, would not be occupied during the operational phase of the proposed Development. The applicant has recognised early in the design process that the specific location of those two dwellings would likely lead to future concerns regarding the level of residential amenity experienced at those properties in the event they were to

[14] https://www.legislation.gov.uk/ Section 59 of the Town and Country Planning (Scotland) Act 1997 (as amended)

remain in residential use once Kintore Hydrogen became operational. The applicant is in advanced negotiations with the owners of those two properties to ensure the relocation of the residents and the cessation of the residential use of the properties before operation of the plant. This would allow the applicant to control the subsequent use of those properties.

3.2.13 The cessation of residential use at those properties has therefore been considered as part of the designed-in mitigation for the project. Given it is considered to be a precursor to the reasonable operation of the proposed development, this approach is reflected within the EIA assessment with residual operational effects on these two properties being assessed on the basis that they are not occupied during operation. The applicant is not proposing to undertake the development without securing the ownership of these properties and considers the matter can be adequately controlled through the use of a planning condition.

3.2.14 By using a negative suspensive condition (or Grampian Condition[15]) the Local Planning Authority (LPA) could adequately ensure that the proposed development did not proceed until such time as the LPA were satisfied that the applicant could secure the relevant rights to ensure the cessation of residential use of the properties prior to and during the operational phase of the development. It is considered that such a condition, subject to the final wording, would meet the tests for a condition set out in Circular 4/1998: Use of conditions in planning permissions.

3.2.15 The applicant recognises the proposed development would result in the effective loss of two residential properties and further discussion on that matter is addressed within Section 5 and 7 of this Statement. It should be noted that consenting authorities including Aberdeenshire Council have previously utilised conditions to control the occupation of residential properties during the operational lifetime of a development. The use of such conditions includes instances where those developments could not otherwise reasonably operate without restrictions on other uses of land being in place and where a wider public benefit would be achieved by allowing development to proceed. Examples of the use of such conditions include wind energy developments within Aberdeenshire[16].

3.3 Pre-Application Engagement

3.3.1 The applicant has undertaken both statutory and non-statutory engagement with a variety of stakeholders in order to ensure a robust development processes in preparation for the submission of the application.

3.3.2 The Town and Country (Development Management Procedure) (Scotland) Regulation 2013 require applicants to undertake additional procedure where a development is classified as a Major Development including the requirement to submit a Proposal of Application Notice (PoAN), undertake community engagement/pre application consultation (PAC) with the local community and submit a report on consultation or Pre-Application Consultation Report (PAC Report).

3.3.3 A Proposal of Application Notice (PoAN) was submitted to Aberdeenshire Council for the proposed development on the 20 March 2024 and is appended to the PAC Report. Taking account of comments made by the Planning Authority the applicant undertook two public consultation events

[15] https://www.gov.scot Planning Circular 4/1998: the use of conditions in planning permissions clarifies that a planning authority may impose conditions regulating the developer or use of land out with a site boundary. Although it would be ultra vires to impose a positively worded condition on such land to require works which the developer has no powers to carry out, or which would need the consent or authorisation of a third party, it may be possible to achieve a similar result by a condition worded in a negative form, prohibiting development until a specified action has been taken. Such negative 'suspensive' conditions are routinely described as Grampian Conditions.

[16] https://upa.aberdeenshire.gov.uk/online applications - Condition 12 of APP/2011/1024 restricted the occupancy of two dwellings located close to a proposed Wind Farm.

at Kintore in line with the regulations and the guidance contained within Planning Advice Note 3/2022: 'Community Engagement'.

3.3.4 As part of this engagement, and in addition to required notifications under the regulations, the applicant has carried out an extensive notification exercise that include issuing letters to 3,796 residential properties and 199 business addresses within the vicinity of the Proposed Development. Pre-application consultation events were held on 24 April 2024 and 19 June 2024. Further to these events, the applicant had undertaken to meet with the community council and residents closest to the development and has provided a dedicated project website for those interested in the development. Further engagement has been undertaken with consultees to the application process, elected members and the Council's Planning Service.

3.3.5 The applicant's PAC Report summarises the consultation undertaken, and the feedback received. Copies of the PAN and PAC Report are provided with this application. The application has been submitted after the 12-week period set out in the Regulations[17].

3.3.6 As set out in the PAC Report, the applicant has taken cognisance of the feedback received and has responded to the main points raised within the consultation within Section 6 of the PAC Report. The applicant has also made amends as a result of the feedback received during the engagement process. In summary these amendments and additional measures include but are not limited to:

- Moving the operational access approx. 300m to the east of the previously shown location to address local safety concerns
- Implementing measures to reduce construction and operational traffic
- Committing to early advance planting of landscaping in the southern part of the site for the electrolysis plant in order to reduce impacts on amenity of local residential properties
- Providing a 'Lighting Principles Statement' that identifies how lighting will be implemented on site and the associated mitigation measures
- Further mitigation which will be proposed through the later detailed design stages

3.3.7 The applicant has undertaken further consultation on the approach to the application set out in Section 3.2 of the Planning Statement as part of the EIA Scoping process and the broader pre application process with Aberdeenshire Council's Planning Service.

3.4 Environmental Impact Assessment

3.4.1 The proposed development falls within Schedule 2, Section 10(a) of the EIA Regulations and as such an EIA is only required if the proposed development is likely to have significant effects on the environment by virtue of factors such as its nature, size, or location. Given the large scale of the project, the applicant has voluntarily undertaken to assess the proposed development under the EIA Regulations.

3.4.2 In order to inform the EIA, a Scoping Opinion was sought from Aberdeenshire Council on the 20 September 2023 with a response issued on the 1 November 2023. This response indicated general agreement with the proposed scope of the EIA subject to some amendments to the detailed assessments criteria and subsequent amendments. The EIA Scoping and Consultation is presented in Chapter 5 of the EIA Report.

3.4.3 The EIA has been undertaken in accordance with the Scoping Opinion and the amendments noted above. The EIA Report contains the following volumes:

Volume 1: Non-Technical Summary.
Volume 2: EIAR environmental topic chapters.
Volume 3: Technical appendices and additional figures.

[17] https://legislation.gov.uk Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

3.4.4 While EIA outcomes are not necessarily a demonstration of policy compliance, they inform decisions about the significance of effects that help inform the assessment of acceptability of the proposed development against the relevant Development Plan policies. It is common for developments significant enough to warrant assessment under the Regulations to lead to some significant residual effect in EIA terms.

3.4.5 It is important to note that the identification of significant residual effects in EIA terms does not necessarily mean a development is unacceptable or in conflict with the associated Development Plan policies, but that such matters form part of the planning balance. Notwithstanding where adverse environmental effects assessed within the EIA are identified, the EIA presents mitigation to reduce these effects wherever possible. A schedule of mitigation is provided within EIA Report Chapter 18. A summary of the environmental effects resultant from the project are noted in Section 5 and discussed in the context of the Development Plan within Section 6 of this Planning Statement.

4.0 THE DEVELOPMENT PLAN

4.1 Content of the Development Plan

4.1.1 As detailed in Section 1 of this statement; in determining planning applications under the Act, decisions should be made in accordance with the Development Plan unless material considerations indicate otherwise.

4.1.2 The statutory development plan covering the site of the proposed development comprises the following:-

- National Planning Framework 4 (NPF 4); and
- The Aberdeenshire Local Development Plan 2023 (ALDP 2023).

4.1.3 The Aberdeenshire Local Development Plan predates the publication of NPF 4 and is based on NPF 3 rather than NPF 4 and therefore in the event of any difference in policy approach between the policies contained within either document, the policies contained within NPF 4 take precedence over those within the ALDP 2023.

4.2 National Planning Framework 4

4.2.1 The National Planning Framework 4 (NPF 4)[18] was adopted in February 2023. It sets out the spatial principles, regional priorities, national developments, and national planning policy for the whole of Scotland. It marks a step change in national planning policy. Unlike preceding frameworks and the now defunct Scottish Planning Policy, NPF 4 contains both National Planning Polices and a Spatial Framework and forms an integral part of the statutory Development Plan. Further reforms to Local Development Plan making, form and content have now been introduced and future Local Development Plans will have a greater spatial focus and are not envisaged to reiterate or reinterpret national policy as set out in NPF 4

Part 1 Spatial Strategy

4.2.2 Part 1 of NPF 4 focuses on the National Spatial Strategy for Scotland. Six overarching spatial principles are identified and are intended to play a key role in delivering the framework:

Just transition. We will empower people to shape their places and ensure the transition to net zero is fair and inclusive.

Conserving and recycling assets. We will make productive use of existing buildings, places, infrastructure, and services, locking in carbon, minimising waste, and building a circular economy.

Local living. We will support local liveability and improve community health and wellbeing by ensuring people can easily access services, greenspace, learning, work, and leisure locally.

Compact urban growth. We will limit urban expansion so we can optimise the use of land to provide services and resources, including carbon storage, flood risk management, blue and green infrastructure, and biodiversity.

Rebalanced development. We will target development to create opportunities for communities and investment in areas of past decline and manage development sustainably in areas of high demand.

Rural revitalisation. We will encourage sustainable development in rural areas, recognising the need to grow and support urban and rural communities together.

[18] https://www.gov.scot/national-planning-framework-4

4.2.3 The national spatial strategy is intended to support the planning and delivery of **sustainable places**, focusing on reduced emissions and restoration and connectivity of biodiversity; **liveable places**, focused on; and **productive places**, where we have a greener, fairer, and more inclusive wellbeing economy.

4.2.4 NPF 4 sets out National Developments, of which there are 18 across Scotland. These are defined both nationally and regionally. The Northeast of Scotland is identified as one of these regions and regional spatial strategies are identified for each region.

4.2.5 In the Northeast Region the priorities are ensuring that the region plays a critical part in achieving net zero. The relevant priorities include the regional and local planning of infrastructure and investment to support the transition from oil and gas to net zero whilst protecting and enhancing blue and green infrastructure and decarbonising connectivity and supporting continued economic diversification and innovation.

The following national developments are also identified within the region:

- Pumped Hydro Storage
- Strategic Renewable Electricity Generation and Transmission Infrastructure
- Circular Economy Material Management Facilities
- Urban Mass/Rapid Transit Networks
- National Walking, Cycling and Wheeling Network
- Digital Fibre Network
- Aberdeen Harbour
- Industrial Green Transition Zones

4.2.6 Further detail about the priorities for the area are contained in Annex C of NPF 4. Further details of the National Developments are contained in Annex B of NPF 4. Although not specifically designated as a National Development within NPF 4 as noted above, hydrogen development is referenced in the document and shown in the mapping. Page 29 notes the Industrial Green Transition Zone at St Fergus noting the corridor between St Fergus and Grangemouth, which represents the transmission gas network, is specifically illustrated.

4.2.7 **Annexe C** notes that action is required to tackle industrial emissions and transition towards a greener future that benefits existing communities and attracts further investment. It states that '*Greener energy choices, including hydrogen and on and offshore renewables, have a natural home here and will be at the heart of the area's future wellbeing economy*' and that '*significant infrastructure will be required to deliver a hydrogen network for Scotland, including repurposing of existing facilities and the creation of new capacity*'.

4.2.8 NPF 4 also states that '*as offshore renewables are an important part of Scotland's energy transition, there will be a need to align terrestrial and marine development so as to maximise the potential of this sector'*.

4.2.9 **Annexe B** includes further details on National Development and includes a description of Industrial Green Transition Zones and the locations. The annexe states that locations are focused on projects that form a Scottish Cluster in the first instance specifically Peterhead, St Fergus, and Grangemouth. It states that further industrial transition sites are expected to emerge in the longer term and benefit from the experience gained within the Scottish Cluster but do not form part of this national development.

4.2.10 The Annexe describes the designation as including development contributing to 'Industrial Green Transition Zones' in the locations described, within one or more of the Classes of Development described below and that would otherwise have been of a scale or type that is classified as 'major'

by 'The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009' is designated a national development. This includes the following types of developments:

- Pipeline for transportation and storage of captured carbon and/or hydrogen
- Onshore infrastructure including compression equipment, supporting pipeline transportation and shipping transportation of captured carbon and/or hydrogen
- New and/or upgraded buildings and facilities for the utilisation of captured carbon
- Infrastructure for the production of hydrogen on shore or offshore where co-located with offshore wind farms within 0-12 nautical miles
- Infrastructure for the storage of hydrogen on shore or offshore, including on or near-shore geological storage
- Port facilities for the transport and handling of hydrogen and carbon dioxide
- Production, storage and transportation with appropriate emissions abatement of bioenergy; hydrogen production related chemicals including ammonia

4.2.11 As can be concluded from the above, the proposed development is not directly located in the Peterhead, St Fergus or Grangemouth transition zones but is located along the route of the pipelines transporting oil and gas between those facilities, as well as being located adjacent to a key part of the electrical transmission network. As such whilst the development is not in itself a National Development, as it is not located at any of these locations identified within NPF 4, it is closely associated with the energy network that is fundamental to the green transition.

National Planning Framework 4 (Feb 2023) – Part 2 Policies

4.2.12 NPF 4 ties the delivery of sustainable places, liveable places and productive places with the UN Strategic Development Goals, the National Outcomes, the Spatial Principles, and the relevant National Policies. Part 2 consists of a set of policy statements consisting of requirements for Local Development Plans and National Development Policies. The latter are practical development management policies that are used to consider development proposals as an integral part of the Development Plan when making decisions on planning applications.

4.2.13 The proposed development is most closely associated with the policy objectives relating to Sustainable Development and Productive Places and specifically in relation to the principle of development **Policy 11: Energy**.

Relevant policies under Part 2 of NPF 4 are summarised below focussing on the relevant policies that could relate to hydrogen production and the associated infrastructure required for the development.

Policy 1: Sustainable Places gives significant weight to the global climate and nature crisis when considering all developments.

Policy 2: Climate Mitigation and Adaptation seeks to ensure proposals are sited and designed to mitigate lifecycle greenhouse gas emissions and be adaptable to current and future risks from climate change.

Policy 3: Biodiversity seeks to ensure that all development proposals are nature positive and conserve, restore and enhance biodiversity. There is particular emphasis on national and major developments in ensuring these objectives are met.

Policy 4: Natural Places seeks to protect the natural environment and designated sites both at a European, national, and local level in addition to seeking to address species protected by legislation from harm potentially caused by development.

Policy 5: Soils sets out to ensure that impact on soils as a result of development is minimised including the use of prime agricultural land, peatland, and carbon rich soils**.**

Policy 6: Forestry Woodland and Trees seeks to protect existing woodland, particularly higher value native and semi native woodland from development unless there are significant and well-defined public benefits and compensatory planting can be provided.

Policy 7: Historic Assets and Places takes a similar approach to Policy 4 in ensuring protection of historic and cultural heritage assets including gardens and design landscapes, listed buildings, archaeological remains and battlefields, ancient monuments, and conservation areas.

Policy 11: Energy is the primary policy dealing with renewable energy, low carbon and zero emissions sources. Developments are supported in principle. This includes proposals associated with negative emissions technologies and carbon capture; and proposals including co-location of these technologies. Development proposals will only be supported where they maximise net economic impacts, including local and community socio-economic benefits such as employment, associated business, and supply chain opportunities. The policies notes that proposals should be designed, and mitigation provided to prevent adverse impacts on thirteen separate grouped sensitives including communities and dwellings, landscape, public access, transport interests, telecoms, hydrology, biodiversity and ecology, woodland, and the historic environment. Significant weight is given to the contribution of proposals to renewable energy generation and on greenhouse gas emissions**.** The policy would cover green hydrogen production.

Policy 14: Design, Quality and Place sets out the need for development proposals to be well designed and take into account the six qualities of successful places.

Policy 19: Heating and Cooling seeks to encourage, promote, and facilitate development that supports decarbonised solutions to heat and cooling demand. It states that proposals for energy infrastructure will be supported where they repurpose former fossil fuel infrastructure for the production or handling of low carbon energy.

Policy 20: Blue and Green Infrastructure seeks to ensure the provision, protection, and enhancement of blue and green corridors. It considered that development proposals that result in fragmentation or net loss of existing blue and green infrastructure will only be supported where it can be demonstrated that the proposal would not result in or exacerbate a deficit in blue or green infrastructure provision, and the overall integrity of the network will be maintained.

Policy 22: Flood Risk and Water Management seeks to ensure development is appropriately limited in areas of flood risk and that where development is considered acceptable in principle it does not contribute to a risk to occupiers or increase flood risk elsewhere. Flood prone areas are limited to developments that cannot be located elsewhere and which do not contribute to increased risk to users and occupiers or result in increased flood risk elsewhere. The policy also requires development proposals to adequately address the issue of surface water management and minimise areas of impermeable surface.

Policy 23: Health and Safety covers the consideration of development which is likely to present a risk to human health and amenity though emissions such as noise. Development that introduces hazardous materials such as chemicals or major accident hazards must consider likely potential impacts on surrounding populations and the environment.

Policy 25: Community Wealth Building promotes the developments which contribute to community wealth building, and this includes the proportion of local supply chains. It is noted the policy should be aligned with any strategy for community wealth building.

Policy 26: Business and Industry the proposal is relevant to industrial development and policy seeks to direct development to allocated sites unless it can be demonstrated that there are no suitable sites allocated in the LDP that are available and that the nature and scale of the development is compatible with the surrounding area. Development proposals must take account of the impacts on surrounding residential amenity, sensitive uses, and the natural and historic environment.

Policy 29: Rural development encourages rural development subject to several caveats. The proposed development is located within a rural area however the policy is geared to dealing with rural development proposals such as smaller scale employment and residential development more typical of rural areas.

4.3 Local Development Plan

4.3.1 Aberdeenshire is currently covered by the Aberdeenshire Local Development Plan 2023 (ALDP)[19] which was adopted in January 2023. The ALDP sets out spatial and text-based policies for development across Aberdeenshire. Due to the timing of the ALDP there is some difference between the wording and structure of the policies contained within NPF4 and the ALDP. Any material differences are discussed in Section 3 of this report. Where there is a material difference in the policies, NPF 4 will take priority in decision making.

4.3.2 The ALDP 2023 is divided into several parts; the first part of the plan contains the strategic vision and the purpose of the plan and contains the spatial strategy. Detailed polices are contained within the second part of the plan. Further detail is captured in various appendices. The key policies are outlined below and then assessed against the scheme in Section 3 of this report.

Vision, Purpose, and Spatial Strategy

4.3.3 The vision and purpose of the plan take on the outcomes from the previous National Planning Framework 3 and Scottish Planning Policy. These include Outcomes 1 and 2 which relate to 'a successful, sustainable place' and a 'low carbon place'. With respect to renewable energy development these outcomes are translated into the policies within the plan. Regarding the Spatial Strategy set out in the plan the site of the facility is located on the edge on the edge of the Strategic Growth Corridor identified between Huntly and Blackburn. As the site is on the fringes of this area it would be considered as an Accessible Rural Area under the terminology used in the plan. Growth within the spatial strategy is focused on the Strategic Growth Corridors although the plan is focused on planned development within these areas focused on key settlements.

Development Management Policies

4.3.4 A full list of development management policies is contained within the ALDP 2023, a summary is provided below. Hydrogen development is not specifically referenced within the development plan policies other than with reference to the inclusion of alternative fuel vehicles including hydrogen refuelling as part of the general sustainable development principles for development covered within **Policy C1: Using Resources in Buildings**. That policy is not considered relevant to the Proposed Development.

4.3.5 The principle relevant policy would be **Policy C2: Renewable Energy**. Policy C2 supports renewable energy developments which are appropriately sited and designed and where impacts resulting from those developments have been assessed and are considered. Paragraph C2.8 'Other renewable energy developments' are required to relate well to the source of the renewable energy required for operation and satisfactory steps must be taken to mitigate any negative impacts on occupiers of affected properties. The policy requires appropriate mechanisms to be put in place for remediation of sites at the end of their lifetime.

4.3.6 Policy C2 is supported by the map on page 86 of the ALDP. The plan identifies Kintore as a national development site for NRIP, Carbon capture & HV Transmission infrastructure. The description is generic however the plan is referring to the Kintore Grid Substation and associated infrastructure that are essential to allow for the development of a hydrogen plant at this location and that were identified through National Planning Framework 3 that has now been superseded.

[19] https://aberdeenshire.gov.uk/planning/plans-and-policies Aberdeenshire Local Development Plan 2023 - Aberdeenshire Council

Policy R2: Development Proposals Elsewhere in the Countryside sets out the principles for development within the Countryside outwith allocated sites and defined settlements. It does not specifically consider the nature of the development proposed.

Policy B2: Employment/Business Land directs employment development including Class 5 uses (which would include the facility) to employment sites identified in the plan. Given the strategic nature of the development this will be discussed further in Section 6 of the Planning Statement.

Policy P1: Layout Siting and Design sets out generally principles for design. Whilst the policy focuses on residential development the six qualities of successful places are relevant to all development proposals. Notably the policy requires proportionate enhancement of biodiversity with a strong preference for such enhancement to be located on site. The policy also requires a Site Waste Management Plan to be submitted as part of any development proposal.

Policy P4: Hazardous and Potentially Polluting Developments and Contaminated Land provides the context for assessing developments that could cause significant nuisance or risks to the public. The policy also covers the installation of pipelines. The policy requires that proposals demonstrate that they can be considered acceptable by appropriate authorities and that residual negative impacts are mitigated.

Policy E1: Natural Heritage sets out standardised policy covering the protection of European, National, Regional and Local Nature Conservation Sites including Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar sites and SSSI's. The policy also covers protected species. Proposals should not have an adverse effect the integrity of these sites unless specific tests are met (consistent with the Habitat Regulations). The policy also covers Local Nature Conservation Sites and woodland and confirms proposals impacting on these sites must have a public benefit outweighing the impacts on the interest. Woodland should be accommodated on site wherever possible. The policy also covers impacts on wider biodiversity and geodiversity.

Policy E2: Landscape is a negatively worded policy seeking to protect key characteristics and landscape features from negative impacts from development. Special protection is given to Special Landscape Areas.

Policy E3: Forestry and Woodland seeks to protect and enhance non-commercial trees and woodland. Commercial woodland removal would be considered under the Scottish Governments policy on Control of Woodland Removal.

Policy HE1: Protecting Listed Buildings, Scheduled Monuments and Archaeological Sites seeks to prevent adverse impacts on the character, setting and integrity of listed buildings, scheduled monuments, or other archaeological sites.

Policy PR1: Protecting Important Resources seeks to protect environmental resources and requires consideration of the impacts of a development on Air Quality, the Water Environment, Prime Agricultural Land, Open Space, Trees and Woodland, Minerals and Peat and Carbon Soils.

Policy PR2: Reserving and Protecting Important Development Sites provides protection for strategic development sites identified through the plan and the former NPF 3.

Policy C3: Carbon Sinks and Stores seeks to ensure development does not affect peatland or carbon rich soils.

Policy C4: Flooding notes that assessments will be required where development is proposed in areas of flood risk and development should not present a risk to occupiers of the proposed development nor increase flood risk elsewhere.

Policy RD1: Providing Suitable Services sets out expectations and requirements for the servicing of sites, this includes provision of suitable road access and appropriate water management proposals including sustainable drainage systems.

Policy RD2: Developer Obligations sets out relative requirements for contributions generally sought as part of mitigating the impacts of development on infrastructure.

Summary of Development Plan Policies

4.3.7 There is significant overlap between the policies of the NPF 4 and the ALDP 2023. The table below has been provided to assist in the understanding of the relevant policies within both parts of the development plan and the corresponding EIA assessment.

Table 1 :

Topic	Relevant NPF 4 Policies	Relevent ALDP Policies	EIA Chapters
Principle of Development	11: Energy 1: Tackling the climate and nature crises 2: Climate mitigation and adaptation Annexe B -National Development 15	C2: Renewable Energy R1: Rural Development B2: Employment/Business Land	2: Project Description 3: Consideration of Alternatives 12: Climate Change
Just Transition and Local Economic Impact	11: Energy part c) 25: Community Wealth Building 18: Infrastructure First	C2: Renewable Energy RD2: Developer Obligations	15: Socio-Economics
Amenity and Health	11: Energy part e i) 23: Health and Safety	C2: Renewable Energy P1: Layout Siting and Design P4: Hazardous and Potentially Polluting Developments and Contaminated Land	10: Noise and Vibration 11: Air Quality 14: Population and Health
Landscape and Visual Impacts	11: Energy (part e) ii)	4: Natural Places E2: Landscape	6: Landscape and Visal Impact Assessment (LVIA)
Public Access	11: Energy (part e) iii) 13: Sustainable Travel 20: Green and Blue Infrastructure	PR2 Open Spaces and Access in New Development	9: Transport and Access
Aviation and Defence Interests and Telecoms	11: Energy (part e) iv and v)	C2: Renewable Energy	
Transport and Road Access	11: Energy part e) vi) 13: Sustainable Transport	RD1: Providing Suitable Services P2: Open Space and Access in New Development	9: Transport and Access
Historic Environment	7: Historic Assets and Places (part e) vii)	HE1: Protected Listed Buildings, Scheduled Monuments and	7: Archaeology and Cultural Heritage

		Archaeological Sites PR1: Protecting Important Resources	
Hydrology, Water Environment and Flood Risk	11: Energy (part e) viii) 22: Flood Risk and Water Management	C4: Flooding PR1: Protecting Important Resources RD1: Providing Suitable Services E1: Natural Heritage	13: Soils, Geology and Water Environment
Ecology, Biodiversity and Arboriculture	1: Sustainable Places 3: Biodiversity 4: Natural Places 11: Energy (part e) ix) 6: Forestry, Woodland and Trees	E1: Natural Heritage PR1: Protecting Important Resources. E3 Forestry and Woodland	8: Ecology and Biodiversity
Decommissioning and Site Restoration	11: Energy part e) xiii)	C2: Renewable Energy	
Soils	5: Soils	PR1: Protecting Important Resources C2: Renewable Energy	13: Soils, Geology and Water Environment
Cumulative Impact	11: Energy part e) xiii)	E2: Landscape C2: Renewable Energy E1: Natural Heritage	6: Landscape and Visal Impact Assessment (LVIA) 16: Interrelated Effects 17: Cumulative Effects

Other relevant policy guidance

4.3.8 The ALDP 2023 is supported by non-statutory Planning Advice. Whilst elements of Planning Advice produced by Aberdeenshire covers some of the topics above there are no specific statutory guidance relating to the ALDP 2023 specifically related to the development or the specific site or its constituent parts. At the time of writing there are no Local Place Plans in force for the area.

4.3.9 Planning Advice has been provided via Planning Advice Notes (PAN's) and Circulars on various aspects of the planning system and relevant development topics. A number of PAN's and Circulars are relevant to the development and are referenced in the Planning Assessment. Where relevant to the consideration of the application, these documents are noted in Section 5 and within Local Authorities Planning Advice is noted in the Planning Assessment.

5. MATERIAL PLANNING CONSIDERATIONS

5.1 Summary

5.1.1 This section of the report considers other relevant material considerations pertinent to the Proposed Development. Material planning considerations can span a broad range of considerations and has been the subject of much case law. The basis for material considerations and their consideration as part of planning decision making are helpfully set out in Planning Circular 3/2013[20]. A 1998 ruling by the House of Lords[21] clarifies that if a proposal is in accordance with the Development Plan and

[20] https://gov.scot/publications Planning Circular 3/2022: Development management procedures

[21] https://international.vlex.com/vid/1997 City of Edinburgh Council v the Secretary of State for Scotland and Revival Properties Ltd (1997) SCLR 1112

there are no material considerations indicating that the proposal should be refused, then planning permission should be granted. Conversely if the proposal is deemed not to be in accordance with the Development Plan, then consideration should be given to material considerations that may indicate it should be granted.

Case law has established that two broad tests must be met for a consideration to be material:

- Material considerations must have consequences for the use and development of land or the character of the use of the land i.e. they must be relevant to planning
- They must relate to the proposed development and be material to the circumstances of the case

5.1.2 Whilst the weight to be placed on any material consideration is a matter for the decision maker (i.e. the Planning Authority), the decision maker has a duty to at least consider the weight to be placed on a material consideration even if that is no weight at all.

5.1.3 In setting out material considerations that are deemed relevant to the application cognisance is given to Circular 3/2022 Annexe A. This confirms that subject to the tests set out in 5.1.1 that the matters considered in this section including, International, UK and Scottish Government Policy, Economic and Social Benefits, Environmental Impacts and Planning History can all be material to planning decision making.

5.2 International and UK Related Climate, Renewable Energy, and Hydrogen Policy

5.2.1 Electrolytic hydrogen production as a form of energy development is relatively new when compared to established renewable energy technologies such as solar, wind, and tidal renewables schemes and as such, the international and national energy policy context is still emerging but has begun to introduce targets in respect of green hydrogen production. Recent policy documents suggest that there is widespread support for the significant role that electrolytic hydrogen could play in 'greening' the economy, particularly in: balancing a renewable led, intermittent grid; reducing industrial emissions; and in acting as a long duration energy storage medium.

5.2.2 These benefits should be considered in the context of the international commitments the UK has made to addressing climate change and reducing greenhouse gas emissions which are a significant contributor to climate change. In this context the UK has committed to **United Nations (UN) Sustainable Development Goals (SDGs) (2015)**[22] that form a basis for UK Planning Policy on sustainability and **The Paris Agreement**[23] which seeks to limit global temperature rise to well below 2 degrees Celsius and aim for 1.5 degrees Celsius. The status of the Paris Agreement as part of Government Policy was confirmed via the Courts of Appeal Judgement[24] and is a legitimate consideration at the decision-making stage of a planning application.

5.2.3 At a UK level the amendments to the **Climate Change Act 2008**[25] in 2019 as a result of the Committee on Climate Change (CCC) report **Net Zero – The UK's Contribution to Stopping Global Warming**[26] clearly set out a legally binding target to achieve 'Net Zero' by 2050 meaning that net UK carbon account for carbon dioxide and other greenhouses gases should be 100% below 1990 levels.

5.2.4 This target is supported by further strategies and policy documents including **National Infrastructure Strategy – Fairer, Faster and Greener (2020)**[27], **Achieving Net Zero (2020)**[28], **The HM Government**

[22] https://www.undp.org/sustainable-development-goals United Nation (UN) Sustainable Goals (SDGs) (2015)
[23] https://www.unfccc.int/process-and-meetings/the-paris-agreement The Paris Agreement 2016 UN Framework Convention on Climate Change
[24] R (Plan B Earth) v SST [2020] PTSR 1446
[25] https://www.leglislation.gov.uk The Climate Change Act 2008 (2050 Target Amendment) Order 2019 (legislation.gov.uk)
[26]
[27] https://assets.publishing.service.gov.uk HM Treasury (2020) National Infrastructure Strategy Faster Fairer Greener
[28] https://www.nao.org.uk, 2020 Achieving net zero

Energy White Paper – Powering our Net Zero Future (December 2020)[29], **The Sixth Carbon Budget: The UK's Path to Net Zero (2020)**[30] and **Net Zero Strategy: Building Back Greener (2021)**[31]. These responses provide further detail on how the target of Net Zero is to be met and sets out interim targets for carbon reductions. **The Sixth Carbon Budget: The UK's Path to Net Zero (2020)**[32] and **Net Zero Strategy: Building Back Greener (2021)**[33] go further in allowing for devolved governments to impose national emissions limits and stressing the role of Local Authorities in playing a key role in meeting the overall objectives.

5.2.5 Further to those policy statements, the **British Energy Security Statement (April 2022)**[34] sets out the Government's strategy for responding to the current energy crisis, introducing new energy supply measures to help with the transition to the UK's Net Zero target. Amongst other measures, it emphasises increased domestic renewable energy regeneration and supporting infrastructure, including energy storage systems to increase flexibility and minimise waste, which will help to facilitate greater energy resilience and security in uncertain times. This can include green hydrogen production.

5.2.6 The need for an even greater focus on climate change has been reiterated by the Progress in Reducing Emissions – 2023 and subsequent 2024 Committee on Climate Change Progress Reports to Parliament[35].

5.2.7 Specifically and in relation to the potential for hydrogen the UK government has published **UK Hydrogen Strategy 2022**[36] **and the Net Zero Hydrogen Fund 2023 (NZHF)**[37]**.** Updated in December 2022, the UK's Hydrogen Strategy set out a target of 10GW of installed low carbon hydrogen capacity by 2030. The document sets out the case for low carbon hydrogen, its role in meeting net zero and the potential for wider economic benefits. The document recognises the role of devolved nations to deliver the strategy.

5.2.8 It recognises the challenges that such a target introduces given the current situation in which virtually no low carbon hydrogen is being produced at scale. It also focuses on the NZHF as a support package and a UK Low Carbon Hydrogen Standard. The Low Carbon Hydrogen Standard sets out standards that production will need to meet in order to be considered low carbon.

5.2.9 **Net Zero Hydrogen Fund (NZHF)** aims to support the commercial deployment of new low carbon hydrogen production projects during the 2020s through £240m of support. Strand 1 provides development expenditure (DEVEX) for front end engineering design (FEED) and post-FEED activities, aiming to build the pipeline of hydrogen production projects to measurably move these closer to deployment. **Kintore Hydrogen (500MW Phase 1) is one of only four projects in Scotland to have been awarded funding at Strand 1 and by far the most ambitious in terms of its ability to provide a significant contribution to the government's targets.**

5.2.10 Further to the NZHF The Department for Energy and Net Zero published their **Market Engagement on the second Hydrogen Allocation Round (HAR2)** in March 2023. The document seeks market views on the HAR2 allocation round which will look to provide a second round of funding for hydrogen projects with applications opening in Q4 2023. This would aim to support an additional 750MW of capacity with an aim of up to 1GW of electrolytic hydrogen production in operation or construction by 2025 and up to 10GW by 2030. HAR 2 is seen as the transitional round leading to a more priced based competitive allocation mechanism from 2025. A further consultation on Hydrogen Allocation Round 3 (HAR 3) was published in December 2023 seeking a call for evidence

[29] https://assets.publishing.service.gov.uk Energy White Paper
[30] https://www.theccc.org.uk, December 2020 The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf
[31] https://www.gov.uk/ October 2021/UK Government Net Zero Strategy: Building Back Greener
[32] https://www.theccc.org.uk, December 2020 The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf
[33] https://www.gov.uk/ October 2021 UK Government Net Zero Strategy: Building Back Greener
[34] https://www.gov.uk/ 2019-2022 British energy security strategy
[35] https://www.theccc.org.uk/2023 Progress Report to Parliament - Climate Change Committee and 2024 Progress Report to Parliament - Climate Change Committee
[36] https://www.gov.uk/August 2021/UK hydrogen strategy)
[37] https://www.gov.uk/May 2022/Net Zero Hydrogen Fund strands 1 and 2: Round 2 open to applications

for price based competitive allocation of funding for low carbon hydrogen via the Low Carbon Contracts Company (LCCC).

5.2.11 The engagement document for HAR 2 proposes to introduce a scoring process that will favour projects that locate behind common network constraints and close to renewable generation. Kintore Hydrogen is located in an area noted as being most favoured in that respect due to the low demand and high output of the region (as noted on figure 1 (page 22) within that document).

5.2.12 The UK Government also produced the **Hydrogen Production Delivery Roadmap Dec 2023**[38]. This clarifies the governments pathway to support the emerging hydrogen industry to reach the Governments Goals via the continuation of support mechanisms within the HAR scheme. Kintore Hydrogen is specifically referenced within this document as Case Study 3 acknowledging the substantial benefits the proposed development could have in both harnessing renewable energy production including offshore wind to produce low carbon green hydrogen. It is acknowledged that Kintore Hydrogen could save around 1.4 million tonnes of CO2 annually across UK power generation and industry and support the just transition within the Northeast of Scotland through job creation.

5.2.13 The **Project Union Launch Report (Gas Transmission and Metering) May 2022**[39] provides more detail on how the use of the gas grid can be achieved through the delivery of a hydrogen transmission system focusing initially on key industrial sites and production sites and a 20% gas blending model. This would be achieved via the repurposing of existing assets which would include the network between St Fergus and Grangemouth to which the proposed development would connect.

5.2.14 The National Grid published **ESO Beyond 2030**[40] builds on the Holistic Network Design and sets out a national blueprint for a decarbonised electricity system in Great Britain. This blueprint follows previous work undertaken by the Electrical Systems Operator through its 2022 document 'Pathway to 2030 Holistic Network Design (the HND). The report identifies the need for significant further investment in the National Grid in order to deliver the aspirations for offshore wind and the wider decarbonisation of the electrical system targeted for 2035.

5.2.15 The report also provides regional context for the north of Scotland and recognises that the potential generation onshore pylons and subsea cables cannot solve the problem alone, saying that its "*network design has included an assumption of major strategic demand being developed in the North of Scotland throughout the 2020s and the early 2030s. This can serve to reduce the requirements for new electricity transmission network build in the 2030s and beyond if the abundant renewable electricity is consumed locally. Solutions such as green hydrogen production (electrolysis) could meet this requirement.*"

5.2.16 The report highlights the significant role hydrogen is expected to play in the UK's future energy system. The report sets out that hydrogen is envisaged as a crucial solution for storing excess energy generated from renewable sources, essential for achieving the UK's net zero greenhouse gas emissions and important in delivering supply side flexibility complimenting other renewable energy sources. Locating green hydrogen production in Scotland also allows it to produce hydrogen at the lowest cost by taking advantage of the lower electricity prices resulting from the abundance of wind.

5.2.17 With the change in Government in July 2024, the new government has provided further commitment to reaching net zero and advancing green hydrogen. At the time of writing no further policy has been implemented specifically in relation to hydrogen production.

Scottish Climate, Renewable Energy and Hydrogen Policy

[38] https://assets.publishing.service.gov.uk/December 2023/Hydrogen Production Delivery Roadmap
[39] The Project Union Launch Report (Gas Transmission and Metering) May 2022 (download (nationalgas.com))
[40] https://nationalgrideso.coom/March 2024/Beyond 2030 Report

5.2.18 Although not a devolved policy matter the Scottish Government also has a range of strategies and reports which outline its policies on hydrogen. The Scottish Government have introduced their own legislation on climate change through the **Climate Change (Scotland) Act 2009**[41] which has subsequently been amended by the **Climate Change (Emissions Reductions Targets) (Scotland) Act 2019** this increases the ambitions of Scotland's own emissions reductions targets to net zero by 2045, 5 years sooner than the equivalent overall UK target but also sets interim targets. The 2009 Acts also established the Climate Change Committee with a statutory role to give advice to government (including the Scottish Government) on carbon budgets, to report on progress in reducing carbon, and to give advice on climate risks and adaptation. Advice from the Climate Change Committee (CCC), while not adopted policy, is strongly relevant to consider and discussed further below.

5.2.19 The **Climate Change Plan (Update to the Climate Change Plan - 2020)** [42] sets out the Governments pathway to the ambitions set out in the Climate Change Act noted above. It includes Hydrogen as a key aspect of the Plan and notes the commitments to the policy and specific action plans noted further within the section.

5.2.20 In terms of the Scottish Governments targets for carbon reductions it is notable that the latest review[43] by the CCC it is reported that Scotland is failing to achieve Scotland's ambitious climate goals, and this is evident in the April 2024 Government announcement that the interim target of a 75% reduction by 2030 was unachievable. The CCC indicates that stronger action is required to reach the 2045 target with action required across various sectors to meet this objective.

5.2.21 Specifically, **The Hydrogen Policy Statement (2020)** [44] confirms the Scottish Governments support for the strategic growth of the hydrogen economy in Scotland with an ambition of at least 5GW of and low-carbon hydrogen by 2030 and at least 25GW by 2045. It also sets out a statement of intent and commitment to funding and support for hydrogen recognising the opportunities across Scotland including the Northeast.

5.2.22 The Policy Statement was supported by **The Hydrogen Assessment Report (2020)** that examined how applications of hydrogen-based technologies in transport, industry, heat, and whole system approaches can best be deployed in Scotland. It concluded that a clear policy approach would be required in order to support the industry in Scotland. It recognised the opportunity for Scotland to become a net exporter of hydrogen. It provided analysis on using the existing gas network in Scotland noting that the St Fergus Gas Pipelines could carry around 240 TWh of natural gas equivalent each year. It concluded that Scotland could grow a hydrogen economy, and this would require flexibility given the emergence of this technology type, co-ordinated efforts across industry and government, a clear strategy and ambitions and hydrogen needs to be seen in a whole energy system context. The assessment identified a clear need to move forward to support commercial scale projects.

5.2.23 **The Hydrogen Action Plan (2022)** [45] sets out actions that will be taken over the 5 years starting in 2023. It builds on the work undertaken in 2020 and sets out the key interaction between the opportunities presented by Scotland's Onshore Wind Sector by using excess capacity to generate green hydrogen. The Action Plan seeks to ensure that Scotland is an early adopter of hydrogen as part of the energy system and grasps the opportunity to export as well as produce hydrogen for the domestic market and reiterates the targets set out in 2020.

5.2.24 The Action Plan encourages joint sector working and notes the funding mechanisms worth around £100m already in place to deliver early-stage projects noting the potential for development within the wider Northeast region focussed on Aberdeen.

[41] https://legislation.gov.uk/Climate Change (Scotland) Act 2009
[42] https://www.gov.scot/Update to the Climate Change Plan 2018 - 2032: Securing a Green Recovery on a Path to Net Zero
[43] https://www.gov.scot/August 2024/Scottish Governments Targets for Carbon Reduction
[44] https://www.gov.scot/December 2021/Scottish Government Hydrogen Policy Statement
[45] https://www.gov.scot/December 2022/Hydrogen action plan

5.2.25 The Action Plan notes that the gas industry is testing options for blending hydrogen into the gas network up to the limit that can be safely used in existing appliances. Using a blend of hydrogen up to 20% by volume has the potential to generate carbon savings from gas use by up to 6-7% on current GB grid gas consumption. There is also potential for some parts of the gas grid in Scotland to be converted to 100% hydrogen from the 2030s.

5.2.26 Importantly regarding the longer-term potential for the Proposed Development, the Action Plan notes that the potential for hydrogen to play a significant role in decarbonisation of industry and power. This partly depends upon strategic decisions by the UK Government that will be made over the coming years and the Scottish Government will continue to urge the UK Government to accelerate decision-making on the role of hydrogen in the gas grid is progressing.

5.2.27 The **Draft Energy Strategy and Just Transition Plan (2023)**[46] sets out the future of our energy sector and sets out an ambitious suite of actions for the Scottish Government, along with actions for industry, the regulator, and the UK Government, to realise the transition to Net Zero. In doing so it seeks to ensure this transition is achieved in a way that is equitable for the people of Scotland. Three objectives are set out in the document i) scale up of renewable energy, ii) increased investment in the net zero economy, and iii) deliver a secure energy system that is not reliant on international markets and delivers low costs for consumers.

5.2.28 The strategy notes the pivotal role of the Northeast of Scotland in transitioning from oil and gas to renewables with £500m set out in the Just Transition Fund to support the area to become centres of excellence for transition. Hydrogen is noted as being a critical part of the strategy referencing the Hydrogen Policy Statement and Action Plan noting the potential from harnessing offshore wind capacity.

Summary

5.2.29 Based on the consideration set out above the government policy background relevant to the development provides a clear background to the need for the development in the broader context of Climate Change and Net Zero objectives but also in terms of the more specific government policy relating to the role of green hydrogen as a means to deliver that energy transition. It is noted that locationally the north of Scotland has substantial renewable energy resources, in particular offshore wind, but limited transmission capacity to the wider UK market; and the UK's national decarbonisation strategy recognises the challenges of replacing natural gas use in heating and industry with electricity. Blending of hydrogen into the gas grid and, in time, pure hydrogen supply is therefore proposed as part of the solution aligning with the national hydrogen strategies produced by both governments. At 3GWe capacity the proposed development will make a very substantial contribution to the UK and Scottish Government Targets.

5.3 Benefits of the Development

5.3.1 The benefits of the development are referred to at relevant points within this Planning Statement and as relevant within the EIA Report. The benefits of the proposed development are clearly defined, are material and add weight to the assessment of the Development Plan. These benefits are summarised below.

Climate Change and Contribution to Net Zero

5.3.2 The proposed development is aligned with the policy framework set out in Section 5.2 and is clearly aligned with the actions that are required to assist with meeting the UK and Scotland's Net Zero ambitions. As noted, hydrogen is a clean gas at the point of combustion producing no carbon-based

[46] https://www.gov.scot/January 2023/Draft Energy Strategy and Just Transition Plan

pollutants and can be used in a variety of applications including helping to decarbonise industrial sectors that are hard to electrify.

5.3.3 The impacts of the proposed development on climate change are assessed within the EIA Report Chapter 12: Climate Change. At full capacity, the proposed development will produce approximately 190,646 tonnes of hydrogen every year with energy content of 6,354 GWh on a net calorific value basis. This will be exported from the site by pipeline and transported via the National Gas high-pressure gas network for onward transmission and use in Scotland and the wider UK. It will therefore displace use of an equivalent quantity (by energy content) of natural gas in the future baseline.

5.3.4 Based on the use of renewable energy to power the proposed development and the displacement of natural gas (and including taking into account the embodied carbon emissions related to the lifecycle costs of that renewable energy) the development would have would result in a net carbon reduction of **approximately 1.28 million tonnes of CO_2 annually**[47] resulting in a significant net benefit as assessed in the EIA. Based on a phased implementation the total carbon savings could be the equivalent of **28 million tonnes of CO_2 savings by 2050** as set out in Table 4.1 of EIA Report Chapter 12. To contextualise this saving, greenhouse gas (GHG) emissions from all sources in Scotland during the year 2021 was estimated at 41.6 million tCO_2 equivalent ($MtCO_2e$)[48] whilst the UK equivalent was 424.5 $MtCO_2e$[49].

5.3.5 Carbon emissions need to rapidly reduce in order to meet the net zero targets set by both Governments. The contribution to the reduction in net GHG emissions from the proposed development alone would be a reduction equivalent to of 0.37% of the 2028 – 2032 UK National Carbon Budget and 0.66% of the 2033-2037 budget due to the reducing levels of emission required to meet the targets.

5.3.6 No equivalent budget for Scotland has yet been set, however the Tyndall Centre for Climate Change Research have developed a tool for identifying suggested reductions to meet the Paris Agreement 1.5 degrees Celsius aligned warming goal. The budgets suggested by the Tyndall Centre between 2028-2032 for Scotland is 6.6 $MtCO_2e$ of GHG emissions per annum whilst for Aberdeenshire this figure is 320,000 tCO_2e GHG emissions. The net GHG emissions savings would be a reduction equivalent to 19% of the Scottish Budget each annum and 400% of the suggested Aberdeenshire budget.

5.3.7 For further context Aberdeenshire Council's own internal CO_2 budget[50] for 2030 (to meet internal emissions targets for the Local Authorities operations) is 21,530 tCO_2e. In comparison with other planned and installed wind energy development in Aberdeenshire, a current wind farm proposal[51] has estimated net emissions savings of around 69,000 tCO_2 per annum. The operational Aberdeen Offshore Wind Farm located off Balmedie is estimated to save around 134,000 tCO_2 per annum[52]. This illustrates that the greater scale of saving from a single development provided by Kintore Hydrogen Plant is therefore very significant at a local, regional and UK level.

5.3.8 Although not meaningfully possible to assess within the EIA, it should be noted that further to these substantive benefits in CO_2 reduction further additional benefits are likely to be accrued. Delivering decarbonisation by installing flexible hydrogen production also allows for the maximisation of the use of renewable energy by avoiding constraining both existing and future renewable generation at periods of lower demand. The broader use of flexible alternative energy production and storage can

[47] The EIA Report Chapter 12 predicts that once fully operational the net reduction in CO_2 would be 1.28 million tonnes a year compared to natural gas use
[48] http://www.gov.scot/June 2023/Scottish Greenhouse Gas Statistics 2021
[49] https://www.gov.uk/February 2024/Final UK Greenhouse Gas Emissions National Statistics: 1990 to 2022
[50] https://aberdeenshjre.moderngov.co.uk/September 2023/Aberdeenshire Council Route Map 2030 and Beyond
[51] https://www.energyconsents.scot/Hill of Fare Wind Farm, Planning Reference ECU00004592
[52] https://group.vattenfall.com/According to the information provided by Vattenfall for the project (European Offshore Wind Deployment Centre - Vattenfall)

also reduce the need for further electricity network upgrades whilst assisting with the business case to support the development of hydrogen networks across the UK.

Energy Security

5.3.9 There is a clear imperative, as set out in the British Energy Security Strategy 2022[53] to increase the UK's Energy Security by reducing the reliance on energy imports. The UK has abundant renewable resources and the use of these resources to support energy security is key to reducing external reliance on energy sources which may be affected by geopolitical issues external to the UK. Reliance on imported natural gas is key to reducing risks to the UK's Energy Security. The development through utilising the gas transmission network to offset natural gas requirements would play an important role in reducing reliance on external gas imports and such improve the UK's energy security.

Economic Benefits

5.3.10 The UK aims for the transition to a low carbon economy to be fair and beneficial for all people. This is illustrated by the UK and Scottish Governments focus on the 'just transition' to a low carbon economy. In the context of some renewable energy technologies, job creation can often be limited during the operation stage of development. Due to the nature of Kintore Hydrogen the proposed development would create significant employment opportunities both during construction and operation.

5.3.11 At a wider level, the development will encourage investment in the UK hydrogen supply chain and skills and create both local, regional and UK job opportunities. This is particularly import of the North East of Scotland region which has the greatest concentration of oil and gas dependent jobs of any region of the UK and has a significant number of existing employees and companies that could potentially support the proposed development both in terms of professional and manufacturing services.

5.3.12 These benefits are discussed further in Section 6 however the development is anticipated to directly and indirectly:

- Create up to 6,857 Full Time Equivalent On Site Jobs over the construction period (approximately 857 per year)
- Create up to 14,196 Full Time Equivalent Off Site Jobs within the wider supply chain over the construction period (approximately 1,847 per year)
- Create up to 192 Full Time Equivalent On Site Jobs during operation of the plant
- Create up to 244 Full Time Equivalent Off Site Jobs during operation of the plant

5.3.13 It is anticipated that 75% of these jobs will be created within the Aberdeenshire Area. The estimated economic benefit of the development to Aberdeenshire from job creation alone is estimated to be in the region of £70m per annum in Gross Value Added (GVA), or 1.1% of total Aberdeenshire GVA during construction. Once fully operational it is predicted that the proposed development would generate around £28.5m per annum in GVA from this additional employment. Further benefits are likely to derive from the value of goods and services purchased as part of the construction and operational maintenance of the proposed development.

Biodiversity Enhancement

5.3.14 Biodiversity enhancement has been considered at the in-principle stage and the Indicative Biodiversity Net Gain Feasibility Assessment demonstrates that the proposed development is capable of providing an uplift in the overall biodiversity value of the application site. This would be

[53] https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy

achieved through biodiversity enhancement and habitat creation as set out through the Outline BEMP as is discussed elsewhere in the Planning Statement.

5.4 Relevant Planning History

5.4.1 Whilst each planning application must be considered on its own merits, planning history can be a material consideration and the potential for cumulative effects with applications that are either granted and yet to be constructed or are currently within the planning system should be considered as part of the planning assessment of the proposed development.

5.4.2 Although there are numerous minor applications and permissions associated with residential properties or agricultural uses on the periphery of the site, there are also more significant applications, including those for grid infrastructure that may be relevant to the consideration of this application. Chapter 18: Summary of Cumulative Effects of the EIA Report sets out the development which have been considered as part of the EIA.

5.4.3 In respect of the electrolysis plant and the ancillary infrastructure close to it, there are several notable recent applications within the wider area that are relevant to Kintore Hydrogen that involve the upgrading of grid infrastructure or electrical infrastructure and are either pending, under construction or are complete. These are:

- APP/2022/0651 – National Development for construction of Electrical Substation at land southeast of Kintore Grid Substation (granted and under construction)
- APP/2020/1673 – Formation of Battery Energy Storage Compound and associated infrastructure at Fordtown, Kintore (granted and operational)
- APP/2020/1437 – National Development for Construction of an Electrical Substation at land southeast of Kintore Grid Substation (granted and under construction)

5.4.4 All of the upgrades to Kintore Grid Substation are currently underway or largely completed with a predicted completion date from Phase 2 of 2026. They are considered as a baseline within the associated EIA assessment.

5.4.5 In addition there are a number of approved developments close to the proposed development that have been granted planning permission but have not yet been constructed. These include:

- APP/2023/2310 – Battery Energy Storage System (up to 49.9MW) and ancillary infrastructure located on land at Kintore Substation, Kintore (granted)
- APP/2022/2022 – Battery Energy Storage System (up to 49.9MW) and ancillary infrastructure located on land at South Leylodge Farmhouse, Kintore (granted.)
- APP/2022/0249 – Battery Energy Storage System (up to 49.9MW) and ancillary infrastructure located on land at South Leylodge Farmhouse, Kintore (granted)
- APP/2021/2903 – Construction of Workshop and Office and Bus/Taxi Depot at Hill of Cottown, Kintore, Inverurie (granted)
- ECU00004756 (APP/2023/1017) – Battery Energy Storage System (up to 300MW) at Midmill Business Park, Kintore (pending)

5.4.6 These developments may lead to cumulative effects with Kintore Hydrogen and have been assessed within the relevant EIA chapters. The developments that have been approved recently include decisions made under the previous NPF 3 and ALDP 2017 as well as decisions taken under NPF 4 and the ALDP 2023. They collectively serve to indicate that the area contains numerous existing energy related developments, and these developments have generally been located within the countryside area of Aberdeenshire.

5.4.7 The other part of the wider site where there is considerable planning history is to the south of Kintore (Kintore East) where there are numerous large scale urban development applications relating to the expansion of the settlement. This includes APP/2022/0283 for a residential development of 600 dwellings and the AMSC application under APP/2023/0872 for details relating to a previous permission at Midmill, Kintore. Whilst there is no overlap between the proposals if implemented, they would increase the population to the south of Kintore, and this is factored into the assessments noted in the EIA. A further application for holiday chalet accommodation under APP/2022/2613 has also been granted and that development is located within 500m of the proposed water abstraction point. This development is also considered in the EIA assessment.

5.4.8 In addition to the above there are several other developments that are at an early stage within the development process and formal applications have yet to be made. Where information is available, and the developments are in the public domain they have been assessed within the EIA Cumulative Effects Assessment (CEA).

5.4.9 In addition to the above, major grid infrastructure upgrades will be required within the next 10 years. The applicant is aware that SSEN's Kintore – Fiddes - Tealing Project has been confirmed at a high level by the ESO's Pathway to 2030 HND. This identified the need to upgrade the 400kV network between Kintore and Tealing via Fiddes (subsequently referred to as Kintore – Tealing 400kV OHL). SSEN are currently consulting on routing options and a final route alignment has not been confirmed however it is possible that they may run across or close to the south part of the proposed electrolysis plant site. The applicant has been in discussion with SSEN regarding the project and are confident that the proposed development would not preclude SSEN's network upgrade. Whilst the applications associated with these upgrades have yet to be made the proposal has been included qualitatively within the CEA as far as is possible.

5.4.10 Aberdeenshire has only determined a small number of hydrogen projects to date and those projects have largely been for small scale hydrogen production associated directly with other renewable energy installations. These include the recent decision relation to the Erection of a Green Hydrogen Storage Facility, BESS, and Solar Array at Glensaugh, Fetter cairn under reference APP/2023/2335. These projects have been approved and it is notable from the decisions made that the consideration of the environmental benefits of green hydrogen featured prominently in these decisions with reliance on the support given by Policy 11 of NPF 4 being a key factor in the granting of planning permission.

5.4.11 In summary the planning history related to the site does not preclude the development and indicates support for energy related infrastructure within the area and more broadly across Aberdeenshire. It is recognised that there are a number of developments either approved or proposed within the planning system that may result in varying degrees of cumulative effects should those developments be constructed in combination with the proposed development. These are assessed within the EIA and summarised in Section 6 of this Planning Statement.

5.5 EIA Outcomes and Mitigation

5.5.1 The outcomes of the assessment of the EIA are referenced within Section 6 of this Planning Statement as they relate to the policy considerations within the development plan. A summary of the EIA outcomes is also provided within Chapter 18: Summary of Mitigation, Monitoring and Residual Effects of the EIA Report.

5.5.2 The assessment has concluded that no significant adverse effects are predicted, with implementation of the embedded and proposed further mitigation, save for possible visual effects at the nearest properties to the south west side of the electrolysis plant site, which would have elevated views of the second phase of development in the southern part of the electrolysis plant site (group B7). There is potential for these effects to reduce subject to the maturation of landscaping which has not been assessed in the EIA. proposed as mitigation. Chapter 18: Table 1.1 sets out the

mitigation measures required by the EIA to reduce potential adverse effects that would otherwise result from the development. It is expected that implementation of the EIA mitigation would be a requirement of any planning permission granted for the proposed development.

5.5.3 Importantly the assessment highlights that the proposed development is likely to result in a significant beneficial effect in respect of:

- reduced greenhouse gas emissions
- socio-economic benefits of construction and operational employment
- subject to detail of the approval and implementation of the biodiversity net gain and habitat enhancement measures, ecology, as the proposed habitat enhancement becomes established and invasive and non-native species removal is carried out

5.6 Other Considerations

5.6.1 As discussed in Section 3 (Approach to the Application), the designed-in mitigation for the proposed development includes obtaining the vacant possession of and ceasing the residential use of two dwellings located at Dewsford during the operation of the proposed development. This would be controlled by a suitably worded planning condition. The ALDP 2023 does not contain any specific policies that prevent the cessation of dwellinghouses in favour of other uses. However, as this would essentially involve a change of use of the land and buildings and the consideration of the loss of two residential properties is considered as a material consideration rather than a consideration embedded within the policies of the Development Plan.

5.6.2 These dwellings are both detached houses and could not reasonably be considered affordable in the context of the definition provided within the Glossary[54] of the ALDP 2023 that defines Affordable ' *Housing of a reasonable quality that is affordable to people on modest incomes.'* The Local Housing Strategy[55] does not identify a particular shortfall in detached larger rural homes noting the prevalence of that type of housing in the rural housing stock. There is no declared housing emergency within Aberdeenshire and the Housing Needs Demand Assessment suggests a trend for smaller dwellings due to changing household. Although the weight to be applied to material considerations is ultimately one for the decision maker, given the factors noted above it is considered that the weight to be given to the impact of reducing the housing stock by two dwellings is not significant in the context of the proposed development and its potential benefits.

6. PLANNING ASSESSMENT

6.1 Preamble

6.1.1 This section of the statement provides an assessment of the proposed development against the relevant Development Plan and associated policies as set out in Section 4 notably NPF 4 and the ALDP 2023 when considered alongside any other relevant material considerations. Guidance provided by the House of Lords judgement and as set out in Planning Circular 3/2022 sets out a useful approach to determining planning applications. This has followed in the approach to the assessment. The approach set out is:

1) To identify the provisions of the Development Plan that are relevant to the decision (*as set out in Section 4 of the Statement*).
2) Consider them carefully looking at the aims and objectives of the Development Plan as well as the detailed wording of policies (*as set out in Section 4 and Section 6 of the Statement and summarised in Section 7*).

[54] https://online.aberdeenshire.gov.uk/Aberdeenshire Local development Plan - October 2022 – Glossary
[55] Aberdeenshire Local Housing Strategy 2018-2023 aberdeenshirelocalhousingstrategy2018-2023.pdf

3) Consider whether the proposal accords with the Development Plan (*as set out in Section 6 of the Statement and summarised in Section 7*).
4) Identify and consider relevant material considerations for and against the proposal (*as set out in Section 5 and assessed in Section 6 and 7 of the Statement*).
5) Assess whether any of these considerations warrant a departure from the Development Plan (*as set out in Section 7 of the Statement*).

6.1.2 Given the application is made for Planning Permission in Principle the key focus of the planning assessment is whether the principle of development can be established in land use planning terms. The potential effects of a development on specific planning considerations are then discussed by relevant topics covered within **Policy 11: Energy** and any other policy considerations:

- Principle of Development
- Just Transition and Local Economic Impact
- Amenity and Health
- Landscape and Visual Impacts
- Public Access
- Aviation and Defence Interests and Telecoms
- Transport and Road Access
- Historic Environment
- Hydrology, Water Environment and Flood Risk
- Ecology, Biodiversity and Arboriculture
- Decommissioning and Site Restoration
- Soils
- Cumulative Impact

6.2 Principle of Development

6.2.1 National Planning Framework 4 identifies low carbon hydrogen production throughout the document as an important contributing industry to meet net zero targets. As noted in Section 4 of this statement NPF 4 states that *'Greener energy choices, including hydrogen and on and offshore renewables, have a natural home here and will be at the heart of the area's future wellbeing economy'* and that *'significant infrastructure will be required to deliver a hydrogen network for Scotland, including repurposing of existing facilities and the creation of new capacity'*. NPF4 also states that *'as offshore renewables are an important part of Scotland's energy transition, there will be a need to align terrestrial and marine development so as to maximise the potential of this sector'*. NPF 4 therefore provides a clear statement on the role of hydrogen within the Scotland and its support within the planning policy framework.

6.2.2 NPF 4 sets out a series of National Developments. As noted in Section 4 the principle of development for these 'national developments' is established by NPF 4. This includes several locationally specific national developments where hydrogen production and associated pipeline infrastructure is to be considered as National Developments. Relevant to the proposed development is National Development 15 which includes the 'Scottish Cluster Industrial Green Transition Zones.' The location of these zones is specified as St Fergus, Peterhead, and Grangemouth. NPF 4 states that these are '*a development contributing to 'Industrial Green Transition Zones' in the location described (above), within one or more of the Classes of Development.'*

6.2.3 As discussed in Section 4, the proposed development is not directly located in the Peterhead, St Fergus or Grangemouth transition zones but is located along the route of the pipelines transporting oil and gas between those facilities, as well as being located adjacent to a key part of the electrical transmission network. As such whilst the development is not in itself a National Development, as it is not located at any of these locations identified within NPF 4, it is closely associated with the energy network that is fundamental to the green transition.

6.2.4 The proposed development would contribute significantly to the industrial green transition by virtue of its contribution to reinforcing the existing network and increasing net capacity and production of hydrogen. Kintore Hydrogen is in a strategic location close to both the national grid gas and electricity transmission networks. By locating at Kintore, it can benefit from the potential opportunity to utilise otherwise constrained renewable energy, reduce the need for downstream grid upgrades and produce a significant amount of hydrogen close to an existing high-pressure pipeline. It is critical in its potential contribution to the energy transition, and it should be stressed that the development has been supported by the UK Government in the award of the Net Zero Hydrogen Fund Strand 1 funding.

6.2.5 In the context of the above, **Policy 11: Energy** of NPF 4 supports renewable energy development. It contains an overarching intent '*To encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure and emerging low-carbon and zero emissions technologies.*' The policy supports **all forms of low carbon technologies,** and this would include green hydrogen production. As such **Policy 11: Energy** is considered to be the primary policy relating to the principle of development. Although this in-principal support for low carbon technologies is caveated by the consideration of specific issues including the local and community socio economic benefits of the proposal as well as site-specific impacts, the policy states that significant weight is placed on the contribution of the proposal to renewable energy generation targets and on working towards greenhouse gas emissions reduction targets. This is reiterated further within **Policy 1: Tackling the Climate and Nature Crisis** of NPF 4 which gives significant weight to the global climate crisis when making decisions in the planning system.

6.2.6 The proposed development would deliver a significant proportion of local and national level renewable and low-carbon hydrogen production ambitions accounting for a significant amount of the Scottish and UK's 2030 targets for hydrogen production. To put that in context, the proposed development once fully operation could produce energy equivalent to around a tenth of Scotland's total current energy demand whilst being capable of saving approximately 1.4 million tonnes of CO_2 annually compared to continued natural gas use. Given these substantial benefits (as further set out in Section 5 of this report and Chapter 12: Climate Change of the EIA Report) and the wording of both Polices 1 and 11 of NPF 4 it is considered that significant weight should be placed on the proposed development's ability to reduce carbon emissions.

6.2.7 Not only would carbon emission reductions be significant, but the proposed development is also clearly aligned with the objectives set out in Scotland Hydrogen Action Plan and the UK's Hydrogen Strategy, Scotland's Draft Renewable Energy Strategy as well as the broader policy background set out in Section 5 of this Statement. Kintore Hydrogen would represent a major milestone in growing the hydrogen economy. This government policy alignment on hydrogen extends to NPF 4 and further support is noted within **Policy 19: Heating and Cooling** that seeks to encourage, promote, and facilitate development that supports decarbonised solutions. It states that proposals for energy infrastructure will be supported where they repurpose former fossil fuel infrastructure for the production or handling of low carbon energy.

6.2.8 As the proposed development will assist in the decarbonisation of the economy it is considered that, and subject to detailed considerations of site-specific matters as considered below, the principle of development fully accords with the aspirations set out within Part 1 of NPF 4 and the wider hydrogen policy strategy and statements set out at a UK and Scottish Level.

6.2.9 **Policy C2: Renewable Energy** of the ALDP 2023 is also relevant to the principle of development. Although this policy does not explicitly consider hydrogen and does not take into account the same weighting in respect of generation targets as NPF 4, paragraphs C.2.8 and C2.9 relate to other renewable energy developments. It is noted that the principle of such developments will be supported where they are well related to the source of the renewable energy required for

operation. The locational requirements of the project are set out in Section 2 of the Planning Statement and EIA Chapters 2 and 3 and justify the choice of location.

6.2.10 Whilst **Policy R1: Rural Development** applies across countryside areas and seeks to permit small scale development but directs larger scale development within the accessible rural area to allocated sites. R.2.20 notes that 'Employment proposals out with settlements in both accessible and remote rural areas should be in keeping with their surroundings and demonstrate that no other suitable site is available. The development must be located on a site that is safe to access via different modes of transport and demonstrate how it could be accessed via footway/ cycle infrastructure and/ or public transport.'

6.2.11 Linked to this policy would be **Policy B2: Employment and Business Land**. The specific nature of the production of hydrogen at scale could be considered industrial. The policy seeks to direct such development to allocated sites. **Policy 26: Business and Industry** of NPF 4 takes a similar approach but more readily acknowledges that locational justification is required if it can be demonstrated no suitable sites are allocated within the LDP. As noted in Section 2 of the EIA there are no suitable sites within the LDP that could accommodate the Proposed Development.

6.2.12 The proposed development seeks to utilise the large amounts of renewably generated electricity, primarily from Scotland's onshore and offshore wind generating stations at periods of low demand on the network to generate an alternative green energy source that can be distributed through the existing gas network. The development needs to be close to the Kintore Substation for a power supply and also needs a large land take commensurate with the scale of development proposed. It needs to be close to a fresh (i.e., non-saline) water resource which is not under significant pressure from other users. It also needs to be close to the gas transmission network. Finally, it also requires an area of relatively low population density due to the character and nature of the development. The size and requirements of the development would exclude any allocated sites close to Kintore Substation such as those at Kintore or Inverurie South. It is considerate is considered there is sufficient rationale to provide a location-based argument for the siting of the proposed development in respect of the relevant ALDP policies noted above.

6.2.13 Taking these ALDP policies in concert we believe that Policy C2 provides support for the development. The proposal does not neatly fit within **Policy R2: Rural Development** or Policy B2 however, we consider that the confirmation of location need, including the consideration of alternatives options through the development and EIA process, including use of existing land allocation is sufficient to confirm compliance with those policies and therefore the principle of development in respect of the ALDP 2023.

6.2.14 The development should primarily be considered under NPF 4 **Policy 11: Energy** which does not require a demonstration of location need and take precedent of Policy C2 as the more recent statement of policy. Notwithstanding, the proposed development demonstrates a locational need requirement as set out in **Policy C2: Renewable Energy** of the ALDP 2023 and it can be demonstrated why the proposed development cannot reasonably be located on identified allocated sites within proximate settlements therefore complying, in principle, with Policy C2.

6.2.15 In summary, the principle of development is clearly established by **Policy 11: Energy** of NPF 4 supported by the weight to be placed on the climate emergency as noted in **Policy 1: Sustainable Places** and **Policy 19 Heating and Cooling** of NPF 4. The contribution that it would provide to Scotland and the UK's energy targets would be material and the weight given to supporting the proposal under **Policy 11: Energy** supported by **Policy 1: Sustainable Places** of NPF 4 should be significant.

6.2.16 Although it is considered that 'in principle' the assessment of the development should be primarily based on the policies reference above other policies are still relevant to the assessment of the proposed development. These further issues are generally covered by the detailed consideration set out in Policy 11. The remainder of Section 6 of this Planning Statement sets out assessment of the proposed development in the order of the topics set out in Policy 11 of NPF 4 with reference to

those additional policies where relevant to that assessment or where not explicitly covered within the topics set out in NPF 4.

6.2.17 Although not considered explicitly within the rest of the Planning Statement due to the in-principle nature of the Planning Application, it should be noted that the applicant has considered the principles of **Policy 14: Design Quality and Place** of NPF 4 and the corresponding **Policy P1: Layout Siting and Design** of the ALDP 2023 in developing the concept designs that provide an illustration of how the proposed development may be taken forward. This is evidenced within the Design Principles Statement that further discusses the design evolution as it relates to ensuring the design parameters and associated mitigation respond to the site opportunities and constraints and are capable of address the policy matters set out in the rest of the Planning Statement. The Design Principles Statement has been produced in accordance with the principles set out in Policy 14 and Policy P1 and with consideration of the planning advice provided by Aberdeenshire Council[56]. The compliance with these policies would be considered further in detail at the AMSC stage.

6.3 Just Transition and Socio-Economic Impact

6.3.1 **Policy 11: Energy** paragraph c) of NPF4 notes that development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities. **Policy 25: Community Wealth Building** also seeks to promote community wealth building based on local and regional strategies. We are not currently aware of any published Community Wealth Building Strategy for the region or area although there are similar strategic objectives contained already within Local Authority Area, Economic and Community plans. The Scottish Government has yet to publish guidance on this matter. **Policy C2: Renewable Energy** also requires the Socio – Economic effects of renewable energy development to be taken into account within the assessment of development proposals acceptability. Socio-Economic impacts from the development have been assessed within Chapter 15: Socio-Economics of the EIA Report.

6.3.2 Given the nature of the development proposal being a production facility for hydrogen, in addition to jobs created temporarily during construction, the opportunities for permanent onsite employment are much greater than for a traditional renewable energy development such as a wind farm or a solar farm.

6.3.3 The EIA identifies that during construction impacts from the development, whilst relatively short term, would be significant during that period (estimated to be 6-7 years). It is estimated that there would be an equivalent of 857 Full Time Employees (FTE) on site during the construction period although this figure will vary across the construction period.

6.3.4 Due to the nature of the development, it has the opportunity to draw in support services, manufacturing (for the components of the development) and technical professional jobs during the construction period. A further 1847 FTE offsite jobs are predicted to be generated for the construction phase within the supply chain during construction. It is estimated that around 75% of on and offsite jobs would be created within Aberdeenshire. The value of these jobs is equivalent to around £70m per annum to the Aberdeenshire economy over the construction period.

6.3.5 Although the outcomes are difficult to quantify, the proposed development could be particularly important to the economy of Aberdeenshire and the North East Region due to the numerous SMEs specialising in oil and gas with expertise that lends itself well to the development and which have existing skills in fabrication, pipe and compression technologies, amongst others which will be required in the construction and operational maintenance of the development. The manufacturing

[56] Aberdeenshire Council (September 2023) Landscaping Design- Planning Advice PA2023-08V, (https://publications.aberdeenshire.gov.uk/Aberdeenshire Council (2023): Landscaping Design: Planning Advice PA2023-08)

sector in Aberdeenshire is otherwise predicted to be in decline over the next 5 years (estimated at a 9.7% decrease) largely due to a decline in the North Sea Oil and Gas Sector.

6.3.6 The applicant has been keen to identify early supply chain possibilities though its early engagement. Many of the companies the applicant has been in discussion with during supply chain engagement are also keen to diversify into renewables. The proposed development represents an excellent opportunity for companies to develop skills for broader application within the hydrogen and renewable energy sectors by companies more traditionally involved in the oil and gas sector. As the development is at an early stage in the development cycle there is opportunity to develop further relationship with local communities and businesses as part of the project development.

6.3.7 During operation the proposed development is likely to support around 192 FTE operational employees based at Kintore Hydrogen assuming the proposed development is fully operational. It is also anticipated that up to 227 FTE indirect offsite jobs would also be created by the Proposed Development. These jobs represent permanent long term and skilled jobs that will generally be provided within the Aberdeenshire area (around 75% or 315 FTE jobs are predicted to be created within the Aberdeenshire Area). The Gross Value Added (GVA) is predicted to be £25.8m per annum once the proposed development is operational.

6.3.8 The creation of both construction and operational jobs and the resultant socio-economic benefits resultant from the proposed development would further the regional aspirations of the Regional Economic Strategy[57] and national aspirations for a just transition to net zero set out in the National Just Transition Outcomes[58] in particular by increasing local spending and providing significant new job opportunities away from the traditional oil and gas related industries that have tended to dominate the North East economy since the 1970's.

6.3.9 Based on the above assessment and likely resultant benefits, aligned to regional and national policy we consider the proposed development would provide sufficient opportunity to meet the policy requirements of **Policy 11: Energy** and **Policy 25: Community Wealth Building**. The applicant has demonstrated the potential for significant beneficial socio-economic impacts arise from the proposed development and has put in place measures to ensure that wherever possible these benefits are realised regionally and locally. The applicant is committed to developing a Supply Chain Engagement Plan and an Employment and Skills Plan that would seek to support the further employment, training and skills development required to construct and support the Proposed Development.

6.3.10 Kintore Hydrogen has already taken a proactive approach by starting supply chain engagement and will continue to ensure there are good opportunities to support existing businesses and create new local direct and indirect employment opportunities as the project is further developed during the detailed design stage. Although not a material planning consideration it is also noted that Kintore Hydrogen are exploring ideas for wider community directed benefits that could be delivered. The application would welcome the opportunity to further develop these proposals based on community priorities.

6.3.11 It should be noted that as there are no predicted significant adverse effects on local infrastructure it is not envisaged that the proposed development will require to make contributions to offsite infrastructure through consideration of either **Policy 18: Infrastructure First** of NPF 4 or **Policy RD2: Developer Obligations** of the ALDP 2023.

[57] https://investaberdeen.co.uk/February 2024/Regional Economic Strategy, A sustainable economic future for the North East of Scotland

[58] https://www.gov.scot/September 2021/Just Transition - A Fairer, Greener Scotland: Scottish Government response Sept 2021

6.4 Residential Amenity, Health, and Safety

6.4.1 **Policy 11**: **Energy** (paragraph e) i) alongside **Policy P1: Design, Quality and Place, Policy 26: Business and Industry** and **Policy 23 Health and Safety** of NPF 4 and **Policies C2: Renewable Energy**, **Policy P1: Layout Siting and Design**, **Policy PR1: Protecting Important Resources** and **Policy P4: Hazardous and Potentially Polluting Developments and Contaminated Land** of the ALDP all seek to ensure that developments do not result in unacceptable adverse impacts on the general amenity of communities and individual dwellings as well as broader public health and safety. Such adverse impacts could result from the effects of emissions such as noise or light pollution, emissions impacting on air or water quality and industrial or other processes that could result in high risk of environmental contamination or accident.

6.4.2 Where such impacts may or could potentially result from a development, the relevant noted policies seek to ensure appropriate mitigation is in place to protect the amenity of the population. Such impacts cut across a number of the topics considered relevant to the proposed development. landscape and visual impacts are considered in Section 6.5, impacts resulting from traffic and transportation within Section 6.8, impacts on the water environment are considered within Section 6.10, impacts on ecology within Section 6.11

Population and Human Health

6.4.3 There is potential for a development of the scale of Kintore Hydrogen to result in potential impacts on the wider population and human health. Specifically, **Policy 23: Health and Safety** of NPF 4 and **Policy P4: Hazardous and Potentially Polluting Developments and Contaminated Land** of the ALDP 2023 collectively provide a policy basis for the assessment of a variety of potential effects resultant of development that could impact on human health. Notably Policy 23 indicates that for certain developments that a Health Impact Assessment (HIA) may be required. An assessment of the development's potential impacts on the matters covered by these policies is contained within Chapter 14: Population and Health of the EIA Report. The assessment within this Chapter has been undertaken in accordance with the relevant guidance[59] to ensure that the assessment aligns with the HIA principles without the need for a separate standalone HIA.

6.4.4 The assessment considers a number of potential changes that could result in potential health impacts during construction and operation, many of which are considered under other topics noted within the EIA and this Statement. The assessment notes that the existing health baseline is good, and that the assessment provided does not indicate there would be any significant human health effects resulting from either the construction or operation of the Proposed Development. Potential for significant effects is likely to restricted to locations close to the proposed development and these are noted within the next paragraphs of this section of the report in respect of Noise and Vibration, Lighting and Air Quality.

Noise and Vibration

6.4.5 A construction noise and vibration assessment is provided within Chapter 10: Noise and Vibration of the EIA Report. Due to the distances between receptors and the site construction areas the potential for vibration has been scoped out of the assessment and the assessment focuses on noise. This assessment includes consideration of existing background noise levels, construction-related noise effects and operational noise effects and has been undertaken in accordance with the relevant guidance and standards. Appendix 10.1 includes the baseline sound monitoring whilst Appendices 10.2 and 10.3 include the Construction and Operational Noise Assessments.

6.4.6 Although, in general, construction effects may be significant without any mitigation (as noted in the EIA Report) further mitigation is to be provided within a project Construction Environment Management Plan (CEMP) to address the management of construction processes that could result in

[59] https://www.researchgate.net/November 2022/Effective Scoping of Human Health in EIA

impacts on the environment, including the amenity of residents. These measures are provisionally set out in an Outline CEMP.

6.4.7 The operational noise assessment has considered the designed-in mitigation proposed within the EIA including the restriction on residential use of the properties at Dewsford but notes that the design is only outline and therefore has been presented as a worst case. Whilst the conclusions of the operational noise assessment indicate that the proposed development would generally result in noise levels close to or lower than existing levels, predictions identify the potential for levels higher than current background levels at a number of receptors, particularly at night. The increase in noise levels at the worst affected residential receptor is within WHO Guidance limits and the NR20 level as advised by Aberdeenshire Council via pre-application discussion and is considered acceptable in the context of the proposed development. Cumulative effects with other developments forms part of this assessment, cumulative noise levels would be no greater than the electrolysis plant in isolation due to the distance between the developments and the respective sensitive receptors.

6.4.8 The assessment indicates that, subject to further mitigation, the operation of the proposed development would not result in any significant effects on the amenity of any identified receptors. The applicant will ensure that subsequent detailed design will achieve a rating level for noise agreed with Aberdeenshire Council as part of the planning permission sufficient to avoid unacceptable noise levels at sensitive receptors, i.e. the mitigated level proposed and assessed through the EIA Report. A further detailed operational noise assessment that would demonstrate compliance with the rating levels set by Aberdeenshire Council will form part of the pre-construction information and controlled by planning condition.

6.4.9 In summary a noise assessment has been provided as required by paragraph e) of NPF 4 **Policy 23: Health and Safety** and paragraph P4.1 of **Policy P4: Hazardous and Potentially Polluting Developments and Contaminated Land** of the ALDP 2023. The assessment does identify the potential for adverse effects, but these are not considered to be significant, and mitigation is capable of being provided by way of construction management and final detailed design and assessment to ensure that these impacts are not unacceptable in accordance with paragraph P4.5 of Policy P4. These measures can be subject to planning conditions to mitigate any residual effects as required by both policies.

Lighting

6.4.10 Whilst neither NPF 4 nor the ALDP 2023 specifically reference or apply controls in relation to the potential for light pollution as a result of development, uncontrolled lighting both during construction and operation of developments can result in adverse effects on the amenity of residential receptors and on wildlife. PAN 51 Planning, Environmental Protection and Regulation confirms this position and light pollution is now considered a statutory nuisance in respect of the Environmental Protection Act 1990. In respect of the relevant planning considerations NPF 4 Policy does reference the need to design to mitigate light pollution within **Annex D – Six Qualities of Successful Places** whilst more broadly both **Policy 23: Health and Safety of NPF** and **P4: Hazardous and Potentially Polluting Developments and Contaminated Land** as noted in paragraph 6.4.1**.**

6.4.11 Construction lighting will be managed sensitively in accordance with the measures set out in the Outline CEMP. This will ensure that lighting does not cause unacceptable impacts to residential receptors or wildlife during the construction of the project. To address concerns raised during consultation regarding the operational lighting of the electrolysis plant site the applicant has prepared a Lighting Principles Statement that has been submitted with the application. The Lighting Principles Statement sets out a strategy for the proposed development to manage both construction and operational lighting. These measures are set out in Section 4.3 of the Lighting Principles Statement. It is expected that a planning condition can be used to ensure that the final lighting strategy is provided for the approval of the planning authority alongside the detailed design of any phase of the proposed development submitted through the AMSC process.

Air Quality

6.4.12 Chapter 11: Air Quality of the EIA Report identifies that there is potential for oxides of nitrogen emissions during use of the hydrogen flare that forms part of the proposed development. The relevant policies noted in paragraph 6.4.10 require that an air quality assessment is provided, and a detailed Operational Air Quality Assessment is provided within Appendix 11.1 to the EIA Report in accordance with those policy requirements.

6.4.13 As set out In the Air Quality Assessment, other than transport-related emissions, which are not considered to be significant, NO_2 is the only predicted emission resultant from the proposed development that could impact on air quality. The hydrogen flare is a safety measure and would not operate at full capacity routinely. The assessment models a highly conservative worst-case scenario of continuous full capacity operation. Even in this scenario, the applicable long-term (annual mean) air quality objective for NO_2 would not be exceeded. Even in this scenario, the applicable short-term (hourly-mean) air quality objective would also not be exceeded at sensitive receptors with mitigation (via flare design and location) as set out in the assessment. In addition, the short-term objective is defined on the basis of up to 18 exceedances per year, i.e. could only be capable of being exceeded with an operating profile of the emergency flare of at least 18 times, for an hour each time, per annum. This is not the proposed mode of operation for an emergency flare and so, by definition, it is extremely unlikely that the short-term limit level could be exceeded. The long-term impacts are considered to be negligible, and the short-term impacts are therefore considered to be at most minor and not significant in air quality terms.

6.4.14 On this basis there would also be no measurable change in population health outcomes associated with long-term NO_2 emissions from the hydrogen stack, and short-term emissions are not anticipated to be significant as set out above**.** In summary an assessment has been provided in respect of air quality and indicates that the proposal would not have a significant adverse effect on air quality in accordance with paragraph d) of **Policy 23 Health and Safety** of NPF 4 and paragraph P4.5 of **Policy P4: Hazardous and Potentially Polluting Developments and Contaminated Land** and paragraph P1.2 of **Policy PR1: Protecting Important Resources.** It should also be noted that air pollutant emissions will be regulated by SEPA under the PPC Permit for the development.

Risk of Accident and Fire

6.4.15 Although fire risk is not in itself a planning matter it is important to note that Kintore Hydrogen have been in active discussions with the Scottish Fire and Rescue Service (SFRS) to ensure that relevant SFRS considerations have been identified early in project development. As part of this, SFRS were originally contacted in October 2023 and a Fire Liaison Framework (FLF) was subsequently agreed in November 2023 between Kintore Hydrogen and SFRS Area Commander Andrew Wright.

6.4.16 The FLF acknowledges a core underlying principle for the project is *'early and full engagement with the local fire and rescue service associated with the site in question at the pre-planning, planning, commissioning and day to day operational management of the site'*. To achieve this Kintore Hydrogen have deployed and agreed with SFRS a three staged, long term, stepped approach through the FLF whereby fire and rescue liaison takes place throughout the complete cycle associated with the planning, implementation, and operational phases of the project. This would include liaison and support at pre-planning, planning submission and multi-agency liaison, commissioning, and operational delivery (business as usual) of the Kintore Hydrogen scheme.

6.4.17 Subsequent pre-application discussions have also taken place between Andy Buchan, Group Commander Prevention, Protection and Preparedness Directorate at SFRS, and Kintore Hydrogen to explore potential for positive changes which could be made to the project whilst allowing SFRS to ask questions of the project team. These discussions made direct reference to the elements being

included within the project design, approach to the planning process how the facility will operate and relevant SFRS operational considerations.

6.4.18 Ongoing engagement with SFRS will continue as the project develops and Kintore Hydrogen will maintain the Fire Liaison Framework (FLF) and keep this in place with SFRS for the lifetime of the project. The FLF will be updated and reviewed where technology or other considerations may require this.

6.4.19 Following any future grant of planning consent, detailed Integrated Fire Risk Management Strategies (IFRMS) will also be produced. Through the FLF, the fire service will be able to engage on the IFRMS and, if necessary, suggest improvements. Through the development of the FLF early contact with SFRS for site familiarisation and exercising of emergency plans will also be put in place.

Summary

6.4.20 In summary the proposed development would likely have some impacts on individual residences during construction and operation. However, mitigation is proposed to minimise those potential effects and the level of impact at any one property. The proposal would:

- Not result on any significant adverse wider impacts on population or health.
- Noise impacts are within acceptable limits or can be made acceptable through the use of mitigation.
- The potential for nuisance from lighting can be managed as set out in the Lighting Principles Statement.
- Air quality impacts are not likely to be significant.
- The applicant will continue to engage with the Fire Service to ensure optimal operational safety is designed into the proposed development.

6.4.21 When considered alongside the use of conditions to manage identified mitigation the proposed development would have no unacceptable impacts on communities and individual dwellings in compliance with **Policy 11**: **Energy** (paragraph e) i).

6.5 Landscape and Visual Impacts

6.5.1 **Policy 11: Energy** (paragraph e) ii) of NPF 4 requires consideration whether the proposed development would result in a significant impact on landscape and visual amenity, while recognising that such impacts are to be expected for some forms of renewable energy. NPF 4 qualifies any assessment by stating that where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable. **Policy 4: Natural Places** and **Policies E2: Landscape** of the ALDP 2023 is also relevant to the consideration of landscape and visual impacts. In the context of the proposed development, these are geared toward the protection of locally designated landscape areas, and in the case of Policy E2 key elements of the local landscape character as set out within Nature Scot Landscape Assessments[60]. This is further supported by the Councils non statutory Planning Advice PA2023-08 Landscaping Design[61].

6.5.2 At the in-principle planning stage the fundamental questions posed by the policies are:

- Are there any likely significant landscape and visual effects resultant from the proposed development on any sites designated for the landscape value

[60] https://www.nature.scot/Nature Scot Landscape Assessments
[61] https://publications.aberdeenshire.gov.uk/Aberdeenshire Council (2023): Landscaping Design: Planning Advice PA2023-08

- Are there any likely significant landscape and visual effects on local landscape character and/or sensitive receptors as a result of the development

6.5.3 In the event of any significant effects or other impacts being identified it is relevant to consider whether they capable of being mitigated in order to be acceptable in planning terms and/or whether conditions can be used in order ensure these matters can adequately be address through the AMSC process. In the event that such effects are unlikely to be capable of mitigation, consideration must be given to the weight to be placed on the benefits of the proposed development recognising that localised impacts which have been satisfactorily reduced through designed in mitigation will generally considered to be acceptable. It should be noted that visual effects relevant to Recreation and Built and Cultural Heritage receptors are considered within other chapters of the EIA and this assessment.

6.5.4 In order to addresses these policy questions Chapter 6: Landscape and Visal Impact Assessment (LVIA) contains a full LVIA that assesses the effects of the development on both landscape and visual receptors and both from an operational and construction perspective and in respect of potential cumulative impacts. The LVIA assessment also considers the mitigation applied at initial site selection and indicative design stages that have been used to inform the design parameters and other mitigation that would be applied to any detailed design of the Proposed Development. The LVIA assessment has been undertaken in accordance with the Guidelines for Landscape and Visual Impact Assessment 3[62] and the requirements of Policy E2 of the ALDP 2023. The LVIA provides further information in the form of ZTV mapping, and a series of visualisations based on the maximum design parameters.

6.5.5 The LVIA has been based on an assessment of the proposed development with maximum design parameters for LVIA defined for the Planning Permission in Principle application. Designed in mitigation has been identified within the LVIA assessment within Table 2.11. This includes setting parameters for the maximum height of various aspects of the electrolysis plant within the zones set out in the Planning Parameters Plan.

6.5.6 In order to illustrate the design and layout development and consideration that has already been undertaken as part of the development process, the applicant has also provided a Design Principles Statement to support the application. In the context of landscape and visual impact, this document provides context as to how the design parameters have been arrived at, provides a framework for future design development of the project. Indicative landscape proposals consistent with the Planning Parameters Plan are set out in Figure 4.1-4.3 of Chapter 6 of the EIA Report. Further and more refined landscape mitigation and enhancement is proposed as shown in the Illustrative Landscape Masterplan in the Design Principles Statement and via the Outline Biodiversity Enhancement and Management Plan (OBEMP) provided within Appendix 8.18.

6.5.6 Addressing the policy requirements noted above, the proposed development is not located close to any landscape designations noted in Policy 4 of NPF 4 nor designated by the ALDP 2023. Given the separation distance and intervening topography the EIA concludes that it is unlikely there would be any significant adverse effects on the closest designation which is the Bennachie Special Landscape Area due to a combination of distance, the scale of infrastructure proposed and the intervening hills and forestry to the north of the site area. The proposed development complies with Policy 4 (NPF 4) in respect of paragraph c) and Policy E2 (ALPD 2023) in respect of paragraph E2.2.

6.5.7 The LVIA assesses both the construction and operational effects of the development in respect of localised landscape and visual effects. Due to the extent of the works required during construction, the proposed development is likely to lead to some adverse effects, but these effects would be limited to localised and very specific parts of the Landscape Character Area LCT 26: Wooded Estates – Aberdeenshire within which the proposed development is located. Due to the extent of the development the LVIA identifies four sub areas of landscape character within LCT 26 referred to as

[62] Guidelines for Landscape and Visual Impact Assessment 3 (LI and IEMA 2013)

Local Landscape Zones (LLZ's). Those effects identified are largely focused on the undulating Open Farmland LLZ 1 and are focused within the immediate context of the construction works.

6.5.8 Visual effects during construction are also assessed. The construction of the development will be apparent from a number of receptors including local residential properties, roads, and non-motorised routes. The effects during construction are generally not likely to be significant and are of short duration across much of the Proposed Development. Significant adverse effects, in EIA terms, are limited to areas close to the electrolysis plant site but due to the phasing of the development and with appropriate mitigation implemented as proposed for the operational development, this would reduce the magnitude of effects at the closest receptors. Construction effects are temporary in nature, and they are to be expected from development of this scale.

6.5.9 Both the water pipeline infrastructure and hydrogen pipeline infrastructure, with the exception of above-ground infrastructure at the gas connection compound and at the water abstraction point, would utilise buried infrastructure. Subject to the avoidance or replacement of landscape features such as hedgerows and trees, installation works would have no permanent landscape or visual effects following reinstatement. The assessment also identifies that operational effects resulting from an intake and pumphouse located by the River Don would not be significant, although some minor impacts on the visual amenity of residential receptors is to be expected. Landscaping is proposed at both locations to further soften the appearance of these aspects of the development from local residential receptors as noted indicatively within indicative landscaping plans contained within Figures 4.2 and 4.3 of Chapter 6.

6.5.10 The main operational effects from a landscape and visual perspective would be related to the electrolysis plant site. The operational impacts from a landscape and visual perspective on the Landscape Character Type, taken as a whole, are not likely to be significant. Given the topography on site, landscape impacts resulting from development within the northern area, identified for initial phases of the development, are likely to be localised to the site and the immediate surroundings. This part of the site is well screened within the contained landscape bowl and would have relatively minimal impact on the character of the wider landscape. Development to the south of the ridgeline, being more prominent would have a greater effect within the LLZ 1 as the development would be locally prominent and would increase the industrial characteristics already apparent within this part of the LCT. This is assessed as being moderately significant in EIA terms but focused on the area of LLZ1 within close proximity to the site.

6.5.11 Without mitigation and based on a worst-case scenario, significant operational visual effects are focused on a small number of residential receptors within a short distance of the electrolysis plant. This includes those at South Leylodge/Leylodge Schoolhouse (group B1)[63] and to a lesser extent the properties at Bogford, Dumnaheath and Wardes (group B7)[64]. Effects would also be significant at the properties at Dewsford (Group B2)[65] if they remained in occupation during operation.

6.5.12 Receptors at group B2 would not be occupied during operation. Further mitigation is proposed to reduce impacts on other receptors via the implementation of landscaping and planting as noted in within Chapter 6 of the EIA Report and as illustrated conceptually within the Indicative Landscaping Masterplan contained within Figure 12 of the Design Principles Statement and Outline BEMP. At receptor group B1 it is proposed to utilise earthworks and planting along the southern edge of the electrolysis plant site. In addition, further planting is proposed along the western edge of the site. This mitigation is expected to reduce effects at those receptors as well as assist with mitigation at receptor group B7. Residual effects will generally be reduced to below a significant effect in EIA terms although residual moderate adverse effects within group B7 may remain due to the elevation of some of the receptors. Although not assessed in the LVIA, maturing of screening planting of the type proposed in the Illustrative Landscape Masterplan in the Design Principles Statement together with the other design measures described in that document could potentially reduce effects to not

[63] Noted as receptor group B1 in Chapter 6: Landscape and Visual Impact Assessment of the EIA Report

[64] Noted as receptor group B7 in Chapter 6: Landscape and Visual Impact Assessment of the EIA Report

[65] Noted as receptor group B2 in Chapter 6: Landscape and Visual Impact Assessment of the EIA Report

significant in the longer term. This mitigation would be implemented alongside the initial phases of development and to allow for increased maturity of landscaping by the time any development within later phases to the south of the electrolyser plant was undertaken.

6.5.13 Cumulative effects are also considered within the LVIA with the developments noted in Section 3 included within the Planning Statement. Localised cumulative effects with other energy infrastructure developments are limited to the within LLZ1 and for a small number of receptors. These cumulative effects are not predicted to be of any greater significance than those predicted for the operational development. Localised cumulative effects with other energy infrastructure are predicted within LLZ1 and for a small number of receptors.

6.5.14 It should be noted that significant effects assessed in the EIA do not necessarily mean that a particular development is unacceptable in policy terms. This is particularly true of visual effects predicted from individual residential properties. Private views are generally not considered to be material in planning decisions and unlike the right to light, there is no statutory protection for private views.

6.5.15 Case law[66] has clarified that the extent of change to a properties outlook can be so significant that in exceptional cases development may lead to an adverse impact on the overall amenity of a residential property to the extent it is no longer considered to be an attractive place to live. Generally speaking, those impacts on visual amenity would be considered in the planning balance in tandem with other potential significant effects resultant from noise or other potential nuisances resultant of development. Guidance has been published by the Landscape Institute on Residential Visual Amenity Assessment (RVAA)[67] and indicates such an assessment would only normally be required for properties experiencing largest magnitude of effect (major and above). Given the assessment indicates that at the worst case these effects would be of moderate significance in EIA terms, no RVAA is considered necessary, and the residual adverse effects would be considered in the planning balance.

Summary

6.5.15 To summarise and in the context of the relevant policy considerations there would be either no or negligible adverse effects on landscape designations as required by **Policy 4: Natural Places** of NPF 4 and **Policy 2: Landscape** of the ALDP 2023. As recognised in NPF 4, due to the scale of development proposed there will be some very localised landscape and visual effects focused on the immediate area of the electrolysis plant and a small number of residential receptors. Further mitigation is proposed as outlined in the EIA Report and within the Design Principles Statement.

6.5.16 In the context of **Policy 11: Energy** of NPF 4, Policy 11 recognises that developments may result in localised significant effects and where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable. As the resultant visual impacts are localised and appropriate design mitigation has been applied these impacts would be considered acceptable. In the context of **Policy 2: Landscape** of the ALDP 2013 the impacts on landscape assessed there would be no significant effects on the LCT as required by paragraph E2.1 of that policy.

6.5.17 Based on the assessment provided it is only reasonable to conclude that the proposal complies with **Policy 4: Natural Places** of NPF 4 (in respect of Landscape and Visual effects), paragraph e) ii) of **Policy 11: Energy of NPF 4** and **Policy E2 Landscape** of the ALDP 2023 subject to the detailed assessment of the final mitigation proposed for landscaping around the electrolysis plant. This can be addressed by way of Planning Conditions to ensure that this mitigation is further developed, and final details are provided as part of the AMSC stage.

[66] There are numerous examples stemming from the Burnt house Farm Windfarm, SoS Decision (APP/D0515/A/10/2123739) 6th July 2011.

[67] https://www.landscapeinstitute.org/march 2019/Residential Visual Amenity Assessment (RVAA) Technical Guidance Note.

6.6 Public Access

6.6.1 **Policy 11: Energy** (paragraph e) iii) of NPF 4 requires consideration of public access impacts as a result of renewable and low carbon development whilst **Policy 13: Sustainable Travel** and **Policy 20: Green and Blue Infrastructure** also require that developments do not significantly affect public access routes including core paths and that mitigation is provided where there is potential for effects. **Policy PR2 Open Spaces and Access in New Development** of the ALDP 2023 similarly seeks to protect public access from development that would impact on non-motorised access.

6.6.2 There are no identified public access routes within the area that would be impacted by the electrolysis plant or the proposed gas pipeline infrastructure and there would be no impacts on identified public access routes including core paths and rights of way from those aspects of the proposed Development. The EIA (Chapter 14: Population and Health) recognises that outside the core path network, some land would be permanently or temporarily inaccessible by the public; however, these areas are not well used for recreation. The provisions of the Land Reform Act in Scotland means that there are plenty of other spaces widely available locally for reasonable and accessible alternatives for recreation and physical activity in the surrounding area.

6.6.3 Temporary works associated with the water pipeline infrastructure could impact on core paths, most notably between the A96 and the River Don as identified in Chapter 9: Transport and Access of the EIA Report. One section of core path ref 402.03[68] would be crossed by the water pipeline route and other sections could be in relatively close proximity to works to install the pipelines, intake/outfall, pumping station and potential water treatment works near the River Don (core path ref 410.03) and a proposed extension to the core path network (410.03P).

6.6.4 Without mitigation these routes could be temporarily inaccessible during pipeline trenching works. These would be managed, as set out in the Outline CEMP submitted with the planning application, to provide a safe public crossing point during the pipeline works and through marshalling of machinery/construction traffic in the vicinity of core path users. Such measures are typically utilised on linear infrastructure projects and the associated mitigation can be adequately controlled by way of a planning condition.

6.6.5 In summary, potential effects would be limited to people's experience and enjoyment of these routes during construction works. However, these impacts would be temporary, and the mitigation noted above would ensure that public access is maintained throughout the construction of the water pipelines.

6.6.6 These measures would ensure that the proposed development complies with the terms of **Policy 11: Energy, Policy 13: Sustainable Transport** and **Policy 20: Blue and Green Infrastructure of NPF 4** in that the proposals would not result in a loss of identified access routes and mitigation will address any temporary impacts resulting from the construction works associated with the proposed development. This measure would also satisfy the ALDP 2023 **Policy PR2 Open Spaces and Access in New Development**. The applicant proposes that, prior to the construction of any phase of the proposed development a CEMP for that phase of the proposed development will incorporate details of how public access is managed in line with the Outline CEMP.

6.7 Aviation and Defence Interests and Telecoms

6.7.1 **Policy 11: Energy** (paragraph e) iv and v) of NPF 4 and **Policy C2: Renewable Energy** of the ALDP 2023 both require the impacts from energy development are considered in respect of the potential for impacts on aviation, telecoms and defence infrastructure including civilian and air defence

[68] https://gis.aberdeenshire.gov.uk/maps/Map.aspx?MapName=Paths

radars. This requirement is typically geared towards types of infrastructure that could affect flightpaths, radar, or other telecoms equipment such as wind turbines.

6.7.2 As described in Section 2 of this report, whilst covering a large area, the proposed development is not particularly high in terms of its structures and located some distance from the nearest operational airport and airfield and any radar or other telecoms systems. As such the proposed development is not likely to give rise to any concerns regarding aviation or defence interests or on telecoms systems. It is considered highly unlikely that the proposed development would impact upon aviation and defence interest and any such assessment is scoped out of the EIA. The proposed development is considered to comply with both NPF 4 and the ALDP 2023 in respect of those impacts.

6.8 Transport and Road Access

6.8.1 **Policy 11: Energy** paragraph e) vi), **Policy 13: Sustainable Transport** of NPF 4 and the associated **Policy RD1: Providing Suitable Services** of the ALDP 2023 all require the impacts of development on the road network are considered and the sustainability of the development. Further to this **Policy P2: Open Space and Access in New Development** encourages provision of blue, green, and safe active travel to form part of development proposals.

6.8.2 There are two main considerations set out in the various policies:

- Suitable transport infrastructure is in place or will be put in place in order that the development can be constructed and operated safely and within the limits of the road network
- In locating development, the implications for sustainable travel have been considered where appropriate and where existing services are not available measures are put in place to ensure developments, as far as is reasonable, can be accessed by more sustainable means.

6.8.3 In order to consider the implications of the development in respect of construction and operational traffic, the application has been supported by a Transport Assessment (Appendix 9.1 of the EIA Report) and Abnormal Indivisible Load Route Survey Report (Appendix 9.2) both of which support further assessment under the EIA Regulations as set out within Chapter 9: Transport and Access of the EIA Report.

6.8.4 Operational access proposals to the various parts of the site are set out in Section 2. The main operational access will be from the unclassified road to the south of the electrolysis plant site that leads to Bogford. Final details of the access are subject to further design and would be provided at the AMSC confirming these access arrangements and junction details. This section of the unclassified road is straight with good visibility and there would be no fundamental reasons why operational access could not be designed to meet Aberdeenshire's Standards for Road Construction Consent and Adoption. Further operational access to the other parts of the site would be limited to the gas connection site, which would utilise an existing private access, and the pumping station. Final details of the pumping station access will be provided at the AMSC stage, but this likely to be from the Rushlach Road during normal operation. These accesses would not be routinely used other than for maintenance.

6.8.5 The assessment of operational traffic movements has considered all routes for construction and operational access, but due to the main access need being to the electrolysis plant site, that is the focus of discussion here. The assessment identifies that the operational traffic impacts will largely result from staff commuting to the site and this would lead to around 124 movements a day (62 each way comprising staff minibus trips, car sharing and minimal sole occupancy vehicles) using the new proposed operational access. Operational traffic would be well within the capacity of the local road network and would have no significant effects on the operation of the road network.

6.8.6 Based on the number of anticipated traffic movements associated with the proposed development, the proposed development would not be considered a significant travel generating use in operation. It is recognised that the location of the proposed development is not particularly well related to existing public transport networks nor non-motorised links. The locational requirements for the development are clearly set out in this statement and the EIA and it will not be realistic to relocate the development closer to existing public transport links or non-motorised routes due to other constraining factors.

6.8.7 As such a number of measures have been proposed which align with the requirements of NPF 4 Policy 13. These measures include ensuring a Travel Plan is in place, providing a reduced number of parking spaces (likely 40 spaces), cycle storage and electric vehicle charging and the use of a staff shuttle bus linking to key transport nodes such as the Kintore rail station. In addition, and in recognition of consultation feedback, the applicant is also proposing to increase the extent of the 40mph speed limit coverage at the site access subject to agreement from Aberdeenshire Council. These measures will compensate for the lack of existing options to access the site of the proposed development and are fully documented in Table 6.11 of Chapter 9 of the EIA Report. A Framework Operation Staff Travel Plan is included within Section 4 of the Transport Assessment contained within Appendix 9.1 of the EIA Report.

6.8.8 During construction there would be a greater number of traffic movements on the local road network than in operation, as set out in the Transport Assessment. These movements would vary across the construction phases. In respect of construction access a number of construction access routes will be utilised. The electrolysis plant site will require the greatest number of vehicle movement and as noted in Section 2 it is proposed to access this part of the site directly via the B977 during construction with a new Bellmouth junction, which would then be retained should it be required at a later date for operational maintenance but not otherwise used in operation. Annexe A: Proposed Site Access Drawings of the Transport Assessment (Appendix 9.1 of the EIA Report) provide sufficient detail to confirm that is possible for this construction access to meet the Local Roads Authority requirements relating to road construction and road safety including for access by abnormal loads. As noted in Section 2 this access would not be used for operational traffic. The construction access complies with the requirement of Paragraph R1.8 of Policy RD1: Providing Suitable Services of the ALDP 2023 that requires *'Any new private access onto a public road must be designed to the satisfaction of Aberdeenshire Council' Road and Transportation Service'.*

6.8.9 Construction traffic would result in increased overall traffic movement on the B977 by around 8.47% during the peak construction period although much of that increase would be HGV traffic (39.50% increase). Although there is potential for some disturbance and impacts on amenity during the construction period due to this construction traffic, there is sufficient capacity to accommodate construction traffic and the effects on amenity would be temporary. Cognisance should be had of previous levels of traffic and in particular volumes of HGVs on this route, prior to the construction of the Aberdeen Western Peripheral Route. Traffic levels are now much reduced, and the impacts of the proposed development would be minimal in comparison.

6.8.10 Notwithstanding the assessed impact on the road network being acceptable, mitigation is proposed to reduce the number and effect of traffic movements to reduce the effects on the amenity of residents. These measures are set out in Paragraph 4.2.18 of Chapter 9 of the EIA Report. They include but are not limited to limiting onsite construction parking for staff, providing shuttle buses from key transport hubs (including park and ride locations) for workers to reduce the amount of worker related traffic trips during construction, batching of concrete on site to reduce HGV delivery requirements and restrictions on site delivery times.

6.8.11 All of these measures will be set out within a Construction Traffic Management Plan, the outline of which is provided within Section 9.2 of the Transport Assessment contained within Appendix 9.1 of the EIA Report. As outlined in Section 4 of Appendix 9.1, a Staff Travel Plan that would be provided prior to construction of the Proposed Development. The finalisation of these documents and the associated provision of mitigation can be subject of controls via the use of Planning Conditions.

6.8.12 The proposed development is likely to require a small number of Abnormal Indivisible Loads (AIL) movements. Appendix 9.2 of Chapter 9 of the EIA Report provides an Abnormal Indivisible Loads Route Survey Report that indicates that access routes are considered feasible for abnormal loads subject to various minor road modifications and further structural surveys. Such movements have been associated with the Kintore Substation and therefore there is known capacity within the road network for these deliveries without significant further public road improvement works. These will be limited in number and such movements will be planned and managed and will not occur for any significant duration. The applicant intends to provide an Abnormal Indivisible Load Management Plan prior to construction, and this could be subject to a planning condition.

6.8.13 Prior to construction taking place a Road Condition Survey[69] will be undertaken; the survey area will be agreed with Aberdeenshire Council. A condition survey will ensure that any potential damage caused to the highway by the construction vehicles can be accounted for and rectified to the satisfaction of the highway authority.

6.8.14 Sufficient consideration has been given to the proposed development at the in-principle stage to demonstrate that the suitable transport infrastructure is in place and can be provided to ensure the constructed and operated safely. The implications for sustainable transport have been considered and measures are set that would provide options for sustainable travel to the proposed development. The proposed development is therefore compliant with the policy requirements of **Policy11: Energy** paragraph e) vi), **Policy 13: Sustainable Transport** of NPF 4 and the associated **Policy RD1: Providing Suitable Services** and **Policy P2: Open Space and Access in New Development** of the ALDP 2023 subject to conditions as noted above.

6.9 Historic Environment

6.9.1 **Policy 7: Historic Assets and Places** (paragraph e) vii) of NPF 4 and **Policy HE1: Protected Listed Buildings, Scheduled Monuments and Archaeological Sites** of the ALDP 2023 provide the policy basis for consideration of effects on the historic environment. These policies are supported at a national level by the Historic Environment Policy for Scotland and the HES Managing Change guidance note on Setting. Chapter 7: Archaeology and Cultural Heritage of the EIA report provides an assessment of the context and potential effects of the development on archaeology and cultural heritage interests and is supported by visualisations (Figures 7.14-7.20 of the EIA Report) and tabulations of heritage assets within, close to and within the wider study area (Appendices 7.1-7.3 of the EIA Report).

6.9.2 As noted in the EIA Report and summarised in Section 2 of this Statement, there are a limited range of historic environment assets both within and close to the site. Given the distance from listed buildings and the setting of those buildings there are no predicted effects on the setting of any listed buildings as noted in Appendix 7.3. Scheduled Monuments are discussed below. For avoidance of doubt there are no other forms of heritage asset or areas (such as battlefields, conservation areas or gardens and designed landscapes) sufficiently close to the proposed development as to have any significant effects on their setting or heritage value.

6.9.3 In respect of Scheduled Ancient Monuments (SAMs), the Aberdeenshire Canal (SM7 674 and SM 7675), which includes backfilled section of canal and associated remains of a building, lies adjacent to the site boundary. Although direct impacts on the SAM have been avoided due to routing of the water pipelines, one of the proposed temporary construction compounds lies adjacent to the SAM and has been identified to support the provision of the water pipeline and pumping station infrastructure to be located at Dalwearie. It should be noted that the Aberdeenshire Canal also relates to the only site identified within the ALDP 2023 that could be directly impacted upon by the

[69] www.legislation.gov.uk/Under s96 of the Roads (Scotland) Act 1984

development, notably ALDP 2023 Local designation P8 identified within the Kintore Settlement Boundary[70].

6.9.4 P8 covers the area surrounding the SAM which includes the location of a temporary construction compound. P8 has been allocated is a protective measure relating to the Aberdeenshire Canal noted as being allocated '*to protect the remains of the Aberdeenshire Canal and protect an area of open space contributing to the character of the place and forming part of the green-blue network*'[71].

6.9.5 Notably most protected areas in the ALPD 2023 relate to open spaces. The corresponding **Policy PR1: Protecting Important Resources** seeks to ensure that protected areas are not developed without ensuring that development is in the public interest and where loss of open space occurs as the result of a new development then replacement must be made of an appropriate type, quantity, accessibility, and quality within the settlement. In the case of P8 the allocation seeks protection of the setting of the monument rather than its active use as formal open space and therefore the EIA assessment undertaken in relation to setting is relevant to assessing the impacts on the allocation. As assessed within Chapter 7 of the EIA Report the construction effects on the setting of Scheduled Ancient Monuments would be temporary and would have no permanent effects. Therefore, temporary impacts on the settings of designated heritage assets during the construction phase have not been assessed on a site-by-site basis and are considered no greater than assessed for permanent operational effects. Permanent effects on the Aberdeenshire Canals SAM are not predicted to be significant. It is noted that there is potential for the discovery of unidentified archaeology in that area and mitigation is proposed as further noted in paragraph 6.9.9.

6.9.6 Whilst the South Leylodge Steading Stone Circle SAM is located within the site there is no development proposed within or directly adjacent to the Scheduled area. Six other SAMs lie within 500m of the site. As such in respect of nationally important historic assets effects would be limited to setting effects. These setting effects are assessed within the Chapter 7 of the EIA Report.

6.9.7 The significance of setting will vary depending on the nature of the asset and its cultural significance. Only two SAMs were identified as having potential for significant setting impacts: the South Leylodge Steading Stone Circle SAM and the more distant South Fornet SAM, which is another stone circle. The assessment indicates that the impact of the development on the settings of these monuments would only result in minor adverse effects with further mitigation provided via sensitive landscaping and building height restrictions within the southern part of the electrolysis plant area that lie closest to the SAMs.

6.9.8 As far as possible, direct impacts on other regionally or locally significant (non-designated) assets have been designed out, as identified within the mitigation table 2.8 within Chapter 7 of the EIA Report. A total of nine known assets would be directly impacted by the development; however, they cannot easily be avoided and are of low or negligible significance. Preservation by record is proposed where relevant to the asset.

6.9.9 With regard to previously undiscovered archaeology there is a risk, without mitigation, of construction impacts resulting in the destruction of archaeological features. To address this the applicant proposes to undertake a programme of archaeological investigation, the scope of which will be agreed through a Written Scheme of Investigation (WSI) whilst any relevant onsite works would be supervised by an Archaeological Clerk of Works (ACOW). Archaeological mitigation can be controlled through a suitably worded planning condition.

6.9.10 The assessment complies with the requirements of **Policy 7: Historic Assets and Places** of NPF 4 (paragraph a) and P**olicy HE1: Protected Listed Buildings, Scheduled Monuments and Archaeological Sites** of the ALDP 2023 (paragraph) that requires developers to fully understand and assess development impacts on cultural and built heritage assets. In compliance with Policy 7

[70] https://www.aberdeenshire.gov.uk/ALDP 2023 - Designation P8 - Kintore Settlement Boundary

[71] https://www.aberdeenshire.gov.uk/ALDP 2023 - Designation P8 - Protection Aberdeenshire Canal

paragraph d) there are no direct impacts on SAMs and there are no assessed significant adverse impacts on the integrity of the setting of any of those SAMs scoped into the detailed assessment.

6.9.11 The residual effects predicted by the EIA are for a low level of impact on the setting of two SAMs and the removal of a small number of low value assets identified on the Historic Environment Register. This level of impact would comply with Policy HE1 particularly given the significant benefits of the proposal as noted in Section 5 and Section 6.2 of this Planning Statement. The mitigation the applicant has committed to would comply with the requirements of Policy 7 paragraph o) and the requirement of Policy HE1 paragraph 1.6 in respect of those assets and any undiscovered Archaeology. The proposed development is therefore compliant with **Policy 7: Historic Assets and Places** and **Policy 11: Energy** of NPF 4 as well as **Policy HE1: Protected Listed Buildings, Scheduled Monuments and Archaeological Sites** of the ALDP. Furthermore, the proposed development would have no long term, post construction impact on the designated protected area P8 in accordance with **Policy PR1: Protecting Important Resources** of the ALDP 2023.

6.10 Hydrology, Water Environment and Flood Risk

6.10.1 **Policy 11: Energy** (paragraph e) viii), **Policy 22: Flood Risk and Water Management** of NPF 4, **Policy C4: Flooding** and **Policy PR1: Protecting Important Resources** of the ALDP 2023 all require applicants to demonstrate they have considered the potential impacts of development in respect of flood risk, drainage and the wider water environment including potential impacts resultant from contamination, abstraction or similar potential effects in line with technical guidance and the provisions of those policies. Furthermore, **Policy RD1: Providing Suitable Services** of the ALDP 2023 requires developers to ensure appropriate consideration and incorporation of measures to deal with surface water, foul water and provide for an adequate water supply. Consideration of each of these aspects is provided below in the context of the relevant assessments that support the development and the planning policy issues relevant to them.

Fluvial Flood Risk

6.10.2 The potential for the effects of flooding both in terms of risk to the proposed development and in terms of potential to increase flooding elsewhere is fully assessed within the EIA Report Chapter 13: Soils, Geology and Water Environment. Appendix 13.2 contains a Flood Risk Assessment (FRA) of the proposed development in order to fully understand the risk of flooding and the effects of the development as well as what mitigation may be required to reduce any such risks. The assessment has been undertaken in accordance with SEPA's Technical Flood Risk Guidance[72]. It should be noted that the development would be classified as Essential Infrastructure under SEPA's Flood Risk and Land Use Vulnerability Guidance[73] and some aspects are classified as water-compatible infrastructure.

6.10.3 The FRA confirms that there are only limited areas of mapped fluvial flood risk within the site boundary and those areas are located close to the Dewsford Burn, to the south of the gas connection site and associated water and gas pipeline routes, and close to the River Don. Figures 2-1, 2-2 and 2-3 of the FRA provide a visual representation of the mapped potential for flooding at those respective areas of the overall site.

6.10.4 The flood plain associated with the Dewsford Burn is located partially within the electrolysis plant area that lies within the mapped 1 in 200-year floodplain. This area is very small (98m^2) but is likely to be required for the electrolysis plant platform and therefore without mitigation could reduce the functioning of the flood plain in this area. Mitigation, as noted in Chapter 13 of the EIA Report, would be provided by providing compensatory storage (369m^2 accounting for level compensation at

[72] https://www.sepa.org.uk/June 2022/Technical Flood Risk Guidance for Stakeholder – SEPA requirements for undertaking a Flood Risk Assessment

[73] https://www.sepa.org.uk/SEPA Guidance and Advice Notes

depth) within the area north of the wider electrolysis plant area or by realigning the watercourse. The use of compensatory flood storage and realignment has been modelled and no downstream effects are predicted. Such mitigation would be readily available and options for providing both compensatory attenuation and realignment would be further considered and confirmed in detailed design.

6.10.5 There is potential for flood risk within the application site boundary close to the gas connection site. The location of the above-ground infrastructure has therefore been proposed outside the area of the site identified as being within the 1:200-year floodplain. Although both gas pipeline infrastructure and water pipeline infrastructure would cross some indicative flood risk areas associated with the River Don, these would be buried and not affect functional water storage nor increase the risk of flooding elsewhere and are water compatible.

6.10.6 With the exception of the headwalls and other works associated with the River Don water abstraction and discharge (which are both water-compatible infrastructure), the pumphouse and water treatment equipment have been located outside the floodplain (including climate change allowances) of the River Don. As such there would be no long-term flood risk as the areas utilised for development of the above-ground infrastructure within the flood plain would be insignificant and most of the infrastructure would be buried, with the ground restored post construction. In respect of all three areas, mitigation to manage potential flood risk during construction is set out within the Outline CEMP.

6.10.7 In summary the proposed development can be classified as Essential Infrastructure, and the FRA confirms that the vast majority of the development is not at risk of fluvial flooding. The parts of the proposed development at risk of flooding are either temporary, water compatible or mitigation can be provided to compensate for the potential for a minor loss of functional flood plain at the electrolysis plant site and safe access can be maintained. The EIA also confirms these impacts are not significant in EIA terms.

6.10.8 Although the proposed development represents a conceptual design it has been demonstrated that the proposed development is capable of meeting the requirements of **Policy 22: Flood Risk and Water Management** of NPF 4 and similar criteria set out in **Policy C4: Flooding** which:

- allows for essential infrastructure in areas of flood risk
- allows for water compatible uses in areas of flood risk
- where development could impact on the functioning of the flood plain there is no reduction in flood plain capacity, the development would remain safe and operational during floods and development would not contribute to flooding elsewhere

6.10.9 Due to the in-principle nature of the design of the proposed development, it is expected that conditions would be implemented to ensure the final details of each phase of the development would meet the policy requirements noted in paragraph 6.10.8.

Surface Water

6.10.10 Chapter 13 of the EIA Report and the associated FRA also consider the impact of surface water flooding in respect of the proposed development. The FRA concludes that whilst there are small areas identified as areas of surface water ponding and it is not anticipated the development would be at risk from or have any significant effect on surface water flows.

6.10.11 A Drainage Impact Assessment (DIA) has also been undertaken and is included as Appendix 13.3 to Chapter 13 of the EIA Report. The DIA outlines the principles and design standards for drainage that would be adopted at site. The proposed development will be designed accordance with the principles of sustainable drainage. Surface water drainage will be designed to accommodate the current greenfield run off rates whilst allowing for climate change where impermeable surfaces and buildings form part of the proposed development.

6.10.12 The DIA indicates that due to the underlying geology it is not likely to be feasible for infiltration to the ground within the northern part of the electrolysis plant site. The DIA indicates that the preferred option is for onsite attenuation via the use of attenuation basins with discharges to the nearest watercourses. This is also likely to be the case within the southern part of the site, but subject to further site investigation data confirming infiltration rates are suitable, some or all of the collected runoffs could be discharged to ground within the southern part of the site. Within the northern part of the site the drainage discharge via attenuation would be to the Dewsford Burn and within the southern part of the site (should it be required) via the Park Burn. Sufficient treatment will be applied to ensure appropriate attenuation and associated maintenance of good water quality at the point of discharge. An indicative design illustrating what the attenuation may look like within the northern part of the electrolysis plant site is captured within Figure 3 (Indicative Electrolysis Site Masterplan Ref Drawing Ref SL260_L_X_MP_2_Rev 2).

6.10.13 Surface water management will also be required at the gas connection site and the pumping station. At the gas connection site due to the proximity of the Park Burn to the south, it is proposed to drain surface water runoff from the impermeable areas via gravity to a detention basin before a restricted discharge to the watercourse. At the pumping station it is proposed to attenuate surface water runoff via a detention basin before a restricted discharge to the Silver Burn.

6.10.14 In addition to managing surface water volumes, the drainage design will include for the provision for the collection and containment of firewater and any accidental spoils for the electrolysis plant site and for the containment of any plant containing oil or other pollutants that may otherwise pose a pollution risk. This will be regulated by SEPA under the PPC Permit. A detailed management and maintenance scheme will also be provided as part of the detailed design stage based on the measures set out in Table 4-1: Detention basin general maintenance requirements.

6.10.15 During the construction process surface water drainage will be managed in line the measures set out in the Outline CEMP. These measures include ensuring water quality is monitored. The applicant has undertaken an extensive programme of water quality monitoring to establish baseline conditions and this monitoring will be undertaken through the construction process to ensure that any changes in water quality can be identified and any further mitigation put in place as set out in the Outline CEMP. Collectively these measures will ensure that the potential for pollution incidents are minimised and any reduction in water quality can be identified so that appropriate corrective actions can be taken in accordance with industry standard good practice.

6.10.16 In undertaking the detailed drainage design, the required attenuation volume, and the rate of discharge from the drainage system will use the principles set out in the DIA and in accordance with SEPA guidance. It is expected that the provision of details of the construction and operational surface water drainage systems will be secured by planning condition with the final drainage design and associated operational maintenance of these systems will be agreed with Aberdeenshire Council as part of the discharge of conditions through the AMSC stage.

6.10.17 The proposed development is therefore capable of meeting the requirements of **Policy 22: Flood Risk and Water Management** of NPF 4 part c) that requires all development proposals to manage surface water sustainably on site in order to prevent surface water flooding elsewhere and similar criteria set out in **Policy C4 Flooding** part C4.6 and **Policy RD1: Providing Suitable Services** part RD1.13 of the which both require that Sustainable Urban Drainage principles apply to all sites.

Water Usage, Abstraction and Discharge

6.10.18 Other than the discharge of surface water noted in the previous paragraphs, the proposed development will involve the use of water for general day to day operation of the facility, the treatment and discharge of foul water generated from welfare facilities on site. Water will also be utilised within the electrolysis process which requires both water abstraction and discharge of water used in the electrolysis process.

6.10.19 Potable water for general use (other than hydrogen production) would be provided via a connection to the public water supply network. This aligns with **Policy RD1: Providing Suitable Services** of the ALDP 2023 that requires under paragraph RD1.10 that developments should be serviced with a water supply with a preference for a mains supply.

6.10.20 Due to the distance of the development from the public wastewater infrastructure it is proposed to utilise a private drainage treatment system such as package wastewater treatment plant that would discharge into the surface water attenuation system following appropriate treatment. Package wastewater treatment plants provide a high quality of treatment, and these systems can generally discharge directly to a watercourse without further need for infiltration. It is expected that a condition would be utilised in order ensure final details of the foul drainage system including any maintenance of those systems to be utilised are provided prior to the commencement of development. These safeguards will ensure that there is no uncontrolled discharge of potential pollutants to the ground nor to the water environment during the operational site. The provision of a high-quality private drainage system would be compatible with the provision of paragraph RD1.12 of **Policy RD1: Providing Suitable Services** of the ALDP 2023.

6.10.21 In terms of the wider use of water directly for the hydrogen production process, permission has been granted by SEPA for water abstraction from the River Don under a Controlled Activities Regulation (CAR) authorisation. The licencing process for abstraction has confirmed the physical quantity of water that can be abstracted from the River Don without any significant effects on water levels or hydrological regime of the river. The licence is appropriately conditioned to ensure that abstraction is sensitive to the river levels within the River Don.

6.10.22 The rate of primary water supply for the hydrogen production facility via surface water abstraction from the River Don will be regulated by SEPA under a CAR authorisation, which has been obtained for the proposed development. The CAR authorisation requires some water abstracted from the River Don to be returned to the river through the discharge pipeline. As SEPA has granted an abstraction licence and this is sufficient to allow for the maximum capacity of 3GWe of hydrogen production, no further consideration of the abstraction of water is required as part of the planning process.

6.10.23 In respect of return water, discharge authorisation from SEPA will be required in the form of a Pollution Prevention Control Permit (PPC). It is proposed that an application would be made for a PPC Permit will be made following further detailed design of the plant and equipment.

6.10.24 As such the EIA concludes that there would be no significant adverse effects from water abstraction or discharge, and this is not considered to be pertinent to the determination of the proposed development. The proposed development will need to operate within the CAR authorisation and PPC Permit and the assessment of discharged water from the process will be considered further by SEPA through the PPC permitting process.

<u>Wider Impacts on Watercourses, Groundwater, and Other Water Users</u>

6.10.25 Chapter 13 of the EIA Report and the FRA note the potential for effects on a number of watercourses and drainage ditches as part of the development including the water and gas pipeline construction. A schedule of watercourse crossings and their condition is given in Appendix 13.4 of the EIA Report. Technical detail will be provided at a detailed design stage to ensure that there are no temporary or permanent adverse impacts on surface water flows or the water environment. The design and construction of these crossings will also be subject to the mitigation measures set out in the Outline CEMP.

6.10.26 Effects on Groundwater Terrestrial Dependent Ecosystems (GWDTE) and groundwater have been considered and the potential for effects are considered negligible in accordance with the requirements of paragraph E1.8 of **Policy E1: Natural Heritage** of the ALDP 2023. Furthermore, the EIA has considered the potential for effects on other water users. No private water supplies are

considered at risk from the proposed development and no other licenced abstraction and discharges has been identified within the area.

Summary of Assessment of Hydrology, Flood Risk, and the Water Environment

6.10.27 In summary the EIA and associated technical FRA and DIA do not predict any residual significant effects on the water environment based on the design parameters and subject to the identified mitigation set out within those assessments. Those mitigation measures can either be controlled through planning conditions or will be controlled through other regulatory mechanisms. It has been demonstrated that the proposed development:

- Is in accordance with the provisions of **Policy 22: Flood Risk and Water Management** of NPF 4 and **Policy C4 Flooding** of the ALDP as flood risk has been assessed and is either minimal or can be addressed via compensation and there would be no net loss of blue infrastructure even in the event of the realignment of the Dewsford Burn in accordance with **Policy 20: Blue and Green Infrastructure** of NPF 4
- Is in accordance with the provisions of **Policy 22: Flood Risk and Water Management** of NPF 4, **Policy C4: Flooding** and **Policy RD1: Providing Suitable Services** of the ALDP 2023 in that surface water management has been appropriately considered at the in-principle planning stage and control and management of surface water can be addressed at the detailed stage in line with the design principles
- The development can be appropriately designed to ensure that the development can be serviced in respect of a water supply and the provision of foul drainage infrastructure in accordance with of **Policy RD1: Providing Suitable Services** of the ALDP 2023
- Water abstraction and discharge from the River Don will be managed in accordance with separate regulatory controls under the terms of the existing CAR authorisation and a PPC Permit ensuring that there would be no unacceptable impacts on water levels or water quality
- There is minimal potential for impacts on ground water and associated ecosystems or existing water users and measures have been identified through the EIA and the Outline CEMP to manage the potential for construction impacts on the water environment in accordance with the provisions of **Policy E1: Natural Heritage**

6.10.28 By virtue of the above it has been demonstrated that the proposed development would also comply with the provisions of **Policy 11: Energy** of NPF 4 in respect of the consideration set out in paragraph e) of that policy and that the associated provisions of **Policy C2: Renewable Energy** of the ALDP 2023.

6.11 Ecology, Biodiversity and Arboriculture

6.11.1 NPF 4 places great emphasis on the nature crisis and **Policies 1: Sustainable Places**, **Policies 3: Biodiversity** and **Policy 4: Natural Places** of NPF 4 relate to the broader need to conserve and enhance biodiversity as well as including appropriate protections for relevant designation sites and protected species. **Policy 11: Energy** (paragraph e) ix) also requires assessment of a proposals impacts on biodiversity. The ALDP 2023 contains similar policies to NPF 4 including **Policy E1: Natural Heritage** and **Policy PR1: Protecting Important Resources**.

6.11.2 A thorough assessment of the potential impacts of the proposed development on ecology and biodiversity is contained within Chapter 8: Ecology and Biodiversity of the EIA Report and the associated appendices. The appendices contain a full appraisal of the site by virtue of both field and desk-based surveys covering the various ecological interests that may be present on the site demonstrating a clear understanding of the characteristics of the site and its ecological context.

6.11.3 The proposed development would not directly impact on any international or national ecological designations. There is potential for the site of the proposed development to provide suitable habitat foraging within the development area by overwintering geese that are a qualifying interest of the

Loch of Skene SPA and the Ythan Estuary and Meikle Local SPA. As such a Habitats Regulations Appraisal (HRA) has been undertaken (EIA Report Appendix 8.11).

6.11.4 The HRA identifies potential for linkages with both SPAs due to potential for areas within the development site to be utilised by species associated with both sites. However, usage was low and infrequent and there is extensive available habitat within the wider area. Subject to mitigation comprising phased clearance of agricultural land providing foraging habitat (if this is undertaken during winter), the HRA concluded that there would be no adverse impact on the integrity of either site. This mitigation can be readily undertaken and secured by Planning Condition. It is anticipated that a condition would secure the requirements for mitigation to be employed during construction in line with the HRA assessment.

6.11.5 No significant effects on the Loch of Skene SSSI were identified within the EIA assessment. The proposed development does not directly impact on any Local Nature Conservations Sites (LNCS) and indirect impacts are unlikely as noted within the EIA Report.

6.11.6 The site is both adjacent to a number of small areas identified as Ancient Woodland and native woodland. These are predominantly located along the boundaries of the development site. There is no intention to remove trees within areas identified as Ancient Woodland. It is intended to retain the small but visually notable block of commercial woodland that is located centrally within the electrolysis plant site. Other individual trees and groupings of trees are located within the site and will be retained wherever possible. It is possible that some trees will need to be removed following finalisation of the detailed design of the proposed development. A tree condition survey is provided at Appendix 8.17 of the EIA Report and outlines the location and assessed classification of these trees. Further assessment and suitable protective measures can be employed at the detailed design stage and secured by planning condition. The Outline BEMP provides significant scope for tree planting within the wider landscaping scheme and allows for an overall expansion of the woodland cover in compliance with paragraph a of Policy 6: Forestry Woodland and Trees that supports proposals that would lead to an overall expansion in woodland and tree cover.

6.11.7 The proposed development capable of meeting the policy requirements set out in **Policy 6: Forestry, Woodland, and Trees** of NPF 4 and **Policy E3: Forestry and Woodland** of the ALDP 2023**.** The proposed development would have no significant effect on any ancient or native woodlands and any residual impacts on trees would be further assessed at the AMSC stage alongside appropriate mitigation and enhancement in accordance with the requirements of appropriate planning conditions

6.11.8 Turning to other habitats that could be directly impacted by development, although it is primarily agricultural land, the site contains a mix of habitat types. The assessments provided within the EIA Report indicate that one Annexe 1 habitat (the River Don) a number of Scottish Biodiversity List (SBL) priority habitats and Local Biodiversity Action priority habitats were identified within the site although these form a small overall proportion of the overall site area which generally consists of low value habitat types. Given the application is made 'in principle', a worst-case scenario has been applied to the assessment and whilst it may be possible to further reduce any habitat loss via detailed design, it is recognised that the loss of these habitats through construction will have a negative impact on biodiversity in the short term.

6.11.9 Significant effects at a site level are only predicted on a small number of habitats related to the fen and grassland areas that are likely required for development within the electrolysis area. Habitat creation and enhancement forms part of the mitigation proposed within the EIA and would reduce these post-mitigation effects to a non-significant level.

6.11.10 In respect of specific species, the assessments have identified the potential for impacts on protected species during construction and operation of the development which could be significant at a site level prior to further mitigation. Appropriate mitigation is fully set out in Chapter 8 of the EIA report, and summarised briefly, this includes Ecological Clerk of Works monitoring, habitat creation, use of protective buffers, species translocation, sensitive lighting via a Lighting Design Principles

Statement, use of fish screens at the abstraction points and bat and bird boxes. This mitigation can be secured by condition.

6.11.11 Badgers are present on the site and badger sett subject to mitigation set out in the assessment. Impacts on the identified sets cannot be mitigated through siting and it is anticipated a licence will be required from Nature Scot to close these sets subject to the provision of artificial badger sets.

6.11.12 Invasive Species are present within and close to the site. An Invasive Non-Native Species (INNS) Management Plan (to form part of the adopted CEMP) is proposed.

6.11.13 In addition to understanding the potential effects of the development on habitats and species, the applicant is proposing to ensure that the development results in a significant enhancement in the overall biodiversity value compared to the assessed pre-development status of the site. This includes site enhancements as well as the inclusion of a specific area of the site to the north of the River Don which would solely be utilised for biodiversity enhancement measures. To secure the above actions the Outline Biodiversity Enhancement and Management Plan (BEMP) has been developed.

6.11.14 The Outline BEMP is presented in Technical Appendix 8.18 and includes measurable objectives for habitat creation and management and cover a period of 30 years, with management to be reviewed regularly and informed by monitoring data. Further to the Outline BEMP the applicant has undertaken, and Indicative Biodiversity Net Gain Feasibility Assessment (Indicative BNG Feasibility Assessment) based on the existing habitat values and the measures set out in the Outline BEMP. This highlighted that subject to the outline measures proposed the proposed development could mitigate the impacts of the development and deliver biodiversity enhancement in the region of a 15% gain in area-based habitats, 14% gain in hedgerow habitats and just under 3% gain in watercourse habitats. This is considered to exceed the aspirations of **Policy 3: Biodiversity** of NPF 4 and the corresponding **Policy E1 Natural Heritage** of the ALDP 2023 in providing a significant uplift in biodiversity enhancement. The required final details of this enhancement can be controlled by planning condition.

6.11.15 In summary, built-in mitigation via the design process has been used to ensure that wherever practicable, adverse effects on sites designated for their ecological value have been avoided. Subject to frequently employed mitigation, the applicant has demonstrated the proposed development would have no adverse effects on the integrity of European sites (SPA/SAC) and there would be no adverse significant adverse effects on any sites of national importance or sites of local nature conservation value. The assessment demonstrates compliance with paragraphs b), c), d) and e) of **NPF 4 Policy 4** and paragraphs E1.2, E1.3 and E1.4 of **Policy E1: Natural Heritage** of the ALDP 2023.

6.11.16 **Policy 4: Natural Places** requires that proposals likely to have an adverse effect on species protected by legislation will only be supported where the proposal meets the relevant statutory tests, an approach mirrored by the ALDP 2023 Policy **E1: Natural Heritage**. Although licences would be applied for at a later stage within the development process, given the significant public benefits noted within Section 5 of this Statement, and the mitigation proposed, it is considered that the test for granting a licence under the relevant act[74] would be met.

6.11.17 In considering the policy regarding other habitats and species it is acknowledged there will be some impacts at a site level on habitats and protected species (as noted above) during construction. The applicant has approached these in line with the hierarchy set out in **Policy 3: Natural Places** of NPF 4 in that the site's ecological context has been fully considered and impacts fully assessed in the context of the conceptual design. Where possible, impacts have been avoided, and where impacts are unlikely, or cannot be avoided, measures have been proposed to fully mitigate any predicted negative effects. In addition, significant biodiversity enhancements are proposed that would ensure that the aspirations of NPF 4 and the ALDP in enhancing biodiversity as an outcome of development can be realised.

[74] https://www.legislation.gov.uk/Protection of Badgers Act 1992

6.11.18 Overall, the assessments provided in support of the applicant confirm the development can comply with the related policies referred to above and therefore also **Policy 11: Energy of NPF 4**. Conditions can be readily employed to address future compliance and the finalisation of mitigation based on further design as suggested in **Appendix 1**.

6.12 Decommissioning and Site Restoration

6.12.1 **Policy 11: Energy** paragraph e) xiii) of NPF 4 seeks to ensure that proposals for decommissioning and site restoration are considered as part of the assessment of energy developments and suitably addressed as relevant to that proposal. **Policy C2: Renewable Energy** of the ALDP 2023 (paragraph C2.9) notes that legal agreements, conditions, or bonds *may* be required to ensure removal of visible structure whenever the project ceases to operate for a period agreed with the proposer.

6.12.2 The hydrogen production facility is proposed as a permanent development. Although like any development the components of the proposed development will have a design life, the nature of the proposal is different from other forms of renewable energy like wind or solar panels which will invariably be removed or replaced at the end of their operational life. The plant and equipment would be maintained, refurbished, and upgraded as required throughout its operational life and in accordance with the relevant legislation pertinent at the time. The operational life of the development will therefore depend on prevailing market conditions.

6.12.3 Should the facility be decommissioned, above-ground structures would be removed from the site, with the maximum value being recovered from materials and equipment via re-use or recycling at the time. Below-ground infrastructure (including pipelines, foundations, and concrete pads) would, once made safe, remain in situ.

6.12.4 Policy C2 is clear that the requirement for a bond, legal agreement or condition may not apply in all cases. As the application has been made in perpetuity rather than as a temporary development the applicant does not consider it necessary to apply a decommissioning condition or other associated provisions. Notwithstanding, the applicant is happy to discuss the terms of any such conditions with the LPA should it be deemed necessary as part of the consideration of the application.

6.13 Soils

6.13.1 **Policy 11: Energy** of NPF 4 does not explicitly include for the consideration of the impacts on agriculture and soils; however, such considerations are covered under **Policy 5: Soils** of NPF 4 and **Policy PR1: Protecting Important Resources** and **Policy C2: Renewable Energy** of the ALDP 2023. Both policies seek to minimise impacts on soils through development, minimise impacts on better quality agricultural land and prevent development that is not essential from impacting on carbon-rich soils and priority peatland habitat. It is noted, however, that both policies allow for energy-related development on prime agricultural land.

6.13.2 The electrolysis plant site would be located on land which is not considered to be prime agricultural land and the permanent land take is therefore unlikely to affect prime agricultural land. A small area close to the pipeline corridors is identified as being Class 3.1 land; however, good practice measures identified in the Outline CEMP relating to construction soil management, storage and restoration would ensure that there would be no significant impact on the quality of agricultural land following pipeline installation.

6.13.3 The applicant has undertaken further assessment including land mapping and the field survey of the application site and those surveys have confirmed that the application site does not contain any peatland or carbon rich soils. It is considered that the proposed development therefore accords with **Policy 5: Soils** of NPF 4 and **Policies PR1: Protecting Important Resources** and **C2: Renewable Energy** of the ALDP 2023.

6.14 Cumulative Impacts

6.14.1 The assessment of cumulative effects that may arise as a result of the proposed development in combination with other developments is both a requirement of the EIA Regulations[75] and of planning policy being a requirement of **Policy 11: Energy** paragraph e) xiii) of NPF 4 and P**olicy C2: Renewable Energy** of the ALDP 2023.

6.14.2 The approach taken to assessment is set out in Chapter 4 of the EIA Report, which is considered a robust approach to the assessment of inter-related and cumulative effects.

6.14.3 Assessments of potential interrelated effects across the assessed topics scoped into the EIA are summarised within Chapter 16: Interrelated Effects of the EIA Report. As set out in Chapter 16 there are no interrelated effects that are considered to be significant in EIA terms.

6.14.4 With regard to the cumulative (in-combination) effects assessment, developments that are at screening, scoping, at the application stage or have been approved or are in construction (but which have not been substantially completed) have been reviewed to identified those developments that could, due to their scale, location and/or nature of impacts have the potential for cumulative effects with the proposed hydrogen plant development such as to cause a likely significant effect at sensitive receptors.

6.14.5 As identified in Section 5 of the report, there are a number of developments that would potentially introduce new receptors that are relevant to consider as part of the cumulative effects assessment. A summary of the cumulative (in-combination) effects resulting from the assessment of the other developments together with Kintore Hydrogen Plant is presented assessment provided within Chapter 17: Summary of Cumulative Effects. Figure 1.1: Shortlisted Cumulative Development within Chapter 17 provides a visual representation of the developments identified within Section 5 of the Planning Statement and Chapter 17 of the EIA regulations. As set out in Chapter 17, there are no additional cumulative effects that are considered to be significant in EIA terms.

6.14.6 This assessment meets the requirements of **Policy 11: Energy** paragraph (xii) to fully consider cumulative effects. A summary of the outcomes of this assessment are noted below**:**

- The majority of cumulative landscape and visual effects are anticipated to remain non-significant and impacts from building based receptors would not fundamentally change. No effects of greater adverse significance would be introduced
- It is recognised that the volume of development that could potentially be developed in close proximity to the Kintore Substation and Kintore Hydrogen has potential to affect the character of parts of the local landscape character of the wider Landscape Character Area. The assessment provided within Chapter 6: Landscape and Visual indicates that cumulative impacts would not be significant across the identified Landscape Character Area and landscaping proposals as indicatively set out in the illustrative masterplan and Outline BEMP would assist in reducing these effects further
- No significant cumulative effects on built and cultural heritage resources are anticipated
- Cumulative ecological effects could arise via the combined effects of disturbance and habitat loss from other developments together with Kintore Hydrogen Plant. However, the cumulative effects together with the proposed Kintore Hydrogen Plant are not considered likely to be of greater significance such as to alter the overall conservation status of the features. Post construction the development would have a net positive effect on habitat and species due to the enhancement of habitat based on pre-development levels
- In terms of traffic generation, potential growth in road usage is accounted for within the Transport Assessment and therefore the EIA already provides a suitably robust assessment of

[75] https://www.legislation.gov.uk/2017/EIA Regulations

potential cumulative effects. No greater cumulative effects than already assessed are therefore predicted

- Cumulative developments with the potential to have noise-generating plant or activity also affecting receptors impacted by Kintore Hydrogen Plant have been assessed. The noise Rating Level from the cumulative developments (individually or together) plus Kintore Hydrogen Plant at the sensitive receptors most affected by a combined noise level would be no greater than Kintore Hydrogen Plant alone, and so there would be no greater impact or significance of effect. This is due to the lower noise level of the cumulative developments at the receptors and the logarithmic nature of combined noise levels
- The EIA identifies there is potential for cumulative effects arising from construction impacts. Under normal planning controls, other major cumulative developments will also be required to apply good practice dust mitigation measures, as are also proposed for Kintore Hydrogen Plant. With respect to and operational nitrogen dioxide emissions, only one cumulative development with potentially significant traffic-source nitrogen dioxide emissions was identified, and none with relevant point-source emissions. The impact of traffic-source air pollutant emissions from Kintore Hydrogen Plant is below the threshold for assessment. No significant cumulative effect is therefore likely
- In terms of cumulative effects on soil, geology, and water environment, all developments would be expected to adopt current good practice and be managed in accordance with industry standards and relevant legislation, planning policy and guidance as controlled by the relevant planning authority and regulators (where applicable), and as also proposed for Kintore Hydrogen Plant. These standards are designed to ensure, with respect to soils, geology, and the water environment, that potential impacts are mitigated and controlled at source. No significant cumulative effect with Kintore Hydrogen Plant is therefore predicted
- No significant cumulative effects are predicted in relation wider population and human health effects
- Although there may be positive socio-economic benefits resulting from the assessed developments in combination with the Proposed Development, they are unlikely to be significantly greater than the assessed impact of the proposed development which is a moderate positive effect
- Future projects such as the Tealing to Kintore 400kV project may increase cumulative visual effects for receptors near to the overhead line route, as would future battery projects, but given that these projects are not within the planning system they cannot meaningfully be assessed, and it would be for those projects to consider any further cumulative effects

6.14.7 In summary, the cumulative effects of the proposed development with other developments are unlikely to be significant in EIA terms either in respect of positive or negative effects. Where effects are predicted they are no greater in magnitude than if the proposed development was to be constructed and operated in isolation. In planning policy terms, it is recognised that there is potential for a temporary reduction in the amenity of residential receptors should multiple projects to be constructed concurrently without sufficient control. Control measures such as construction and transport management plans, advanced planting and landscaping and operational mitigation measures, as proposed within the EIA, would be subject to further assessment at a detailed design stage (through the AMSC process). These measures would be capable of mitigating potential effects to ensure any residual impacts remain acceptable in planning terms.

7.1 Conclusion

7.1.1 The application seeks Planning Permission in Principle (PPiP) for the construction of a green hydrogen production facility referred to as 'Kintore Hydrogen Plant' to the west of the town of Kintore, Aberdeenshire. The development includes both the production facility itself and ancillary development in the form of both water and hydrogen pipelines and associated infrastructure (the Proposed Development).

7.1.2 The first and most important consideration in providing a conclusion to the assessment of the proposed development is whether the proposal accords with the Development Plan. The second consideration is whether there are any identified material considerations relevant to the proposed development and whether those considerations would further support a decision to grant Planning Permission in Principle or suggest against the grant of Planning Permission in Principle.

7.1.3 The Planning Statement has identified the relevant Development Plan as constituting NPF 4 and the ALDP 2023 as set out in Section 4 of this Statement and relevant material considerations as set out in Section 5.

Compliance with the Development Plan

7.1.4 The assessment set out in Section 6.2 of this Planning Statement highlights that the principle of the proposed development is supported by **Policies 11: Energy** of NPF 4 and **Policy C2: Renewable Energy** of the ALDP 2024. These policies provide support for all forms of renewable, low-carbon and zero emissions technologies in appropriate locations where resultant impacts of developments have been assessed and can be made acceptable noting appropriate mitigation, as required.

7.1.5 NPF 4 through **Policy 11: Energy** is clear that in assessing any impacts and their acceptability, significant weight is to be placed on the contribution of developments to greenhouse gas emissions reduction targets and renewable energy generation targets. This is reiterated further within **Policy 1: Tackling the climate and nature crisis** of NPF 4 which confirms that significant weight will be given to the global climate crisis when making decisions on planning applications. Collectively the Development Plan provides a clear statement as to the imperative of the need to combat climate change, decarbonise 'hard to abate' industries and facilitate and encourage renewable energy technologies.

7.1.6 The potential carbon reductions from the proposed development would be significant due to the direct replacement of gas with green hydrogen. With lifetime emission savings of up to 28 million tonnes of CO_2 the proposed development would make substantial contribution to the Scotland and the UK's net zero targets whilst allowing for the maximisation of the use of renewable energy and the accelerated 'scale up' of renewables. Further benefits derived from the proposal relevant to development plan policies include the significant socio-economic benefits of the proposed development including substantial jobs in both the construction and operation phases. These benefits align with the Policy objectives set out in NPF 4.

7.1.7 As demonstrated within this Planning Statement, the land to be utilised for the proposed development is not specifically identified for any particular land uses that would conflict with the proposed development. Although Policy 11 of NPF 4 does not require a locational justification for renewable energy proposals, there is a clear locational requirement for the proposed development, and this meets the policy requirements of Policy C2 of the ALDP 2023.

7.1.8 The wider assessment of policy compliance within the Planning Statement is supported by the assessment provided within the EIA Report. Whilst it is acknowledged that effects identified within the EIA do not necessarily always correspond to planning policy, they provide a robust basis for identifying potential issue of policy compliance or non-compliance. The assessment is further defined and supported by the applicant's approach to designed-in mitigation and in defining

maximum design parameters for the proposed development. It is considered that both the future design of the proposed development, the embedded and proposed additional mitigation set out in the EIA and supporting documentation provides a robust basis for planning conditions that would allow the LPA to control the final form and phase of the proposed development.

7.1.9 Importantly, with implementation of appropriate mitigation that has been fully set out in the EIA Report and associated outline management plans, the proposed development would result in very limited adverse environmental effects either individually or in combination with other developments during its operation. Furthermore, the assessment against the relevant planning policies demonstrates overall compliance with the policies of the Development Plan or the ability to comply with policies subject to detailed design information to be provided through the AMSC process and controlled via Planning Conditions.

7.1.10 The Planning Statement acknowledges that there may be some residual impact on local landscape character and on the visual amenity experienced from a small number of residential properties located within the immediate vicinity of the electrolysis plant site. However, the level of impact on these receptors would be acceptable in planning terms particularly when considered on balance with the benefits of the development under the provisions of **Policy 11: Energy** and **Policy 1: Tackling the climate and nature crisis** of NPF 4.

7.1.11 It is acknowledged there is potential for some impacts to arise from the construction of the proposed development. Those impacts are temporary and as demonstrated by the assessment are within the expected threshold of impacts that would normally occur during any large construction process. The impacts can appropriately be managed through mitigation measures that can be controlled via the use of planning conditions.

7.1.12 Overall, the proposed development would make a substantial contribution to the aims and objectives of both NPF 4 and the ALDP 2023 in promoting sustainable development and tackling climate change and would accord both with NPF 4 and the ALDP 2023 when considered in concert. The proposed development therefore accords with Development Plan.

Material Considerations

7.1.13 Section 5 summaries the additional material considerations that are relevant to the proposed development. As set out in Section 5 the proposed development would:

- Deliver decarbonisation by installing flexible hydrogen production that allows for the maximisation of the use of renewable energy to decarbonise the electricity gird and gas transmission network by displacing natural gas with low carbon green hydrogen. In doing so the proposed development will make a significant contribution to meeting the objectives and associated targets set out in the Climate Change Act 2008 and Climate Change (Scotland) Act 2009 as amended respectively

- Is wholly aligned to the UK and Scottish Governments' hydrogen policies and strategy and in supporting the delivery of at-scale hydrogen production to be injected into the gas transmission system

- Facilitate the accelerated 'scale up' of renewables as well as supporting the conversion of the national gas pipeline network to carry hydrogen

- Increase the UK's energy security, resilience, and independence by facilitating solutions for the problem of weekly, monthly and seasonal intermittency of renewables and therefore reducing the need to import energy from overseas

- Encourage investment in the UK hydrogen supply chain and skills, provide a significant benefit to the local economy, and provide local employment opportunities that would assist with the Northeast of Scotland's just transition away from oil and gas

7.1.14 In addition to the positive considerations referenced above, it is noted that the embedded mitigation requires the cessation of residential use of two properties located close to the electrolysis plant site prior to operation of the development. There are no specific policies preventing the loss of open market housing in Aberdeenshire and the weight to be given to the limited loss of housing stock required to operate the proposed development is considered to be low. Given the significant benefits to be derived from the proposed development, any adverse impact in terms of the reduction in rural housing stock would be greatly outweighed by the benefits of the proposed development.

Overall Conclusion

7.1.15 In reaching a conclusion, NPF 4 has a presumption in favour of low carbon infrastructure with weight being given to the scale of contribution to reducing carbon emissions. The proposed development will help deliver decarbonisation, play a significant role in meeting both UK and Scottish targets for hydrogen production, and support associated net zero targets, while also providing significant wider public benefits.

7.1.16 The proposed development is consistent with the aims, objectives and policies of the Development Plan and there are no overriding material considerations which would indicate that the proposed development would be unacceptable in land use planning terms. Planning Permission in Principle should therefore be granted subject to appropriate planning conditions.

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