Cruachan Expansion project – Planning Statement

May 2022

Contents

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1 Introduction

1.1 Introduction

1.2 Overview

1.2.1 This statement is part of an application submission on behalf of Drax Cruachan Expansion Limited (the applicant) for consent under Section 36 of the Electricity Act 1989 (the Electricity Act) and deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 (the Planning Act), to construct and operate a new underground pumped storage hydro (PSH) power station and associated infrastructure adjacent to the existing Cruachan 1 facility, Dalmally, PA33 1AN; the proposed "Cruachan Expansion Project." The application site falls within the Argyll and Bute Council (ABC) local authority area.

1.2.2 In summary, the proposed PSH facility and associated works seek to optimise use of the existing Cruachan Power Station, reservoir and dam through development of a new, separate but linked, underground power station and associated infrastructure to provide up to 600MW new generating capacity. Both power stations will use Loch Awe as the lower reservoir and Cruachan Reservoir as the upper reservoir.

1.2.3 As the proposal will have an installed generating capacity in excess of 50MW, consent is sought from the Scottish Ministers under Section 36 of the Electricity Act, together with a direction under Section 57(2) of the Planning Act that planning permission is deemed to be granted for the proposed development. Any conditions attached to the deemed planning permission will require to be discharged through the submission of relevant information to ABC as the local planning authority (LPA).

1.3 Environmental Impact Assessment

1.3.1 Regulation 5 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations) provides that an EIA Report must accompany any application for section 36 consent for EIA developments and the submission has been prepared as such.

1.4 Engagement

1.4.1 Under The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, the proposal is designated a national development, referenced in NPF3 and the emerging National Planning Framework (4) as significant as a productive place, key to delivering the national spatial strategy. As such a programme of statutory engagement has taken place with a range of stakeholders as outlined in the accompanying Pre-Application Consultation (PAC) Report.

1.5 Application

1.5.1 The application submission relates to land defined in the site location plan (Appendix One), and in addition to this statement, includes the following:

- EIA Report (EIAR);
- Flood Risk Assessment;
- Loch Awe and Cruachan Reservoir Hydrology Technical Note;
- Species Reports: Bat, Otter, Ornithology, Fisheries, Badger, Red Squirrel, Pine Martin;
- Ecological Constraints Plan;
- Habitats Regulation Assessment;

- Transport Assessment;
- Draft Construction Traffic Management Plan;
- Noise Monitoring;
- Draft Peat Management Plan;
- Cultural Heritage Assessment;
- Draft Construction Environmental Management Plan;
- Schedule of Mitigation; and,
- Pre-Application Consultation (PAC) Report.

1.6 Supplementary Procedures

1.6.1 In parallel, the applicant will lodge applications under the relevant legislation in respect of:

- Listed Building Consent;
- CAR License; and,
- Application for Acquisition of Water Rights.

1.7 Summary

This supporting statement in conjunction with the wider application submission, will address the determining issues in the consideration of this proposal, focussing upon:

- The extent to which the proposed development accords with the relevant provisions of the Electricity Act, the national planning policy context and relevant material considerations. EIA Development – assessment of the likely environmental impacts of the proposed development.

2 The Proposed Development

2.1 Application Site

2.1.1 The Site, shown in Appendix 1, comprises all areas required for construction and operation of the Proposed Development. Given the scale and nature of the proposal, the red line boundary covers a broad area and includes a corridor of land running from Cruachan Reservoir, extending into Loch Awe, a corridor along the access road which currently connects Cruachan Reservoir with the A85, and a separate parcel of land located to the east of the Site where a temporary construction compound is anticipated to be located. The application boundary is approximately 447 hectares (ha) in size.

2.1.2 Located on the northern banks of Loch Awe in Argyll and Bute (National Grid Reference for Cruachan Reservoir: NN 080 282), the site encompasses the existing Cruachan pump storage hydro facility, including Cruachan reservoir, underground power station, visitor centre and associated parking and access.

2.1.3 Currently, access to the Cruachan facility is via the A85 trunk road, which links to the nearby villages of Lochawe, Dalmally, Bridge of Awe and Taynuilt. The A85 continues to Tyndrum in the east where it meets the A82, and westwards continues to Oban where it meets the A816.

2.1.4 The site is primarily formed on and within the lower slopes of Ben Cruachan, beneath the Cruachan Reservoir - the upper reservoir of the existing facility, and located within a natural coire on the southwest facing slope of Ben Cruachan.

2.1.5 The upper reservoir is impounded by a concrete mixed gravity and buttress dam (B listed) across the natural outlet to the Allt Cruachan Burn. Together, the Category A listed Ben Cruachan turbine hall and the Category B-listed dam form part of a Category A listing group with the power station. Adjacent to the power station visitor centre is the Category A-listed Falls of Cruachan Railway Viaduct.

2.1.6 The existing Cruachan facility offers a visitor and education centre and car parking to the southern side of the A85, on the northern shoreline of Loch Awe.

2.1.7 A path around the reservoir is part of the route used by the public to access the summit of Ben Cruachan.

2.1.8 A range of habitats are present on site, and parts of the Site fall within the boundaries of Glen Etive and Glen Fyne Special Protection Areas (SPA), Coille Leitire Site of Special Scientific Interest (SSSI) and Loch Etive Woods Special Area of Conservation (SAC). Additionally, Loch Etive Mountains Wild Land Area (WLA) is located immediately to the north of Cruachan Reservoir and the Site.

2.2 Description of Development

2.2.1 In summary, the proposed development seeks to optimise use of the existing Cruachan Reservoir and Dam through development of a new underground power station and associated infrastructure adjacent to Cruachan 1 to provide up to 600MW new generating capacity.

2.2.2 The proposal will be operated independently of the existing 440 MW Cruachan 1 Power Station. Both power stations will use Loch Awe as the lower reservoir and Cruachan Reservoir as the upper reservoir.

2.2.3 The proposal can be broken down into the following elements, as shown in schematic form in Appendix Two:

- **Upper Control Works** – A new intake structure including tower, screens, gates, gate hoisting arrangement, etc. would be located within and adjacent to the Cruachan Reservoir to direct water into a new headrace tunnel and underground waterway system;
- **Underground Waterway System** – A series of underground shafts and tunnels carrying water between the upper reservoir and lower reservoir, through the underground powerhouse cavern;

- **Powerhouse Cavern** – A series of underground caverns containing reversible pump-turbines and motor-generators together with associated equipment such as transformers and switchgear. The construction process will require various interconnecting tunnels to enable construction;
- **Substation** – The existing substation compound requires to be extended in order to install two new 275kV circuit breakers and associated disconnectors, with each circuit breaker to be T-connected onto the existing 275kV overhead lines at the cable sealing ends to provide connection to the existing 275KV circuit that connects to Dalmally sub-station, located some 7km to the east;
- **Ventilation Shaft** – A ventilation shaft will be required to circulate fresh air through the underground access tunnel and cavern power station complex. It is noted that this may also include a cable shaft for the 275kV cable from the transformers to cable sealing ends/sub-station;
- **Tailrace Tunnel** – A concrete-lined low-pressure tunnel including a downstream surge shaft will conduct water between the pump-turbines and Loch Awe, the lower reservoir. Upstream of the lower control works, the tailrace will contain an underground gate chamber and gate shaft, housing the tailrace tunnel gate;
- **Lower Control Works** – Comprising screened inlet / outlet structure and stop logs, positioned in Loch Awe at the end of the tailrace tunnel below the water level. These structures would channel water in and out of Loch Awe;
- **Quayside** – Constructed on the northern shore of Loch Awe to facilitate the construction of the underground access tunnels, waterway system and powerhouse cavern, and the temporary storage of spoil prior to its off-site removal;
- The quayside would also house a canopy structure, covering the stockpiles of spoil. The canopy structure would be enclosed on 3 sides by brick / concrete walls and have a corrugated roof. The maximum dimensions would be 150 m (length) x 10 m (width) x 4 m (height). The primary purpose of this structure would be to prevent silt from stockpiles mobilised by wind / rainfall from entering Loch Awe and the surrounding landscape. An indicative layout of the structure is shown in Fig. 3.1 in Appendix 1.1 of the EIAR;
- **Administration Building** – Above ground administration and workshop buildings required for day to day operational and maintenance tasks – located on the quayside;
- **Storage Buildings** – Above ground buildings required for storage and plant and equipment required for regular plant maintenance – located on the quayside;
- **Access Tunnels** – A main access tunnel of some 1450m in length would be constructed to provide access to the underground power plant, close to the shore of Loch Awe. This will cross connect to the existing Cruachan 1 to allow personnel to easily move between the plants and provide a further means of access/egress; and,
- Existing service roads will be used as far as possible to facilitate the long-term operation of the generating station. Some upgrades of these roads may be required to facilitate access by heavy machinery and the removal of spoil.

2.2.4 The following temporary works will also be required:

- An upper site compound to be used for construction laydown and concrete batching plant would be established in the vicinity of the existing dam. Once construction work for the Upper Control Works and sub-station is complete, this compound would be removed and the land restored;
- A lower site compound including workers welfare will be established to the North East of Lochawe village, with access from the junction of the A85 and B8077 (Stronmilchan Road). Once construction work is complete, this compound would be removed, and the land restored. The total area required for this compound would be approximately 9ha; and,
- A temporary diversion of the A85 using the existing car-parking layby at the Falls of Cruachan Station would be required in order to facilitate construction of the initial sections of the main access tunnel and lower control works. The A85 would revert to its current alignment once the bridge structure within the A85 has been complete (after a period of approximately 4-6 months).

2.3 Development Design

2.3.1 The design of the Proposed Development has undergone an iterative process to refine and improve the proposals in relation to a range of design requirements and criteria, including the consideration of sustainability, material use and construction efficiency.

2.3.2 The existing Cruachan 1 Power Station is one of only four large-scale PSH facilities in the UK. The station currently operates with a nominal maximum output of 440 MW in full generation mode.

2.3.3 Given the current electricity market conditions and drive towards net zero generation by 2045[1], there is a clear and urgent requirement for increased low carbon flexible generation.

2.3.4 The infrastructure at Cruachan 1 is ideally suited for expansion and development of a new and complimentary PSH scheme. The initial design work (Design Basis Report, Stantec 2020) identified the potential to develop a project which would operate alongside the existing scheme and deliver an additional 600MW of electrical output in generation mode. This can be delivered with limited environmental impact given the existing available infrastructure above and below ground. The main principles of the design and minimising visual impact are based on the following:

- As with Cruachan 1, the Proposed Development will largely be subterranean, and constructed within Ben Cruachan mountain;
- No alterations to the Dam at Cruachan Reservoir. The proposals will use the same body of water. Construction works at the reservoir are limited to the upper intake, located on the south-eastern edge of the reservoir, approximately 200m upstream of the dam;
- The interconnecting tunnels will be sited in order to avoid loss of significant historic fabric in the listed Cruachan 1 Power Station cavern, and measures will be put in place to protect the historic fabric during construction thereby preventing accidental damage. Works affecting the fabric of Cruachan 1 Power Station will be subject to a separate application to ABC for Listed Building Consent;
- Careful design and positioning of permanent, above-ground features e.g. upper intake structure to minimise landscape and visual effect and optimise the opportunity for additional mitigation measures;
- Minimising the permanent design footprint as far as is possible; and,
- Retention of existing trees which would help to limit the visual appearance of construction works and proposed features, and particularly woodland included on the Inventory of Ancient and Long-established Woodland, as far as possible.

2.3.5 The opportunity to expand Cruachan 1 presents the opportunity to utilise much of the current infrastructure. There is no requirement for a new dam, new reservoir, or significant modifications to the existing reservoirs. This as a whole presents huge carbon savings in terms of materials requirements and energy used for construction. It also means that the existing dam, which is Category B listed, does not require any modification.

2.3.6 The development of the new facility will not be detrimental to the operation of the existing facility or detract from its current efficiency. The two projects working in parallel can help facilitate increased low carbon generation, whilst also providing grid balancing services.

2.4 Construction

2.4.1 The construction process will take place over an estimated 65-month programme to achieve commercial operation of the first unit. Surface work is expected to take place Monday - Saturday 7am - 7pm and Sundays 7am - 12pm, with underground works expected to take place 24 hours a day. Some construction activities may need to be undertaken outside these hours, for which agreement would be sought from ABC.

[1] Update to the Climate Change Plan 2018 – 2032: Securing a Green Recovery on a Path to Net Zero. Published 16th December 2020.

2.4.2 Key construction activities will include the following:

- Mobilisation, site set up, camps, batching plant and haul roads;
- Construction of a working quayside platform on the foreshore of Loch Awe;
- Temporary diversion of A85 into existing layby at Falls of Cruachan;
- Provision, at the Cruachan visitor centre, of temporary public parking for the duration of the works to accommodate displacement of parking from layby at falls of Cruachan;
- Re-divert A85 back onto existing permanent alignment following completion of initial Main Access Tunnel Section;
- Construction of initial phase of working quayside platform on the foreshore of Loch Awe;
- Excavation of main access tunnel;
- Using spoil generated from initial excavation of main access tunnel to create the remainder of the quayside area;
- Continued construction of the main access tunnel, tailrace gate chamber, ventilation shaft, a tailrace surge shaft, and a tailrace tunnel under A85;
- Construction of the intake structure within Loch Awe to connect to the tailrace tunnel, including gates, screens and stoplogs;
- Drive and support main access tunnel to powerhouse complex;
- Excavation and support of powerhouse complex;
- Excavation and support of the high-pressure tunnel system connecting the Cruachan reservoir and the powerhouse;
- Excavation, construction and installation of a headgate to manage water flow to the pump turbines;
- Construction of the upper control works within and adjacent to the Cruachan reservoir to allow water in and out of the new waterway system;
- Installation of powerhouse overhead crane;
- Installation of powerhouse electromechanical and hydromechanical equipment;
- Installation of powerhouse balance of plant (mechanical and electrical); and,
- Dry & Wet commissioning of units.

2.4.3 Mobilisation will be required at the upper reservoir area and as close as possible to the lower foreshore area. Access to the upper reservoir already exists but the existing dam access road will require to be widened in places and additional passing places formed to accommodate construction traffic.

2.4.4 The first phase would be to establish two site offices and laydown staging areas. It is likely that the main site offices would be located within the lower site compound with smaller construction working areas at the lower works and upper works sites. After the establishment of the site office and laydown areas, access to the main construction areas would be established, with access roads completed prior to commencing the main construction and excavation phases to prevent excessive vehicle movements over unsuitable ground.

2.4.5 The main construction laydown area would be decommissioned on completion of the works and the land restored to a suitable standard before being returned to the owners at the end of the construction phase.

2.5 Operation

2.5.1 The Proposed Development will be designed to be operated 24/7 whenever called upon by National Grid ESO, apart from planned and unplanned outages. It will have an operational lifespan of circa 100 years, after which the need for re-powering or decommissioning will be considered.

2.6 Spoil Management

2.6.1 A major component arising from the proposed development is the generation of spoil from excavation of new tunnels and powerhouse cavern during construction.

2.6.2 The construction is anticipated to generate up to 2.30 million tonnes of excavated rock arisings over the 5.5 -year construction period (2024-mid to 2029). An average of 1,600 tonnes per day with peak generation of c. 3,000 tonnes per day. Approximately one fifth of this material (0.45Mt) will be re-used on site, and the residual volume of 1.85 Mt of spoil will be re-used off-site.

2.6.3 The primary use for approximately one fifth of the material on site will be in the creation of the quayside structure in Loch Awe and for concrete production in tunnel lining. Construction of the quayside structure has a depth of approximately 12m, width of approximately 30m and a length of 510m. It will require approximately 162,500 tonnes of spoil, 21,700 tonnes which will be imported to form the initial tunnel access and 140,800 tonnes will be from excavation arisings of spoil.

2.6.4 The remaining material will be removed from site. Discussions are ongoing with local and national stakeholders to identify market end-uses for the remaining material. Any re-use will seek to achieve the most preferable outcomes in terms of the Waste Hierarchy and Circular Economy. Drax has committed to not disposing of any of the arisings as waste in landfill or similar.

2.6.5 Approximately 15,000 tonnes of material will be stored on the quayside structure at any one time, (prior to removal by road). The material would be stored under a canopy structure, enclosed on three sides which would prevent runoff and windblown silt from entering Loch Awe.

2.6.6 The effects, management and implications are set out in the EIA Report (EIAR) Waste Management Chapter 14, and the Transport Assessment (TA).

2.6.7 It is anticipated that, as the project develops, the accuracy and extent of the material resources use and waste quantifications will improve, supporting the effective planning and management of any wastes likely to arise from the Proposed Development.

2.7 Summary

2.7.1 Whilst the proposed development contains a number of elements, the key principles are based upon maximising efficiency, linking into an existing facility and minimising impacts. The wider EIAR submission demonstrates and assesses this in greater detail.

3 Legislative Planning Framework

3.1 The Electricity Act 1989

3.1.1 As the proposal is an onshore renewable energy development that has capacity to generate over 50 MW, consent is required from the Scottish Ministers under the Electricity Act. The LPA is a statutory consultee in the application process and procedure.

3.1.2 Schedule 9 sub-paragraph 3(1) of the Electricity Act requires that in formulating proposals for a generating station a generation licence holder:

a) *"shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest;* and,

b) *shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects."*

3.1.3 Under sub-paragraph 3(2), in considering proposals, the Scottish Ministers are to have regard to:

a) *"the desirability of the matters mentioned in paragraph (a) of sub - paragraph (1) above;* and,

b) *the extent to which the person by whom the proposals were formulated has complied with his duty under paragraph (b) of the sub - paragraph."*

3.1.4 At sub-paragraph 3(3), it indicates that, without prejudice to the above provisions, a licence holder and the Scottish Ministers *"shall avoid, so far as possible, causing injury to fisheries or to the stock of fish in any waters."*

3.1.5 The provisions of Schedule 9 of the Electricity Act apply to the assessment of this application, and we note the Schedule contains no substantive development management tests.

3.1.6 In the case of Section 36 applications, section 25 of the Planning Act is not engaged, and the statutory development plan does not have primacy in the decision-making process, although it will be a material consideration. Rather, more weight is given to the provisions of the Electricity Act as well as national planning policy and guidance, whilst taking account of other valid considerations.

3.2 Town and Country Planning (Scotland) Act 1997

3.2.1 The principal planning statute in Scotland is the the Planning Act.

3.2.2 Section 57(2) of the Planning Act establishes: *"On granting a consent under section 36 or 37 of the Electricity Act 1989 in respect of any operation or change of use that constitutes development, the Scottish Ministers may direct that planning permission for that development and any ancillary development shall be deemed to be granted, subject to any conditions (if any) as may be specified in the direction"*.

3.2.3 This application includes a request that the Scottish Ministers direct that planning permission is deemed to be granted for the proposed development.

3.2.4 As noted above, primacy is not given to section 25 of the Planning Act in determining this application and the Scottish Ministers will have regard to the statutory duties in Schedules 8 and 9 of the Electricity Act, so far as relevant, and any other relevant material considerations, one of which will be relevant aspects of the statutory Development Plan.

3.2.5 The following sections set out the relevant Development Plan policies and other material considerations at a local and national level.

3.3 Environmental Impact Assessment Regulations

3.3.1 Regulation 5 of the EIA Regulations provides that an EIA Report must accompany any application for section 36 consent for EIA developments.

3.3.2 The results of the EIA are presented in the accompanying EIA Report which, as prescribed in the EIA Regulations, is required to include a "description of the likely significant effects" of the development. It is therefore necessary for the scope of the EIA to be appropriately and clearly defined to ensure that any likely significant effects are described and assessed.

3.3.3 The accompanying EIA Report conveys the findings of the assessment of the potential significant environmental effects of the proposed development during construction, operation and decommissioning. The EIA has sought to:

- Identify the likely environmental effects of the Proposed Development;
- Define appropriate design and construction measures and good practice to mitigate likely significant environmental effects and maximise opportunities for environmental enhancements resulting from the construction and operation of the Proposed Development; and,
- Determine the level and significance in the context of the EIA Regulations of the likely residual environmental effects from the Proposed Development remaining after all proposed mitigation and enhancement measures have been taken into account.

4 Energy Policy Context

4.1 Introduction

4.1.1 The Cruachan Expansion project is designated as a national development and priority project in existing and emerging planning policy (see Section 5.1), this reflects the status and key role of the project in contributing towards the delivery of the Scottish and UK Governments' policy objectives and commitments to renewable energy production and storage.

4.2 Renewable Energy and Climate Change Framework

Introduction

4.2.1 Pumped storage hydro schemes take advantage of cyclical patterns of energy usage. When energy demand is low, electricity is absorbed from the national grid and used to pump water from a lower reservoir to a higher one for storage. When energy generation is required (i.e., greater demand/usage) water is released through the generation infrastructure back into the lower reservoir. PSH can be used to avoid the curtailment of intermittent nonsynchronous renewables technologies (such as wind and solar) and can avoid the costly reinforcement of the transmission network. With the ability to provide long duration energy storage and utilise renewable water resources, PSH schemes effectively act as large batteries and provide extremely quick back-up during periods of increased demand.

International and European Policy Context

4.2.2 Statutory and policy requirements at UK and Scottish level to mitigate climate change and increase renewable energy generation are informed by higher level international agreements as outlined below.

4.2.3 At the international level, action to tackle climate change is informed by the work of the Intergovernmental Panel on Climate Change (IPCC) and underpinned by the United Nations Framework Convention on Climate Change (UNFCCC, 1992), which aims to stabilise atmospheric greenhouse gas concentrations at a level sufficiently low "*to prevent dangerous anthropogenic interference with the climate system"* (Article 2). On 12th December 2015, 196 Parties to the UNFCCC including the UK adopted the Paris Agreement, which commits UNFCCC signatory countries to take action to cut carbon emissions and emphasises the aim of restricting temperature rises to below 2°C above pre-industrial levels. In addition, a recent report by the World Energy Council references the 'Energy Trilemma', which ranks countries on their ability to provide sustainable energy through three metrics: energy security, energy equity, and environmental sustainability. PSH is able to play a key role in meeting all three of these objectives.

4.2.4 The 26th UN Climate Change Conference of the Parties (COP26) was hosted in Glasgow in 2021. The COP26 summit brought nations together to outline how they will achieve the targets of the Paris Agreement and the UN Framework Convention on Climate Change. The COP26 Agreement allocates over $20 billion to facilitate the transition from coal to clean renewable energy and represents the strongest ever commitment to the development and use of renewable and low carbon energy; with approximately 90% of world GDP and around 90% of global emissions now covered by net zero commitments.

UK Legislative and Policy Context

4.2.5 At the UK level, action to tackle climate change is underpinned by the Climate Change Act 2008 (the 2008 Act) as amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019. This legislation imposes a legally binding duty on the Secretary of State to ensure a 100% reduction by 2050 in the UKs net CO2 account – covering all six Kyoto Protocol Green House Gasses (GHGs) – compared with 1990 levels, resulting in 'net-zero carbon' emissions. The 2008 Act also established a

rolling system of statutory five-year carbon budgets to ensure steady progress towards the 2050 emissions reduction target. The UK Government has also indicated it will legislate for a 78% reduction of GHGs by 2035 in line with the recommendations of the 6th carbon budget.

4.2.6 A range of policy documents set out the UK Governments binding commitments to cut carbon emissions through the deployment of renewable energy, including the UK Government's Ten Point Plan for a Green Industrial Revolution (2020), Energy White Paper (2020), Carbon Plan (2011), and the UK Renewable Energy Roadmap (2011) (updated 2012 and 2013). In the British Energy Security Strategy (2022), PSH schemes are not referred to explicitly in the strategy, but reference is made to "encouraging all forms of flexibility with sufficient large-scale, long-duration electricity storage"

Scottish Policy Context

4.2.7 On 14th May 2019 the Scottish Government declared a climate emergency and stated that tackling climate change would be placed at the heart of all decision making. The Scottish Government recognises the opportunities that Scotland's vast renewable energy potential provides for both playing an important role in tackling climate change and developing world leading expertise in low carbon technologies.

4.2.8 Scotland has enacted a world leading legislative framework to tackle climate change and transition to a low carbon economy, with the Climate Change (Scotland) Act 2009 as amended by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. This sets out ambitious binding net carbon emission reduction targets to require a 70% reduction in net emissions by 2030, a 90% reduction by 2040 and a 100% reduction (i.e. for Scotland to become net zero carbon) by 2045. The targets reflect the view expressed by the UK Committee on Climate Change (May 2019) that Scotland has greater capacity to remove emissions than the UK as a whole, including through substantial renewable energy generation.

4.2.9 Sitting alongside Scotland's world leading climate change legislative framework, the Scottish Energy Strategy (2017) sets a target for "*the equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources*" by 2030. This builds upon existing electricity generation-only targets set for 2020 and confirms that further action to decarbonise Scotland's energy system is required. The Energy Strategy notes that *"investment in new PSH capacity in Scotland could greatly enhance the flexibility and resilience of our electricity network and power supplies. These are major infrastructure projects, with considerable economic and industrial value attached.*" In March 2021 the Scottish Government published Scotland's Energy Strategy Statement Position Statement which provides an overview of their approach to supporting the energy sector in the lead up to COP26 and a green economic recovery from the COVID-19 pandemic. The statement sets out a comprehensive programme of work across the energy sector but does not replace the current Energy Strategy.

4.2.10 In response to the new and ambitious targets set by the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 the Scottish Government has updated Scotland's 2018-2032 Climate Change Plan. Published in December 2020, the Update to the Climate Change Plan, 2018-2032, Securing a Green Recovery on a Path to Net Zero, is a key strategic document supporting the green recovery from COVID-19. The decarbonisation of Scotland's energy sector has been aided by the growth of renewable technology and further progress is needed to move from a low carbon electricity system to one that is no carbon. The Climate Change Plan recognises that further decarbonising the system means addressing the substantial challenges of maintaining security of supply and a resilient electricity system, noting that PSH has an important role to play in this as it can release stored electricity when the demand is high and systems needs it most. The Update to the Climate Change Plan also confirms that the Scottish Government's policy of collaborating to support investment in new PSH capacity, set out in the original Climate Change Plan, remains in place.

5 Planning Policy

5.1 National

5.1.1 **National Planning Framework (NPF) 3 (2014)** provides a statutory framework around which to orientate Scotland's long-term spatial development. In relation to renewable energy, Section 3 "*A low carbon place"*, sets out a commitment to continue to facilitate renewable energy developments and guiding new infrastructure to appropriate locations and sets an ambition for Scotland to be considered a world leader in the low carbon energy generation sector.

5.1.2 Paragraph 3.30 identifies hydroelectric power as a key asset and recognises that increasing the capacity of PSH can complement ambitions for more renewable energy capacity. The expansion of Cruachan is specifically cited as being amongst the most advanced plans for new PSH schemes and the relationship with Cruachan 1 is noted.

5.1.3 Section 6, *Delivery,* identifies 14 National Developments that are needed to help deliver the spatial strategy. Three national developments are included to assist delivery of the low carbon place strategy, one of which is pumped hydroelectric storage at existing and new sites with particular support given to development at Cruachan which is recognised as *a nationally important pumped storage facility with significant potential for enhanced capacity.*

5.1.4 Non-statutory, but a material consideration to the determination of the application, **Scottish Planning Policy (SPP) 2014**, reflects the Scottish Ministers' policy priorities for operation of the planning system and for the development and use of land. The document aims to contribute to the Scottish Government's overarching purpose of achieving sustainable economic growth and includes a presumption in favour of development that contributes to sustainable development, and supports the delivery of renewable energy generation capacity, including energy storage projects at a range of scales.

5.1.5 Alongside NPF3, SPP shares a single vision for the planning system in Scotland: *We live in a Scotland with a growing, low-carbon economy with progressively narrowing disparities in well-being and opportunity. It is growth that can be achieved whilst reducing emissions and which respects the quality of environment, place and life which makes our country so special. It is growth which increases solidarity – reducing inequalities between our regions. We live in sustainable, well-designed places and homes which meet our needs. We enjoy excellent transport and digital connections, internally and with the rest of the world.*

5.1.6 The SPP sets out four planning outcomes to support this vision, the second of which, 'a low carbon place' involves *"reducing our carbon emissions and adapting to climate change"*, and SPP paragraph 19 recognises that *"planning can support the transformational change required to meet the emission reduction targets and influence climate change.*"

5.1.7 The policy principle that introduces a presumption in favour of development that contributes to sustainable development, is supported by thirteen principles (Para. 29) intended as a guide to policy and decision making in assessing to what extent a proposal supports sustainable development.

5.1.8 Development plans are required to support energy generation and storage among the national priorities for energy infrastructure, and paragraph 168 recognises that *"Energy storage schemes help to support development of renewable energy and maintain stability of the electricity network where reinforcement is needed to manage congestion.*" Paragraph 169 goes on to set out criteria to be taken into account in the development management process when considering proposals for energy infrastructure development. Considerations will vary relative to the scale of the proposal and area characteristics but are likely to include:

- Net economic impact, including local and community socio-economic benefits such as:
- Employment, associated business and supply chain opportunities;
- The scale of contribution to renewable energy generation targets;

- Effect on greenhouse gas emissions;
- **Cumulative impacts** – planning authorities should be clear about likely cumulative impacts arising from all of the considerations below, recognising that in some areas the cumulative impact of existing and consented energy development may limit the capacity for further development;
- Impacts on communities and individual dwellings, including visual impact, residential amenity;
- Noise and shadow flicker;
- Landscape and visual impacts, including effects on wild land;
- Effects on the natural heritage, including birds;
- Impacts on carbon rich soils, using the carbon calculator;
- Public access, including impact on long distance walking and cycling routes and scenic routes identified in the NPF;
- Impacts on the historic environment, including scheduled monuments, listed buildings and their settings;
- Impacts on tourism and recreation;
- Impacts on aviation and defence interests and seismological recording;
- Impacts on telecommunications and broadcasting installations, particularly ensuring that transmission links are not compromised;
- Impacts on road traffic;
- Impacts on adjacent trunk roads;
- Effects on hydrology, the water environment and flood risk;
- The need for conditions relating to the decommissioning of developments, including ancillary infrastructure, and site restoration;
- Opportunities for energy storage; and,
- The need for a robust planning obligation to ensure that operators achieve site restoration.

5.1.9 SPP takes a strong line in supporting renewable electricity generating technologies and storage, as a national policy priority that supports the wider vision of the document.

5.1.10 The relevant Scottish Government Planning Advice Notes (PAN) are:

- PAN 51: Planning, Environmental Protection and Regulation (2006);
- PAN 60: Planning for Natural Heritage (2000);
- PAN 61: Planning and Sustainable Urban Drainage Systems (2001);
- PAN 75: Planning for Transport (2005);
- PAN 79: Water and Drainage (2006);
- PAN 3/2010: Community Engagement (2010);
- PAN 1/2011: Planning and Noise (2011);
- PAN 2/2011: Planning and Archaeology (2011);
- Flood Risk: Planning Advice (2015);
- Hydro Schemes: Planning Advice (2013); and,
- Energy Storage: Planning Advice (2013).

5.1.11 Other relevant guidance developed by the Scottish Government's Key Agencies:

- Land Use Planning System Guidance Note 18: Planning Guidance on Hydropower Developments (Version 3) (SEPA 2013);

- Land Use Planning System Guidance Note 2a: Development Management Guidance on Flood Risk (Version 2) (SEPA, 2018);
- Guidance for Applicants on Supporting Information Requirements for Hydropower Applications: The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR) (SEPA); and,
- Hydroelectric Schemes and the Natural Heritage (SNH now NatureScot, 2015).

5.2 Development Plan

5.2.1 Whilst not the primary factor, the development plan is a material consideration in the determination of this application and comprises the Argyll and Bute Local Development Plan (LDP), adopted in March 2015, and associated Supplementary Guidance. The LDP sets out the overarching vision, spatial strategy, and policies to guide development in the administrative area.

5.2.2 In Creating a Sustainable and Growing Economy Together, a Key Policy Theme, Policy LDP 6: Supporting the Sustainable Growth of Renewables confirms that, *"the Council will support renewable energy developments where these are consistent with the principles of sustainable development"* and it is demonstrated that there are no cumulative or individual unacceptable significant adverse effects, including on *"local communities, natural and historic environments, landscape character and visual amenity"* and that the proposed development should be compatible with adjacent land uses.

5.2.3 Other relevant policies include the following:

- LDP STRAT 1 Sustainable Development;
- LDP 3 Supporting the Protection, Conservation and Enhancement of Our Environment;
- LDP 5 Supporting the Sustainable Growth of Our Economy;
- LDP 6 Supporting the Sustainable Growth of Renewables;
- LDP 9 Development Setting, Layout and Design;
- LDP 10 Maximising our Resources and Reducing Our Consumption; and,
- LDP 11 Improving our Connectivity and Infrastructure.

5.2.4 The relevant policies are covered in the EIAR and will be reviewed in the planning assessment section of this statement.

LDP Supplementary Guidance

5.2.5 The LDP is supported by statutory Supplementary Guidance. Those of relevance area addressed in the EIA and in the planning assessment.

Supplementary Guidance – adopted March 2016 includes specific policies relating to:

- Development Impacts on Habitats, Species and Our Biodiversity;
- Development Impact on European Sites;
- Development Impact on Local Nature Conservation Sites (LCNS);
- Development Impact on Trees/Woodland;
- Development Impact on Areas of Wild Land;
- Geodiversity;
- Protection of Soil and Peat Resources;
- Development Impact on National Scenic Areas (NSAs);
- Development Impact on Areas of Panoramic Quality (APQs);
- Landscape;
- Development Impact on Listed Buildings;

- Development Impact on Sites of Archaeological Importance;
- Contaminated Land;
- Access to the Outdoors;
- Off-site Highway Improvements;
- Tourist Facilities and Accommodation, Including Static and Touring Caravans;
- Supplementary Guidance 2 (December 2016);
- TRANS 8 – Piers and Harbours; and,
- Section 8.1 – Renewable Energy including Hydro.

5.3 Material Considerations

Scotland 2045 – Fourth National Planning Framework – Draft: Consultation

5.3.1 The draft National Planning Framework (NPF4) will in due course become part of the development plan, replacing the SPP and strategic development plans. Recently subject to public consultation, the draft sets out an updated National Spatial Strategy for 2045, focussed on tackling climate change and setting a target of net zero emissions by 2045, with significant progress required by 2030. In support of this, the draft recognises the need for new development and infrastructure across Scotland.

5.3.2 Eighteen national developments are proposed in the draft, as significant developments of national importance that will help to deliver the spatial strategy. Notably, this designation means that the principle of the development does not need to be agreed in later consenting processes, providing more certainty for communities, business and investors.

5.3.3 Under "Productive Places" the Cruachan Expansion project is specifically listed as a Scotland Wide National Development: 9. Pumped Storage Hydro. Ben Cruachan at Loch Awe is named as the initial focus of the PSH capability, with an all-Scotland intention thereafter.

5.3.4 This national development will play a significant role in balancing and optimising electricity generation and maintaining the operability of the electricity system as part of our transition to net zero. This is necessary as we continue to move towards a decarbonised system with much more renewable generation, the output from which is defined by weather conditions.

5.3.5 This national development supports additional capacity at existing sites as well as new sites. Cruachan in Argyll is a nationally important example of a PSH facility with significant potential for enhanced capacity that could create significant jobs in a rural location.

5.3.6 Need: This national development supports pumped hydro storage capacity within the electricity network through significant new or expanded sites. This supports the transition to a net zero economy through the ability of PSH schemes to optimise electricity generated from renewables by storing and releasing it when it is required.

5.4 Historic Environment Policy for Scotland

5.4.1 The Historic Environment Policy for Scotland (HEPS) policy statement is a material consideration for proposals that might affect the historic environment and in relation to listed building consent and scheduled monument consent. It sits alongside SPP (2014) supporting national policies for land use matters and decisions. HEPS is supported by a series of non-statutory guidance notes about managing change in the historic environment. HES also produce an EIA handbook offering guidance on making EIA a more effective process, to allow for better-informed decisions and, ultimately, improve environmental protection. The overall policy principle is to improve the treatment of cultural and natural heritage assets and impacts upon cultural heritage will be assessed in the EIAR Chapter 12.

5.5 Scotland's National Strategy for Economic Transformation 2022

5.5.1 The priorities for Scotland's economy and the actions needed to deliver them are set out in Scotland's National Strategy for Economic Transformation. The Strategy drives a green economic recovery to meet the current climate and nature targets and respecting environmental limits. The Strategy Vision for the future economy is for Scotland to be recognised as an international benchmark for how an economy can transform itself, de-carbonise and rebuild natural capital whilst creating more well-paid and secure jobs and developing new markets based on renewable sources of energy and low carbon technology.

5.5.2 National planning policy is supported by numerous Scottish Government Planning Circulars, Planning Advice Notes (PANs), Advice Sheets, Ministerial/Chief Planner Letters to Planning Authorities, as well as guidance documents prepared by guidance documents prepared by Key Agencies of the Scottish Government.

5.6 Argyll and Bute Local Development Plan 2 (2019)

5.6.1 Argyll and Bute Council are preparing a new Local Development Plan (LDP2). The Proposed LDP2 has been issued, along with all unresolved representations, to Scottish Ministers in January 2022 for Examination. An outcome is anticipated later in 2022 with adoption of the new plan likely in 2023.

5.6.2 The Proposed LDP represents the most up to date policy position of the Council and although this remains to be tested at Examination, its content is a material consideration to the determination of this application.

5.6.3 The Proposed LDP identifies the Tobermory to Dalmally Growth Corridor, wherein the application site is located, as an area for sustainable economic growth. The Proposed Plan also identifies Cruachan as Proposal E, Cruachan Dam PSH Facility Expansion:

> *'Argyll and Bute Council support the National Planning Framework 3 proposal for delivery of a project to increase the pumped hydro storage hydroelectricity capacity at Cruachan dam'.*

5.6.4 The LDP2 Proposed Plan confirms that the Council, through partnership working, will look to maximise direct and indirect economic benefit for Argyll and Bute resulting from accommodation and tourism developments promoted within the Tobermory to Dalmally growth corridor both in the construction and legacy phases of the project.

5.7 Summary

5.7.1 The national policy position contains a clear presumption in favour of development that contributes to sustainable development; coupled with support for the delivery of renewable energy generation capacity, including energy storage projects at a range of scales. NPF3 contains specific support to development at Cruachan, as proposed, which is recognised as a nationally important pumped storage facility with significant potential for enhanced capacity. Support for such development feeds into policy consideration and guidance at all levels, in recognition of the wide range of benefits they offer.

5.7.2 The emerging policy position as drafted for consultation in NPF4, takes this support further towards delivery, with the Cruachan Expansion project listed as a Scotland Wide National Development: 9. Pumped Storage Hydro. Ben Cruachan at Loch Awe is named as the initial focus of the PSH capability, with an all-Scotland intention thereafter. Focussed on tackling climate change and setting a target of net zero emissions by 2045, with significant progress required by 2030. This will be further reinforced when NPF4 forms part of the development plan in due course.

6 Planning Assessment

6.1 Principle of Development

6.1.1 Renewable energy development is actively supported by policy at international, national, and local level. Specifically, PSH is an important and well established technology that provides support for a flexible electricity network, which ultimately supports the development of other renewable energy technologies. The Proposed Development can provide up to 600MW new generating capacity, which would be a valuable contribution towards Scotland and the UK's climate reduction targets.

6.1.2 At a national level, the need for additional PSH capacity in Scotland is recognised in NPF3, with Cruachan recognised as a nationally important facility with significant potential for enhanced capacity. Emerging policy in the draft NPF4 would designate the Proposed Development as 'national development', which would establish the principle of development for the proposed scheme.

6.1.3 On this basis, the Scottish Ministers can be satisfied that the Principle of the Development and the 'needs case' has been established for the Proposed Development.

6.2 Assessment – National Planning Policy

6.2.1 NPF3 identifies hydroelectric power as a key asset and recognises that increasing the capacity of pumped storage hydroelectricity can complement ambitions for more renewable energy capacity in Scotland. The expansion of Cruachan is specifically cited as being amongst the most advanced plans for new PSH schemes and the relationship with the existing Cruachan 1 Power Station is noted.

6.2.2 Of the 14 National Developments listed in NPF3, needed to help deliver the spatial strategy, three of these are included to assist delivery of the low carbon place strategy, one of which is PSH at existing and new sites. Specific support is given to Cruachan; recognised as a nationally important PSH facility with significant potential for enhanced capacity.

6.2.3 Similarly, the SPP takes a strong line in supporting renewable electricity generating technologies and storage, as a national policy priority that supports the wider vision of the document. It establishes both a policy presumption in favour of proposals that contribute to sustainable development, and a mandate that development plans and development management decisions should support this, in accordance with several guiding principles. These principles, as set out in paragraph 29, are broadly supported by this proposal as set out in this application submission, including that:

- There is a net economic benefit and is in line with the local economic strategy of supporting the growth of renewables;
- The proposal is demonstrated to be of a suitable design to minimise impacts and maximise efficiency of land use and existing plant; reducing waste and promoting resource recovery;
- Facilitates the delivery of key infrastructure of national priority status;
- No conflict with cultural heritage objectives;
- Promotes continued access to natural heritage; and,
- Does not represent over development and has fully assessed impacts upon water, air and soil quality.

6.2.4 The development management considerations listed in SPP paragraph 169 are relevant to proposals for energy infrastructure. All matters relevant to the scale of this proposal and impact upon the characteristics of the area are addressed in the EIA and supporting documentation.

6.2.5 The Proposed Development accords with and benefits from national planning policy.

6.3 Assessment – Local Development Plan

6.3.1 The principle of the proposal development fully accords with the stated objectives of the LDP, meeting the strategic vision and sustainable development principles set out in policy **STRAT1** – Sustainable Development.

a) Maximise the Opportunity for Local Community Benefit;

6.3.2 The proposal offers significant benefits to local communities through additional spend within the local area during the construction period in particular, with particular benefits to the leisure and hospitality sectors and associated supply chain. There will be local employment opportunities during construction and in operation, and Drax is committed to working with local firms so construction benefits can be retained in Argyll and Bute where possible.

b) Make Efficient Use of Vacant and/or Derelict Land Including Appropriate Buildings;

6.3.3 The proposal by its nature, operating adjacent to an existing facility, infrastructure and resources maximises efficiency.

c) Support Existing Communities and Maximise the Use of Existing Infrastructure and Services;

6.3.4 As set out in relation to *(a)* and *(b)* above.

d) Maximise the Opportunities for Sustainable Forms of Design Including Minimising Waste, Reducing our Carbon Footprint and Increasing Energy Efficiency;

6.3.5 The value engineering exercise informing this project has set the principle of expanding an existing PSH facility and associated infrastructure as a highly sustainable form of development, that will have significant benefits in decarbonising the national grid and associated energy efficiency.

e) Avoid the Use of Locally Important Good Quality Agricultural Land;

6.3.6 There will be no loss of prime agricultural land as a result of the proposal.

f) Utilise Public Transport Corridors and Active TravelNnetworks;

6.3.7 The proposal makes best use of the existing road, rail and active travel networks.

g) Avoid the Loss of Important Recreational and Amenity Open Space;

6.3.8 There is limited impact upon recreational use of the site as a result of the proposal, with walking routes to Ben Cruachan being maintained and only temporarily re-routed during construction.

h) Conserve and Enhance the Natural and Built Environment and Avoid Significant Adverse Impacts on Biodiversity, Natural an Built Heritage Resources;

6.3.9 As set out in detail in the EIAR, full assessment of the potential impacts on the above resources has been undertaken and mitigations proposed where necessary. Whilst there may be some adverse impacts during construction, there are no significant adverse impacts upon the above resources in the long term (operational phase).

i) Respect the Landscape Character of an Area and the Setting and Character of Settlements;

6.3.10 The landscape and visual impact of the proposal has been assessed (EIAR Chapter 11) and whilst there will be temporary significant effects of the proposal during construction, during the operational phase, the proposed development, after 10 years, it is anticipated that all effects would be reduced to levels which would not be significant. The permanent above ground features having been assessed would not lead to any notable changes to the character of the landscape within the surrounding area.

j) *Avoid Places with Significant Risk of Flooding, Tidal Inundation, Coastal Erosion or Ground Instability;* and,

6.3.11 The proposal avoids any such areas.

k) Avoid Having Significant Adverse Impacts on Land, Air, and Water Environment.

6.3.12 The EIAR and supporting information in this application submission confirms there will be no residual significant adverse impacts on the above as a result of the proposal.

6.3.13 A sustainable "checklist" is attached as Appendix 3, prepared in line with the LDP Supplementary Guidance, confirms the suitability of the proposal in policy terms.

6.3.14 In relation to the LDP Settlement and Spatial Strategy, the application site is within the Oban and Lorn spatial vision map, which envisages the area to be a greener place by 2024, with renewable energy projects making a contribution to the local and national economy. Alongside objectives of strategic road improvements, and a tourism development area, the strategy also supports "Significant Hydro Energy Development."

6.3.15 Under the key policy theme of *Protecting, Conserving and Enhancing our outstanding environment together,* **LDP Policy 3** aims to protect, conserve and where possible enhance the built, human and natural environment. Proposals for development will not be supported when it:

a) "does not protect, conserve or where possible enhance biodiversity, geodiversity, soils and peat, woodland, green networks, wild land, water environment and the marine environment;

b) does not protect, conserve or where possible enhance the established character and local distinctiveness of the landscape and seascape in terms of its location, scale, form and design;

c) does not protect, conserve or where possible enhance the established character of the built environment in terms of its location, scale, form and design;

d) has not been ascertained that it will avoid adverse effects, including cumulative effects, on the integrity or special qualities of international or nationally designated natural and built environment sites; and,

e) has significant adverse effects, including cumulative effects, on the special qualities or integrity of locally designated natural and built environment sites."

6.3.16 Each of the above criterion has been assessed in the EIAR and or relevant supporting technical documentation, providing adequate certainty concerning the potential impact of the development. There is no conflict with any of the criteria and as such the proposal is compliant with the objectives and criteria of LDP Policy 3.

6.3.17 The Supplementary Guidance referred to provide details of the mechanisms for delivery of this policy relating to the natural environment, landscape, and the historic environment.

6.3.18 Under key policy theme *Creating a Sustainable and Growing Together Economy*, **LDP Policy 5 – Supporting the Sustainable Growth of our Economy**; supports development that helps deliver sustainable economic growth in the area. The spatial and logistical requirements for locating major hydroelectric power generation are recognised and supported elsewhere in the plan, and this policy reinforces and supports delivery of renewable energy projects as a main growth sector in recognition of the economic benefits they bring. Chapter 13 of the EIAR provides a socio-economic assessment of the tourism and recreation impacts and sets out the economic benefits and impacts of the proposal during construction, operations and to the supply chain.

6.3.19 Most notably, the UK capital investment in the project is expected to be £450 million, with the construction period having potential to generate £41 million as an economic benefit to the local economy or Gross Value Added (GVA), including the creation of additional jobs and expenditure. Once operational, additional permanent jobs will be created at the facility, with further associated net benefit to the local economy. The supply chain associated with construction, hospitality and leisure will all benefit – Drax is committed to working with local firms to resource goods and services, retaining economic benefits within Argyll & Bute where possible.

6.3.20 Following on from Policy 5, **Policy 6 – Supporting the Sustainable Growth of Renewables**, provides a more specific focus on supporting the renewables sector. Whilst there is a focus on wind, the Council commit to supporting renewable energy developments where these are consistent with the principles of sustainable development and it can be adequately demonstrated that there would be no unacceptable significant adverse effects, whether individual or cumulative, including on local communities, natural and historic environments, landscape character and visual amenity, and that the proposals would be compatible with adjacent land uses.

6.3.21 This proposed development is in full compliance with this policy, with the EIAR and supporting reports demonstrating that there will be no unacceptable significant adverse effects upon the environment.

6.3.22 The proposal is compatible with adjacent land uses as it is effectively an extension to an existing facility in this location. The completed LDP SG sustainability checklist is attached in Appendix 3.

6.3.23 A key challenge noted in the LDP Chapter 4, is that the authority can mitigate and adapt to the growing impact of climate change in an affordable way. In doing so, the Council, through the plan, recognise their role in making a positive contribution to meeting the Scottish Government's targets for renewable energy generation, as well as the important role that the renewable industry can play in developing the local economy (Renewable Energy Action Plan – REAP).

6.3.24 **Policy LDP 9 – Development Setting, Layout and Design** is primarily concerned with the achieving a high standard of design in accordance with the setting. Development Design (C) states that the design of developments and structures shall be compatible with the surroundings. Given the proposal is an extension to an existing facility, and largely subterranean in nature, the design can be considered as compatible with the existing site and surroundings, and of acceptable siting and positioning. The above ground structures including the upper and lower works areas, including upgrades to the existing Dam access road have been assessed in terms of the visual and landscape effects and this is confirmed in supporting reporting including EIAR Chapter 11.

6.3.25 Under the key policy theme of *Maximising our resources and reducing consumption together*, **Policy LDP10** – is supportive of all development proposals that seek to maximise resources and reduce consumption, and where they accord with the following:

- The settlement strategy;

6.3.26 The proposal actively supports the LDP hierarchical settlement strategy that allows the rural economy and smaller settlements to thrive and support the viability of the surrounding rural areas.

- Sustainable design principles;

6.3.27 The proposal upholds sustainable design principles by virtue of its nature, location, co-existence with Cruachan 1 and specific design evolution to ensure efficiency and minimising impacts.

- Minimising waste and/or contributing to recycling;

6.3.28 The waste management strategy for surplus materials generated as result of the construction process is assessed in the EIAR, and proposes that the majority of the spoil will be repurposed.

- Minimising the impact on the water environment both in terms of pollution and abstraction;

6.3.29 The EIA (Chapter 7 EIAR) concludes: Through successful application of the embedded and further mitigations and enhancements identified, the assessment has concluded that the Proposed Development would not result in any significant residual effects on the hydrology receptors.

- Avoiding areas subject to flood risk or erosion;

6.3.30 The majority of site is not at risk of flooding, and where potential is identified, for example the new quayside construction at Loch Awe, mitigation is proposed. Erosion is not an identified issued and the Construction Environmental Management Plan (CEMP) for the Proposed Development would seek to avoid this during the construction phase. It will include an erosion prevention and sediment control plan to reduce the quantity of sediment entrained in runoff and to prevent hydromorphological changes to surface water features, in addition to a construction-phase surface water runoff management plan.

- Minimising the impact on biodiversity and the natural environment;

6.3.31 Impacts of the development at both construction and operational stages have been assessed and a range of mitigation measures is proposed to minimise impact where necessary.

- Safeguarding our mineral resources and minimising the need for extraction;

6.3.32 Mineral extraction does not form part of the proposal.

- Avoiding the loss of trees and woodland;

6.3.33 Removal of trees will be avoided where possible, however EIAR Chapter 11 confirms embedded mitigation measures are proposed involving the replacement of trees and woodland removed for the construction on the quayside area and planting and encouragement of vegetation growth at the base of rock cuttings at the proposed upper intake structure.

- Contributing to renewable energy generation;

6.3.34 During the operational phase, the Proposed Development will be actively reducing grid emissions by displacing fossil fuel generation and will deliver 61,413 MWh of renewable energy in grid decarbonisation benefits. This will significantly contribute to Scotland's Emission Reductions Targets to reach net zero by 2045.

- Avoiding the disturbance of carbon rich soils; and,

6.3.35 Chapter 6 of the EIAR confirms that peat deposits are not shown to be present at the site however that the SNH Carbon and Peatland Map 2016 indicates that two areas of the site may contain identified peatland soil. A peat probing survey was carried out in April 2022, and where identified, disturbance of peat deposits will be avoided where possible and a Peat Management Plan (PMP) has been prepared (EIAR Chapter 6 Appendix B6, see also EIAR Section 6.7 embedded mitigation), setting out the measure to protect, avoid or limit the disturbance of peat where possible.

- Safeguarding our best agricultural land.

6.3.36 There will be no loss of prime agricultural land as a result of this development.

6.3.37 As confirmed throughout the application submission, the Proposed Development, by its nature and design upholds the above policy objectives and all relevant sub-criteria.

6.3.38 Under the key policy theme of *Improving our connectivity and infrastructure together*, LDP **Policy LDP11** seeks to maintain and improve internal and external connectivity in the region. Relevant to the proposal; this application submission confirms that public access to the surrounding area and green network will be maintained, access to public transport maintained, and an appropriate standard of access will be provided. All other relevant criteria can be met and may be subject to detailed design.

6.3.39 The Transportation Assessment (TA) confirms that the construction and operational phases of the Proposed Development would not result in material impacts on the surrounding transport network. This is based on the following:

- The trip generation and percentage impact assessment show that impacts to the surrounding highway network would be minimal in terms of link and junction capacity;
- Access to the Proposed Development has been designed to minimise impact to the existing public highway network and to accommodate the required vehicle types during construction;
- The construction process would be managed based on a construction sequence and traffic management that ensures minimal impact to the surrounding transport network and non-motorised users. A Construction Traffic Management Plan (CTMP) would also be prepared and implemented prior to the start of construction;
- The temporary A85 realignment and associated traffic management would be supported by a Stage 1 Road Safety Audit and would be planned to be carried out at a more neutral period within the year; and,
- Parking during the construction and operational stages will be managed and there would no residual impacts on the public highway in terms of parking.

6.3.40 A detailed CTMP will be prepared and implemented prior to the construction stages of the development to ensure that construction is undertaken in a way that will minimise its impacts as far as is practical upon the local community and transport network.

6.3.41 The proposed development supports the development plan strategic vision and principles for achieving sustainable communities and economic growth whilst safeguarding the environment. The proposed development is, by nature, of a design that minimises the effects on the environment and amenity, being largely underground, and linking into existing infrastructure and resources. The

proposal enjoys full policy support from the LDP and associated SG and is therefore compliant with the development plan, a consideration material to the determination of this application.

6.4 Effects of Development

6.4.1 A summary of likely effects as assessed in the EIAR is as follows:

- **Ground Conditions** – Chapter 6 of the EIA concludes taking account of all proposed mitigation and enhancement measures, the likely residual effects from the construction and operation of the proposed development on key receptors are concluded to be minor, negligible and overall - not significant.
- **Hydrology** - Through successful application of the embedded and further mitigations and enhancements, the assessment concludes that the Proposed Development would not result in any significant residual effects on the hydrology receptors.

6.4.2 Ecology/ Ornithology (Chapter 8) - full effects to be taken from final chapter/ NTS once available.

- **Transport and Access** – The Transport Assessment (TA) provides a detailed assessment of the impacts on the surrounding transport network and its users, associated the Proposed Development. The EIAR Chapter 9 is an assessment of the transport effects during the construction phase and considers that the proposed development will not result in any significant transport effects; and,
- **Noise and Vibration** – In Chapter 10, an assessment of construction noise, vibration and road traffic has been undertaken.

6.4.3 During the construction phase the use of blasting requires that a number of practical measures are implemented that are likely to reduce the significance of effects at nearby receptors, and these measures can be implemented through the use of a CEMP.

6.4.4 As there is the potential for significant residual effects to occur, a detailed assessment should be undertaken once detailed information regarding the exact location, methodology and outcome of trial blasting is known in order to determine the noise and vibration impact of blasting at nearby noise sensitive receptors.

6.4.5 During the operational stage, the impact of the change in noise levels associated with operational road traffic on the surrounding road network has been assessed, and concludes that no significant residual effects are likely to occur.

- **Landscape and Visual** (Chapter 11) – Significant effects were identified for several visual receptors during construction, however these effects would reduce to levels that are not significant by 10 years into the operational phase, when the intensity of activities within the view would be reduced and planting and vegetation re-growth associated with the Proposed Development would begin to establish;
- **Cultural Heritage** (Chapter 12) – no significant residual effects are anticipated in respect of cultural heritage assets;
- **Socioeconomics** (Chapter 13) - the assessment concludes that the Proposed Development will have a minor beneficial socio-economic impact, and that tourism and recreation will experience no significant effects;
- **Waste Management** – Chapter 14 - Subject to the proposed embedded mitigation measures, the construction phase will not result in any significant adverse effects;
- **Climate Change** In addition to the re-use of existing infrastructure at Cruachan 1 where possible, a series of embedded design measures have been adopted to reduce greenhouse gas emissions associated with the Proposed Development. The contribution of the proposed development once operational, to decarbonising the national grid will be a beneficial (significant) effect; and,
- **Impact Interactions** - no significant adverse impact interactions have been identified.

6.4.6 The assessment of environmental effects has shown that the Proposed Development can be responsibly delivered without causing significant harm to the environment. No likely significant effects are predicted on local noise, ecology, water quality, ground conditions, traffic and transport and historic environment during the construction or operational phases or decommissioning phases in isolation, or cumulatively with other developments. Minor positive effects are likely to result on the socioeconomics of the area surrounding the Site due to an increase in workforce during all phases of the Project.

7 Summary and Conclusion

7.1.1 As outlined within this statement and the EIAR, the Proposed Development will make a significant contribution towards the Scottish and UK Government's renewable energy and climate change targets, helping them meet their legal obligations and policy objectives. It will provide an important contribution to the diversification of the energy mix in the UK, energy security, a reduction in carbon emissions and help balance the supply and demand of electricity when a greater proportion of it is generated by other renewable technologies.

7.1.2 The Proposed Development is supported by national planning policy and in emerging national policy in NPF4. Furthermore, the Proposed Development accords with the local development plan.

7.1.3 The EIAR has identified that the Proposed Development can be responsibly delivered without causing significant harm to the environment. As such, the Scottish Ministers can he satisfied that if they grant consent for the Proposed Development, they will be meeting their obligations under Schedule 9 of the Electricity Act.

7.1.4 The Proposed Development represents a unique opportunity for PSH in Scotland and the UK, building on the existing infrastructure that already exists at Cruachan. The EIAR has assessed that no significant adverse impacts are predicted and as such the wide range of benefits that the Proposed Scheme would deliver results in an overall planning balance weighted strongly in favour of granting consent for the Proposed Development.

Appendix One Site Location Plan

Site Boundary

Coire Dearg
Fords
Waterfall
Tunnel Entrance
Outlet
Coire Cruachan
Allt Cruachan
Ford
Cruachan Reservoir
Pillar
Tunnel Entrance
Pillar
Outlet
Pillar
Intakes
Tunnel Entrance
Cruachan Dam
Pillar
Lairig Torran
Beinn a' Bhuiridh
897
Monadh Driseig
641
Allt Coire Chreachainn
Allt Coire Ghlais
Coire Glas
Reservoir
Quarry (disused)
Quarries (disused)
Sheepfold
Corries
Homestead
Castles Farm
Ford
Barran an Tuirc
Allt Mhoille
River Strae
B8077
Drishaig
Creagan Geoidh
Kilchurn Castle
Creag a' Gheoidh
Hotel
Pier
PO
Creag na Circe
Coille Driseig
Lochawe
Creagan a' Bhuic
Slipway
Rubha Fionn Uillt
St Conan's Kirk
Crannog
Quarry (disused)
Sewage Works
Sàilean Rubha Dubhairt
Rubha Dubhairt
Pit (dis)
Ardteatle Cottage
Cairn
Lag na Luinge
Badan Tomain
Innis Chonain
Jetty
Creag an Fharaidh
Falls of Cruachan
Cruachan Power Station
Falls of Cruachan Station
Tunnel Entrance
A85
Creag a' Bhodaich
Allt Lorgaidh
Intakes
Outlet
Intake
Old Military Road
Sheep Creep
Coille Leitire
Tigh Cherracher
Fionn Allt
Creag a' Chuil
Dam
Tervine
Jetty
Sheepfold
Quarry (disused)
MS
FB
Ford
27
28
29
30
26

CRUACHAN EXPANSION PROJECT

Site Location Plan

Client: Drax Generation Enterprise Ltd

0 0.5 1 km

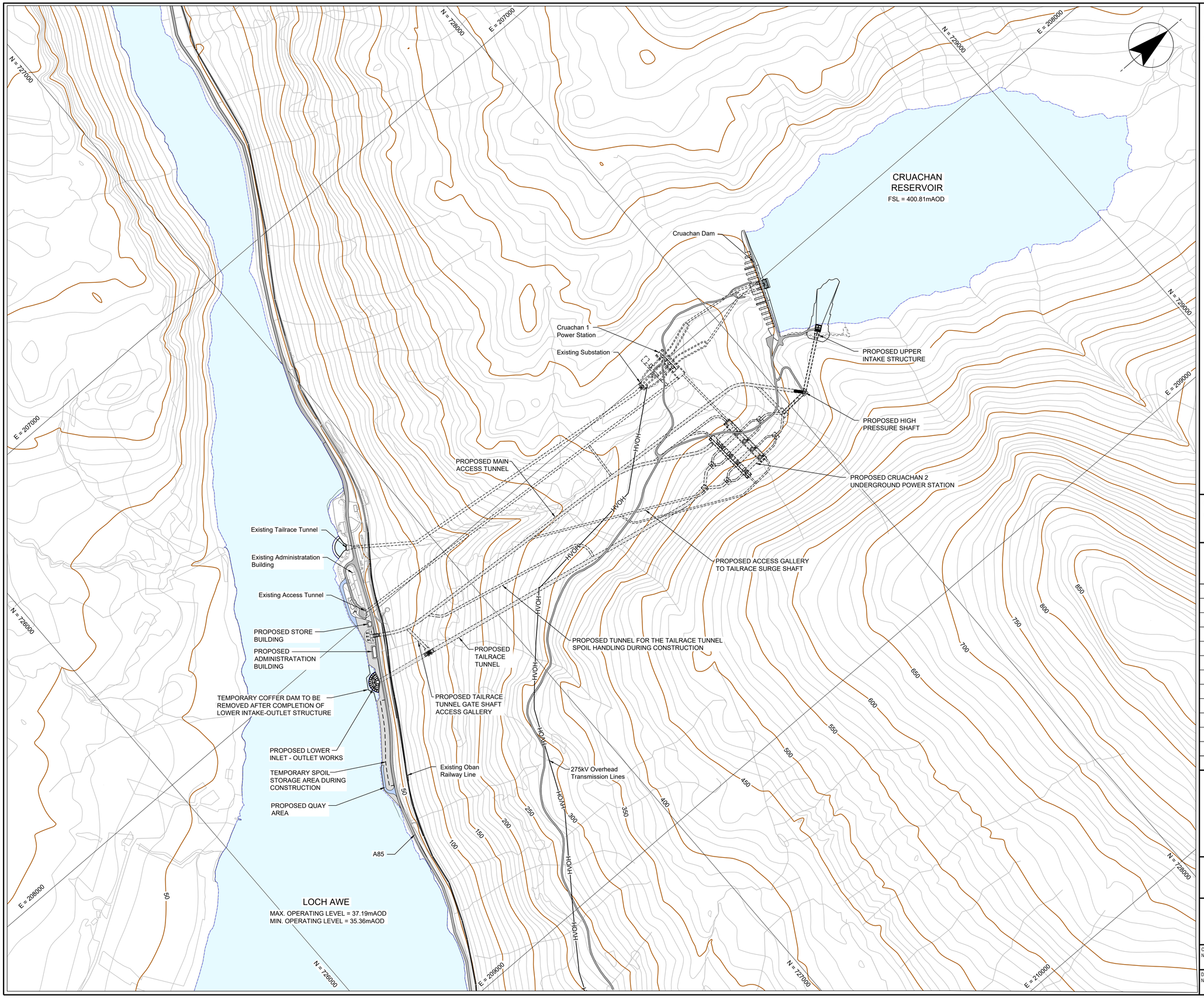
1:17,500 @ A3 | Date: 03/03/2022

Drawn: JP | Checked: CL

Figure 1.1 | Rev D

Document Path: Z:\Projects\332010112\02_mxd\332010112_SiteLocation_20220202.mxd

Appendix Two Proposed Development – Schematic



NOTES

1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES UNLESS SHOWN OTHERWISE.
2. THIS IS A CONCEPT PHASE DRAWING TO ILLUSTRATE THE PROJECT BASE CASE. ALL DIMENSIONS AND ELEVATIONS ARE APPROXIMATE AND WILL BE REVIEWED AND UPDATED AS PROJECT DESIGN STUDIES CONTINUE. ALL CONCEPTS, DETAILS, DIMENSIONS AND ELEVATIONS INDICATED ON THIS DRAWING WILL REQUIRE FURTHER REFINEMENT DURING A SUBSEQUENT DESIGN PHASE.

SCALE 1 : 5000

m100 0 400m

CURRENT VERSION INFORMATION

C. PROPOSED STORE AND ADMINISTRATION BUILDING RELOCATED.
TEMPORARY SPOIL STORAGE AREA ADDED.

DATE	DRWN	CHKD	REVD	VER	REASON FOR ISSUE
10.03.22	MD	SS	CS	C	FOR INFORMATION
28.02.22	PPS	SS	CS	B	FOR INFORMATION
21.09.21	RAB	SS	CS	A	FOR INFORMATION

DRAX CRUACHAN EXPANSION LTD

CRUACHAN 2

4 x 150 MW GENERAL ARRANGEMENT PLAN ALTERNATE MAIN ACCESS TUNNEL AND UPPER INTAKE ARRANGEMENT OPTION-2

drax

Stantec

CONTRACT NO.	SCALE	MASTER SIZE
01	1:5000	A1

DRAWING NO.	VERSION
331201086/01/C/0961	C

Appendix Three Sustainability Checklist

Sustainability Checklist – Supplementary Guidance Addressing Climate Change

Q	Community	Yes	No	N/A	Details
1	Does the project have widespread community support?	Yes			The proposals have been subject to several consultations, the feedback from which has been largely positive (see PAC Report).
2	Does the project strengthen the local community?	Yes			Through the range of benefits provided – economic and environmental.
3	Does the project help to ensure everyone has access to the same level of resources?			N/A	
4	Does the project have any impact on existing facilities or other organisations?	Yes			There may be some increased use of existing community facilities.
5	Does it help increase value of local products or make sustainable use of existing resources?	Yes			Maximising use of natural resources to generate renewable energy.
6	Does it create jobs or retain existing jobs?	Yes			During construction and when operational.
7	Does it help to develop skills/ knowledge of local people?	Yes			It has the potential to through employment and training.
8	Does the project purchase goods and services locally?	Yes			The applicant has committed to sourcing goods and services locally where possible.
9	Does the project impact on existing businesses?	yes			With a positive impact on local business including leisure and hospitality, and the associated supply chain.
Q	Environment	Yes	No	N/A	Details
10	Does the project help reduce waste and pollution?	Yes			The EIAR confirms this.
11	Has the project undertaken an Area Capacity Evaluation (ACE)?	No			The LVIA chapter of the EIAR covers all matters relating to landscape capacity, the scope of which was agreed in advance.
12	Does the project minimise energy use, including the need to travel by car, and/or support the development or use of renewable energy?"	Yes			The proposal is specifically focussed on delivery of a significantly enhanced provision of renewable energy generation and storage.
13	Does the project provide or safeguard access to and awareness of wildlife and open spaces?	Yes			Access will be safeguarded and enhanced as a result of the proposal.
14	Does the project safeguard, protect and enhance the natural environment and	Yes			The proposed development is assessed to have no significant adverse impacts on the natural

	support local biodiversity?				environment, subject to the relevant mitigation.
15	Has the project considered the re-use of brown field land or an existing building?	yes			Whilst not brownfield land, the proposal has been designed to maximise efficient use of an existing facility and infrastructure.
	The Future				
16	Will the project bring positive changes?	Yes			Enhanced renewable power generation and storage, grid stabilisation capacity, as well as economic, environmental and local benefits.
17	Does the project link with existing services or organisations?	Yes			Cruachan 1 PSH facility.
18	Does the project have any long-term impacts on the environment?	No			In the long term, there are no likely significant adverse impacts.