



Crystal Solar

SCOPING REPORT

February 2023



1. Contents

1. CONTENTS.....	1
1. INTRODUCTION	6
The Applicant.....	7
2. PROPOSED DEVELOPMENT	7
Solar PV Panels.....	7
Access Tracks	8
Construction Environmental Management Plan	8
Grid Connection Application.....	8
Operational Period.....	8
Decommissioning and Restoration	9
3. SITE CHARACTERISTICS	9
Overview.....	9
Existing Infrastructure	9
4. ECOLOGY AND ORNITHOLOGY	10
Introduction.....	10
Baseline.....	10
4.1.1. Designated Sites.....	11
4.1.2. Habitats.....	12
4.1.3. Protected Species.....	12
4.1.4. Birds.....	13
Potential for Significant Environmental Effects.....	13
Conclusions and Proposed Mitigation	14
5. LANDSCAPE AND VISUAL	15
Introductions	15
Methodology	16



5.1.1. Landscape Assessment.....	17
5.1.2. Sensitivity of Landscape Receptors.....	17
5.1.3. Landscape Magnitude of Effect	17
5.1.4. Visual Assessment	17
5.1.5. Sensitivity of the Visual Receptor	17
5.1.6. Visual Magnitude of Effect	17
5.1.7. Judging the Levels of Significance of Landscape and Visual Effects.....	18
LVIA Study Area	18
Landscape and Visual Baseline	18
5.1.8. Landscape Baseline	18
5.1.9. Visual Baseline	19
5.1.10. Viewpoints.....	19
5.1.11. Site Visit.....	20
5.1.12. Zone of Theoretical Visibility Mapping.....	20
Visualisations.....	20
Future Consultation	20
6. GEOLOGY, HYDROLOGY AND HYDROGEOLOGY	20
Surface Water Hydrology.....	20
6.1.1. Bothwell Water Catchment	20
6.1.2. Sub-catchments of the Bothwell Water.....	21
Water Quality	21
Designated Areas	22
Flood Risk.....	22
Soils and Peat.....	23
Bedrock and Superficial Geology.....	23
Hydrogeology.....	24
Water Resources and Private Water Supplies	24
7. TRAFFIC AND ACCESS.....	25
8. ARCHAEOLOGY AND CULTURAL HERITAGE	26
Introduction.....	26
Legislation, Policy and Guidance	27
8.1.1. Legislation.....	27
8.1.2. Policy	27
8.1.3. Technical Guidance	28
Baseline.....	28
8.1.4. Study Area	28
8.1.5. Preliminary Baseline	29
8.1.6. Proposed Development Area.....	29



8.1.7. Study Area	30
Proposed Surveys and Assessments Methodologies.....	30
8.1.8. Desk-based assessment.....	30
8.1.9. Stage 1 Settling Assessment	31
8.1.10. Assessment of Potential Effects.....	31
Potential Significant Effects.....	32
8.1.11. Construction.....	32
8.1.12. Operation	32
Approach to Mitigation	33
8.1.13. Construction.....	33
8.1.14. Operation	33
Effects Scoped Out.....	33
8.2 Other Considerations	34
Noise	34
Aviation.....	34
Glint and Glare.....	35
Forestry	35
Public Access	35
Utilities.....	36
9. ENVIRONMENTAL IMPACT ASSESSMENT	36
What will the EIA Assess?	37
Gathering Baseline Information.....	37
Predication and Evaluation of Impacts and Effects	38
Mitigation of Environmental Effects.....	38
Securing Commitments and Mitigation through Planning Conditions	39
10. ENVIRONMENT IMPACT ASSESSMENT REPORT (EIAR).....	40
EIAR Production	40
Legal and Policy Context	40
11. RESPONDING TO THIS SCOPING REPORT	41
Consultee Questions.....	41
12. APPENDICES	41
Appendix A – Figure, Site Constraints (IFS doc no. 1264916)	41



Appendix B – Figure, Indicative PV Array Layout (IFS doc no. 1264918)

41

Appendix C – Figure, Zone of Theoretical Visibility 2km (IFS doc no.

1281565)41



Document history

Author	Hannah Brown	24 th June 2022
Checked	Chloe Watson	27 th October 2022
Approved	Emily Galloway	10 th November 2022

Client Details

Contact	Rachel Baird
Client Name	Fred. Olsen Renewables
Address	Ochil House, Springkerse Business Park, Stirling, FK7 7XE

Issue Date Revision Details

A	27.10.2022	Client Review
B	07.11.2022	Further Review
C	13.02.2023	Client Review
D& E	14.02.2023	Further Review
F	14.02.2023	Final Version



1. Introduction

This Scoping Report has been prepared by Natural Power Consultants Limited (Natural Power) on behalf of Fred. Olsen Renewables Limited (The Applicant). It is provided in anticipation of an application under Section 36 of the Electricity Act 1989 and/or Section 32 of the Town and Country Planning (Scotland) Act 1997 (as amended) for a solar photovoltaic array (PV) installation within the boundary of the Crystal Rig IV Wind Farm, located within the Scottish Borders and East Lothian areas of Scotland. Crystal Rig IV Wind Farm has been granted consent and is at pre-construction stage of development. Furthermore, a battery energy storage system (BESS) will also be considered for this development.

Under the statutory procedures set out in the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (EIA Regulations), it is proposed that any such application is accompanied by an Environmental Impact Assessment Report (EIAR). Under regulation 12 of the EIA Regulations, a formal opinion of the information to be supplied in the EIAR is sought from Scottish Ministers.

The purpose of this Scoping Report is to provide information to consultees for determining the scope of the Environmental Impact Assessment (EIA) and EIAR. Consultees will note that the Scoping Report contains a number of questions for which it would be useful to receive feedback. Not all questions will be relevant to all consultees, therefore we request consultees provide feedback only on those questions appropriate to them. The questions should not be considered an exhaustive list, and consequently feedback is welcome on any issue considered relevant to the Crystal Rig Solar development (herein referred to as the Proposed Development). If consultees elect not to respond, the Applicant will assume that consultees are satisfied with the approach proposed. Further consultation will take place with relevant stakeholders throughout the EIA process, including with local communities as necessary.

The Proposed Development has been designed to complement the approved Crystal Rig IV Wind Farm (Scottish Borders planning reference: 18/00768/S36, East Lothian planning reference: 18/00004/SGC) recognising site-specific and broader constraints, see Appendix A: Figure - Site Constraints, as they are understood at the time of writing the Scoping Report. The layout presented in the Scoping Report is expected to be further refined during the EIA process and through further consultation as required. Therefore, it should be noted that any amendments to the design are unlikely to increase the likelihood of a significant effect. However, should any changes occur that are likely to result in a significant or unknown effect on an important feature or impact previously scoped out, then this will be scoped back into the EIA process. Changes of this nature will be discussed with the relevant consultees to ensure that they too are in agreement with the Applicant's understanding and before altering the inclusion or exclusion of features from the EIA.



Question 1: Do the consultees have any comments about the proposed approach to scoping and the purpose of the Scoping Report?

The Applicant

The Applicant is a leading developer, owner and operator of renewable energy assets, primarily onshore wind farms. The Applicant has been developing and operating wind farms in the UK since the mid 1990's demonstrating long term commitment to the renewable energy generation market in the UK, Scotland and the South of Scotland in particular.

In the UK alone, the Applicant's operational portfolio comprises over 500 MW. Internationally the Applicant operates over 1 GW of renewable energy projects.

The Applicant was the first developer to bring forward community benefit in Scotland. To date, the Applicant has made available over £6 m to eligible communities surrounding its renewable energy projects and is substantially increasing this investment as new projects come online.

Engagement with key stakeholders and the local communities surrounding its sites is at the heart of how the Applicant operates. By being involved in every aspect of a renewable energy projects lifecycle, from site selection to planning, construction and operation, the Applicant is not only expert in developing successful projects, but also a good neighbour.

2. Proposed Development

The Proposed Development comprises of around 25 to 30 MWdc of PV panels, installed within the boundary of the consented Crystal Rig IV Wind Farm (Wind Farm). The Proposed Development is 13 km south of Dunbar, in the Scottish Borders. It is anticipated that access to the development will be taken from either the south off the B6355 or from the north off the A1, by Dunbar. If access from the north is deemed most appropriate through the EIA process, the Proposed Development will also lie within the East Lothian local authority area. A battery energy storage system (BESS) is also being considered as part of this development.

The development area is shown in see Appendix B: Figure - Indicative PV Array Layout.

Solar PV Panels

It is anticipated that the PV panels will be ground mounted, fitted to a fixed tilt system with central inverters for direct to alternating power conversion.



Figure 2.1: Example of layout format



Access Tracks

Existing wind farm tracks will be utilised where possible to gain access to the Proposed Development for both construction and operational requirements. Existing farm access tracks to the south may also be considered.

Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) would be created and agreed with the Scottish Borders and East Lothian Councils (as appropriate) prior to construction commencing through an appropriately worded planning condition. This will ensure the impacts resulting from construction are kept to a practical minimum.

The CEMP would set out method statements for constructing the project and measures that would be undertaken by contractors to ensure good site practice with regards to construction practices and environmental management.

Grid Connection Application

Connection of the Proposed Development to the National Grid network will be subject to a separate planning application.

Operational Period

The Proposed Development would be monitored locally by an experienced team based at the Wind Farm Control Building currently utilised to operate the existing, operational Crystal Rig Wind Farms (see **Table A3.1** for details). Equipment will be installed and maintained in accordance with manufactures guidance to reduce risks of fires.

In line with the consent for Crystal Rig IV Wind Farm, the lifetime of the Proposed Development is envisaged to be approximately 35 years with the likelihood of component



exchanges throughout the life of the planning consent. The maintenance, and subsequent component exchanges, will be completed by suitably trained teams utilising the agreed access tracks and at times acceptable to relevant stakeholders, including ecologists, in order to minimise any environmental impacts.

Decommissioning and Restoration

Following the conclusion of the operational period of the Proposed Development, all PV panels and associated equipment will be removed from site and the site restored to its previous condition. A decommissioning method statement will be agreed with the Scottish Borders and East Lothian Councils (as appropriate) prior to the commencement of the decommissioning period.

If nearer the time of decommissioning, it is deemed sensible to extend the life of the awarded planning consent, formal request will be made by way of a planning application to the relevant local authorities to alter the operational period and subsequently, the decommissioning period.

Question 2: Do the consultees agree with the approach to the EIA and the associated mitigation and monitoring?

3. Site Characteristics

Overview

The Proposed Development is located on the East Lammermuir Plateau of the Lammermuir Hills in East Lothian and the Scottish Borders local authority areas. It is located on ground that is currently used for rough grazing. See Appendix B Figure: Indicative PV Array Layout.

Existing Infrastructure

The proposed development is sited within is the fourth phase of the wider complex. The breakdown of the phases and the associated infrastructure is shown **Table A3.1**.

Table A3.1: Summary of the Crystal Rig Wind Farm complex

Phase	No. Turbines	Infrastructure	Installed Capacity	Status
1	25	Access tracks and cable routing to the onsite Wind Farm substation	62.5 MW	Operational
2	60	Access tracks and cable routing to the onsite Wind Farm substation	138 MW	Operational



Phase	No. Turbines	Infrastructure	Installed Capacity	Status
3	6	Access tracks and cable routing to the onsite Wind Farm substation	13.8 MW	Operational
4	11	Access tracks and cable routing to the onsite Wind Farm substation	48MW	Consented, pre-construction.

4. Ecology and Ornithology

Introduction

Solar farm developments have the potential to impact upon ecological features through habitat loss, fragmentation or the displacement of species. It is considered that the construction, operation and decommission of the Proposed Development has the potential to result in the following:

- Construction disturbance (negative, short-term, local, reversible);
- Habitat loss and degradation (negative, long-term, local, irreversible); and
- Operational disturbance (negative, short-term, local, reversible).

However, solar farm developments also present an opportunity to enhance the biodiversity value of sites through the creation of enhanced habitats for a range of species.

This section of the Scoping Report will identify relevant ecological and ornithological features (including nature conservation designations, priority habitats and protected/notable species) within the Proposed Development Area and will consider the effects that the Proposed Development is likely to have on these features.

The suite of ecological surveys, including vegetation, protected species, bird and electrofishing surveys, took place in 2022 to gather baseline information. In the context of this report, the term 'ecological' refers to both disciplines of ecology and ornithology. In addition, baseline and pre-construction data collected for Crystal Rig IV Wind Farm, were used to inform this scoping report.

The Study Area for ecological surveys includes the land within the Proposed Development Area and appropriate buffer zones. The boundaries and zones for the ecology Study Area reflect standard industry good practice and the distances that statutory consultees would typically expect to be considered for identification of features that could be affected by the Proposed Development.

Baseline



4.1.1. Designated Sites

A search for designated sites included international statutory nature conservation sites (e.g., Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites) within 10 km of the Proposed Development; national statutory nature conservation designations (e.g., Sites of Special Scientific Interest (SSSI)) within 5 km of the Proposed Development; and non-statutory nature conservation designations within 2 km.

There are no designated sites within the footprint of or immediately adjacent to the Proposed Development. Also, there are no sites designated for ornithological features within 10 km of the Proposed Development.

One SAC and four SSSIs were identified within 5 km of the Proposed Development. A summary of their citations is provided in **Table A2**.

Table A4.2: Summary of internationally and nationally designated sites located within 5 km of the Proposed Development

Designation	Site name	Qualifying features	Distance from the Proposed Development
SAC	River Tweed	The SAC is designated for Atlantic salmon, river lamprey, sea lamprey, brook lamprey, otter and as a river with floating vegetation often dominated by water-crowfoot species.	1.4 km
SSSI	River Tweed	The SSSI is designated for river lamprey, brook lamprey, sea lamprey, Atlantic salmon, otter, fly assemblage, beetle assemblage, trophic range river/stream, vascular plant assemblage.	3.5 km
SSSI	Rammer Cleugh	The SSSI is designated for upland oak woodland, and quaternary of Scotland.	3.8 km
SSSI	Woodhall Dean	The SSSI is designated for upland oak woodland.	3.9 km
SSSI	Lammermuir Deans	The SSSI is designated for upland mixed ash woodland, subalpine calcareous grassland, valley fen.	4.3 km

Source: Natural Power



The Proposed Development falls within the catchment of the Whiteadder Water which is designated under the Freshwater Fish Directive Salmonid Waters ¹(capable of supporting a salmonid fishery). The Bothwell Water flows from northwest to southeast, north of the Proposed Development and converge with the Whiteadder Water to the southeast.

4.1.2. Habitats

Extended Phase 1 Habitat survey² and National Vegetation Classification (NVC)³ surveys were conducted in April 2022. The habitat within the Proposed Development is a highly degraded bog community laying on shallow peat (>50 cm), with dominant hare's-tail cottongrass, purple moor-grass and mat grass. Effectively, the entire Study Area is a mosaic of marshy grassland, acid grassland and unimproved acid grassland (NVC: M20/M25/U5 and intergrades). In summary, the habitats within the Proposed Development Area are heavily modified by drainage/enrichment and are in poor condition due to grazing pressure.

4.1.3. Protected Species

The following species were recorded during the extended Phase 1 Habitat survey:

- Otter: signs (old spraints) were found along the Bothwell Water indicating low otter activity. Bankside and surrounding habitat are of low structural diversity (flat, well grazed grass/rush), offering little opportunity for secure holt locations. No signs were found along the Bothwell Water tributaries – they offer low suitability for otter (mainly poorly vegetated, steep-sided, channelised, fast-flowing burns). Baseline data collected for Crystal Rig IV Wind Farm in 2014 indicate that otters are frequently using the area further to the east of the Proposed Development (the Bothwell Water and Monynut Water);
- Brown hare: flushed from the edge of the conifer plantation; and
- Reptiles: adder and common lizard were both recorded across the Study Area.

The extended Phase 1 Habitat survey also found potential to support the following species, the impacts of the Proposed Development on these features will therefore be considered during the planning application:

- Water vole: the Bothwell Water offers low suitability (rate of flow), however some areas of wet rush pasture flanking the burn may provide reasonable habitat. Hazelly Cleugh offers good habitat; the burn becomes braided into several smaller channels through rush pasture. Vole middens/latrines were frequent there - all assessed as field vole. No water vole signs were observed during the baseline survey for Crystal Rig IV Wind Farm (covering much larger area) in 2014;

¹ Council Directive 78/659/EEC of 18 July 1978 on the quality of fresh waters needing protection or improvement in order to support fish life implemented in the UK under the provisions of the Surface Waters (Fishlife) (Classification) (Scotland) Direction 1999, 205 salmonid waters and 4 cyprinid waters have been designated, listed in Annex 1. These waters are required to comply with the physical and chemical environmental quality standards set out in the directive.

² JNCC, 2010. Handbook for Phase 1 habitat survey: a technique for environmental audit. JNCC, Peterborough

³ Rodwell, J. S. 2006. National Vegetation Classification: Users' handbook. JNCC, Peterborough.



- Bats: a small block of conifer plantation adjacent to the Proposed Development Area offers negligible bat roost potential. There are no other features (trees, buildings, structures) within the Proposed Development Area that could be suitable for bat roosts. For foraging and commuting bats, the Proposed Development Area is of low value (due to the low impacts associated with solar developments, bat activity surveys are not currently recommended for solar developments⁴ and they have been scoped out from the ecological survey programme); and
- Migratory salmonids (Atlantic salmon) and non-migratory salmonids (brown trout) as well as lamprey species are known to be present in the Bothwell Water and some of its tributaries. Electrofishing survey, covering a stretch of the Bothwell Water that is relevant to the Proposed Development, to inform the recent population levels of these species took place in summer 2022 as part of the planning condition discharge requirements for Crystal Rig IV Wind Farm. The results of this survey will be reported within the EIAR pertinent to the Proposed Development.

4.1.4. Birds

- Breeding bird survey (BBS) based on the Brown and Shepherd method⁵ were carried out in the breeding season 2022. They covered the Proposed Development Area and a 50 m buffer. Curlew, snipe and lapwing are known to be breeding within the Study Area or on land adjacent to it. The BBS results will be analysed and discussed further within the EIAR; and
- Black grouse targeted surveys were conducted in March/April 2022 as part of the planning condition discharge requirements for Crystal Rig IV Wind Farm. The surveys covered the much wider area of Crystal Rig IV Wind Farm, including 1.5 km buffer (and included the Study Area). No black grouse were recorded during these surveys.

Potential for Significant Environmental Effects

SACs are protected sites designated under the Habitats and Species Directive (92/43/EEC). Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the habitat types and species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level. The Proposed Development lies 1.4 km from the boundary of River Tweed SAC, which is designated for lamprey species and Atlantic salmon. Along with brown trout they are also priority species in the Scottish Borders Local Biodiversity Action Plan⁶ (LBAP) and are listed on the Scottish Biodiversity List⁷ (SBL).

⁴ NatureScot 2022. General pre-application and scoping advice for solar farms (draft guidance).

⁵ Brown, A. F. & Shepherd, K. B. 1993. A method for censusing upland breeding waders. *Bird Study*, 40: 189-195

⁶ Scottish Borders Council, undated. Scottish Borders Biodiversity Action Plan. Available at: http://www.scotborders.gov.uk/downloads/file/287/local_biodiversity_action_plan

⁷ The SBL forms a list of species and habitats of importance for biodiversity conservation in Scotland, produced by the Scottish Government



Potential adverse impacts during construction of a solar development are less likely to occur than during construction of a wind farm. However, they still can include water pollution incidents or contamination of watercourses (due to works taking place too close to watercourses) and water acidification associated with decomposition of debris. To mitigate potential impacts on qualified interests of River Tweed SAC standard mitigation measures will be applied and best practice during construction will be adhered to. Currently, no significant adverse effects are anticipated from the Proposed Development on the River Tweed SAC. The remainder of the designated sites are sufficiently distant as to prevent impacts from the Proposed Development and have been scoped out of the assessment.

Of the habitats present, wet modified bog has the highest potential nature conservation importance as it is listed on Annex 1 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (The Habitats Directive). The installation and operation of solar photovoltaic modules may have both direct and indirect impacts on the degraded wet modified bog. Therefore, the emphasis should be put to ensure that developable areas, including any associated cable route, are proposed within less degraded habitats as much as feasible. Areas of deeper peat should be avoided wherever possible, and electrical infrastructure cabling should be installed along tracks wherever possible to reduce the footprint of the Proposed Development. Although some habitat loss due to the Proposed Development is anticipated, any significant adverse effects on Annex 1 habitats are unlikely.

There is also potential that without suitable mitigation, construction works may temporarily disturb groundwater flow. As such, the presence of potential Ground Water Dependent Terrestrial Ecosystems (GWDTEs) will inform site design and potential impacts will be managed through the adoption of standard good practice and environmental management techniques in order to maintain hydrological connectivity.

Potential impacts to protected and/or priority species, notably otter and waders, will be avoided through implementation of pre-construction surveys and adherence to best practice during construction.

Conclusions and Proposed Mitigation

In line with the above it is proposed that the EIAR will present the results of the extended Phase 1 habitat survey and NVC survey, electrofishing survey, and breeding bird survey. A detailed assessment of the predicted effects on designated sites, habitats, and ecological and ornithological features will be presented along with details of the precautionary methods of working, embedded and additional mitigation and habitat enhancement if required.

Subject to the final survey results, best practice and through suitable embedded mitigation, it is anticipated that there would not be a significant adverse environmental effect arising from the Proposed Development in respect of its impact on designated sites, habitats, flora and fauna. To minimise the risk of breaching legislation during construction, proportionate mitigation and precautionary working methods will be prescribed within the EIAR and



detailed within a Construction Environmental Management Plan (CEMP). The recommended mitigation measures will include the following:

- Pre-construction protected species survey to be completed prior to the start of construction to survey for the presence of otter, water vole and ground nesting birds;
- Vegetation clearance and construction to be completed outside of the breeding bird season (March to August). Should that not be possible, breeding bird checks should be completed by a suitable qualified ecologist at regular intervals;
- Works to be carried out during daylight hours to reduce disturbance to otters;
- Ramps to be placed within any temporary or permanent deep excavations to allow trapped wildlife to escape;
- Continued run-off management and erosion control;
- Check of maintenance vehicles for oil leaks to avoid risk of pollution incident (refuelling of vehicles and machinery would be carried out at a central designated area, on an impermeable surface, located at least 50 m away from any watercourse; and
- Fuel and other chemicals to be stored in designated locations with specific measures to prevent leakage (the siting of the storage area to be away from surface water drains and on impermeable base).

Question 3: Are consultees content with the proposed methodology for Ecology and Ornithology?

5. Landscape and Visual

Introductions

This section of the Scoping Report sets out the proposed approach to be applied to the Landscape and Visual Impact Assessment (LVIA) of the Proposed Development. The aim of the LVIA is to identify, predict and evaluate potential effects arising from the addition of the Proposed Development on the following:

- Physical elements of the landscape;
- Landscape character;
- Special qualities of protected and designated landscapes;
- Views from sensitive locations, for example residential properties, settlements, hill tops, and routes (roads, footpaths); and
- Cumulative effects that may arise from other solar farm developments in the study area.

The LVIA will be undertaken by Chartered Members of the Landscape Institute (CMLI) experienced in undertaking the design and assessment of solar farm developments in accordance with best practice guidance.



Methodology

The LVIA will be prepared in accordance with the principles set out within the *Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3)*.⁸ In addition, the LVIA will take account of the following guidance documents:

- GLVIA3 Statement of Clarification 1/13 10-06-13 (Landscape Institute, 2013);⁹
- Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. (Scottish Natural Heritage, Historic Environment Scotland, April 2018);¹⁰
- Landscape Character Assessment, Guidance for England and Scotland, (The Countryside Agency and SNH 2002 Edition);¹¹
- Landscape Sensitivity Assessment – Guidance for Scotland, Consultation draft (NatureScot, July 2020);¹²
- Technical Guidance Note 02/21, Assessing landscape value outside national designations (Landscape Institute, February 2021);¹³
- Technical Guidance Note 06/19, Visual Representation of Development Proposals (Landscape Institute, 2019);¹⁴ and
- Visual Representation of Wind Farms, Version 2.2, (SNH, February 2017).¹⁵

The assessment will also take cognisance of relevant national and local landscape planning policy and other such material that may be published during the preparation of the LVIA. A methodology including detailed criteria for assessing landscape and visual effects will be included as an appendix document to the main LVIA EIAR chapter.

In accordance with the principles set put in GLVIA3, the landscape and visual will be set out separately in the LVIA.

8 Landscape Institute, Institute of Environmental Management. (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*. Abingdon. Routledge

9 Landscape Institute. (2013) *GLVIA3 Statement of Clarification 1/13 10-06-13* [Online] Available from: <https://www.landscapeinstitute.org/technical/glvia3-panel/glvia3-clarifications/>. (Accessed: February 2023)

10 Scottish Natural Heritage., Historic Environment Scotland. (2018) *Environmental Impact Assessment Handbook* [Online] Available from - <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf>. (Accessed: February 2023)

11 Land Use Consultants., Swanwick. C. (2002) *Landscape Character Assessment Guidance for England and Scotland*. The Countryside Agency, Scottish Natural Heritage. Cheltenham.

12 NatureScot. (2020) *Landscape Sensitivity Assessment – Guidance for Scotland, Consultation draft* [Online] Available from - https://www.nature.scot/sites/default/files/2020-07/Consultation%20-%20Landscape%20Sensitivity%20Assessment%20guidance_1.pdf. (Accessed: February 2023)

13 Landscape Institute. (2021) *Technical Guidance Note 02/21 Assessing landscape value outside national designations* [Online] Available from - <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2021/05/tgn-02-21-assessing-landscape-value-outside-national-designations.pdf>. (Accessed: February, 2023)

14 Landscape Institute. (2019) *Technical Guidance Note 06/19 Visual Representation of Development Proposals* [Online] Available from - https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf. (Accessed: February 2023)

15 Scottish Natural Heritage. (2017) *Visual Representation of Wind Farms, Guidance*. [Online] Available from: <https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf>. (Accessed: February 2023)



5.1.1. Landscape Assessment

Assessing effects of the Proposed Development on the landscape requires a number of steps broadly summarised as identifying the sensitivity of the landscape receptor, establishing the magnitude or scale of the effect likely as a result of the Proposed Development, and ultimately forming a judgement with respect to the significance of the effect in the context of the EIA Regulations. The identification of significant effects is important because those are the effects that are likely to carry more weight in the decision-making process (or often referred to as the planning balance). This does not however mean that non-significant effects are not considered in the LVIA.

5.1.2. Sensitivity of Landscape Receptors

The sensitivity of the landscape will be defined by analysing the susceptibility of the landscape receptor to the proposed change (the Proposed Development) and the value of the landscape receptor. Having established both the susceptibility and the value of the landscape (receptor), these will be combined to determine the overall sensitivity of the landscape receptor to the Proposed Development.

5.1.3. Landscape Magnitude of Effect

Judgements of magnitude of change will be assessed in terms of the size and scale, geographical extent, duration and reversibility of the change to the landscape likely to result from the Proposed Development. These will be considered in combination to determine the overall magnitude of the change resulting from the introduction of the Proposed Development.

5.1.4. Visual Assessment

Assessing the significance of visual effects of the Proposed Development requires several steps including identifying the sensitivity of the visual receptor and identifying the magnitude or scale of the effect to the receptors view, prior to forming a judgement with respect to the significance of the effect in the context of the EIA Regulations.

5.1.5. Sensitivity of the Visual Receptor

The sensitivity (or nature) of visual receptors will be assessed in terms of susceptibility of the visual receptor (of the viewer not the view) to the particular form of change likely to result from the Proposed Development, and the value attached to the visual receptor.

5.1.6. Visual Magnitude of Effect

Judgements of magnitude of effect will be assessed in terms of the size and scale, geographical extent, duration, and reversibility of the change of the view likely to result from the Proposed Development. These will be considered in combination to determine the overall magnitude of the change resulting from the introduction of the Proposed Development.



5.1.7. Judging the Levels of Significance of Landscape and Visual Effects

Having established the sensitivity of the landscape and visual receptors and the magnitude of effect predicted; the assessment will conclude by identifying the significance of the effect in EIA terms.

LVIA Study Area

The first step of the LVIA is to establish the extent of study area. Based on knowledge of the proposed site, a 2 km study area is proposed for the LVIA (see Appendix C Figure – Zone of Theoretical Visibility). The final study area will be agreed with statutory consultees during post-scoping consultation and informed by Zone of Theoretical Visibility mapping.

Landscape and Visual Baseline

A review of the landscape and visual receptors located within the study area will be undertaken through a combination of desk study and site work.

5.1.8. Landscape Baseline

The landscape baseline will be identified through review of the following information:

- Landscape Character Types and Map Descriptions (NatureScot, 2019);¹⁶
- Landscape Character Assessment: Borders – Landscape Evolution and Influences (NatureScot, 2019);¹⁷
- Landscape Character Assessment: Lothians – Landscape Evolution and Influences (NatureScot, 2019);¹⁸
- Local Landscape Designations (Scottish Borders Council, 2012);¹⁹ and
- East Lothian Local Development Plan 2018. Special Landscape Areas. Supplementary Planning Guidance (East Lothian Council, 2018).²⁰

The Proposed Development is located within the boundaries of Crystal Rig IV Wind Farm and occupies an area of moorland and rough grazing. The proposed site lies entirely within

¹⁶ NatureScot. (2019) *Landscape Character Types* [Online] Available from - <https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions>. (Accessed: June 2022)

¹⁸ NatureScot (2019) *Landscape Character Assessment: Lothians – Landscape Evolution and Influences*. [Online] Available from <https://www.nature.scot/doc/landscape-character-assessment-borders-landscape-evolution-and-influences> (Accessed: June 2022)

¹⁹ NatureScot (2019) *Landscape Character Assessment: Lothians – Landscape Evolution and Influences*. [Online] Available from <https://www.nature.scot/doc/landscape-character-assessment-lothians-landscape-evolution-and-influences> (Accessed: June 2022)

¹⁹ Scottish borders Council (2012) *Local Landscape Designations* [Online] <https://www.scotborders.gov.uk/downloads/file/1124/local-landscape-designations> (Accessed: June 2022)

²⁰ East Lothian Council (2018) *Local Development Plan 2018. Special Landscape Areas. Supplementary Planning Guidance*. [Online] Available from <https://www.eastlothian.gov.uk/downloads/file/27910/special-landscape-area-spg-part-1> (Accessed: June 2022)



the Dissected Plateau Moorland Landscape Character Type (LCT 90) which is anticipated to receive both direct and indirect effects as a result of the Proposed Development. The proposed site also lies close to the Plateau Moorland – Lothians (LCT 266) which occupies a large area to the west and would receive potential indirect effects.

No national level landscape designations would be affected. The proposed site lies entirely within the Lammermuir Hills Special Landscape Area (SLA) in the Scottish Borders, and adjacent to both the Lammermuir Moorland and Whiteadder SLAs in East Lothian and the effect on their special qualities will be a key consideration.

5.1.9. Visual Baseline

The following will be considered in the visual baseline:

- Residential properties;
- Settlements;
- Roads including A, B and minor roads;
- Walking routes including Scottish Hill Tracks, Public Rights of Way and Core Paths;
- Hill tops; and
- Promoted visitor attractions.

When considering the ZTV (see Appendix C – ZTV to 2 km), the extent of visibility of the Proposed Development is contained within the ‘bowl’ formed by the ridgelines of Lothian Edge to the north, Monymut Edge to the east and Spartleton Edge to the South. The extent of visibility is therefore limited to minor public roads and footpaths within the wider wind farm complex as follows:

- users of the B6355 road and connecting minor road to Garvald;
- Walkers on the Herring Road, Core Paths; and
- Walkers on Spartleton.

5.1.10. Viewpoints

In addition, a selection of viewpoints will be chosen to represent the views experienced towards the Proposed Development. It is the intention to agree these with statutory consultees post-scoping during follow up consultation once the baseline and site visit has been undertaken.

Viewpoints will be selected to take account of the viewing experience (such as static views from settlements and sequential views from routes) and cumulative views of other solar farm developments. The viewpoints will be as far as possible, representative of the range of key visual receptors and view types (including panoramas, vistas, glimpsed views), as well as being located at varying distances, elevations, and orientations from the Proposed Development.



5.1.11. Site Visit

Site visits will be undertaken periodically during periods of clear visibility and include visits to the Proposed Development Area, and the wider study area from publicly accessible locations in order to aid the assessment.

5.1.12. Zone of Theoretical Visibility Mapping

A ZTV map has been produced to illustrate the potential extent of visibility of the Proposed Development based on the current layout (see Appendix C: Figure – Zone of Theoretical Visibility). The ZTV assumes a bare earth surface, i.e. no trees or buildings etc. that might otherwise obscure the view of the solar panels and therefore is a worst-case illustration. The ZTV has been produced with an extent of 2 km based on NatureScot guidance for ZTV production.²¹ ZTVs will be used throughout the design evolution of the Proposed Development and will be presented in the LVIA.

Visualisations

Baseline photography will be undertaken by a professional photographer from viewpoint locations used in the LVIA. Wirelines and photomontages will be generated for the same viewpoint locations and comply with both NatureScot guidance and Landscape Institute guidance.

Future Consultation

It is the intention to undertake further consultation with statutory consultees regarding the landscape and visual receptors to be scoped into the assessment, establish the viewpoint locations, and cumulative baseline once the Proposed Development is at an advanced stage. This will be supported with ZTVs and wireline projections.

Question 4: Do the consultees agree with the LVIA and CLVIA methodologies proposed?

6. Geology, Hydrology and Hydrogeology

Surface Water Hydrology

Hydrologically, the Proposed Development lies within the tributary catchments of the River Tweed. The catchment and named sub catchments draining the site are discussed in the following paragraphs.

6.1.1. Bothwell Water Catchment

The Proposed Development Area lies within the Bothwell Water catchment which is in the Whiteadder catchment of the SEPA Solway Tweed River basin district. The main stem of the Bothwell Water is approximately 11.4 km in length. The Bothwell Water rises in the

²¹ NatureScot (2017) Visual Representation of Wind Farms [Online] available from: <https://www.nature.scot/sites/default/files/2019-09/Guidance%20-%20Visual%20representation%20of%20wind%20farms%20-%20Feb%202017.pdf> (Accessed: June 2022)



Lammermuir Hills near Caldercleugh and flows southeast, discharging to Whiteadder Water at NGR NT 68679 63044. The Whiteadder Water flows east to discharge to the River Tweed.

6.1.2. Sub-catchments of the Bothwell Water

The watercourses on the site of the Proposed Development which form tributaries to the Bothwell Water are typical upland watercourses, with heavily vegetated riparian zones. These watercourses are generally of shallow to moderate gradient with bed material ranging from vegetated watercourses to beds of gravels and cobbles. Two of these sub-catchments drain the Proposed Development: a watercourse to the north in Gullions Cleugh and a watercourse to the south in Hazelly Cleugh. Part of the northeast of the Proposed Development drains directly into the Bothwell Water.

Water Quality

Three watercourses with hydrological connectivity to Proposed Development have been classified under SEPA's River Basin Management Plans (RBMP)²². The RBMP are one of the requirements of the Water Framework Directive (WFD) and are the plans designed for improving and protecting the water environment. The details of the watercourses that are within or downstream of the Site are classified under the RBMP classification scheme and are provided in **Table A4** below.

Table A4: RBMP classification of watercourses within the vicinity of the site.

River	Length (km)	Current Ecological Status (as of 2022) ^{23,24}	Reasons for classification	2027 Targeted Ecological Status
Bothwell Water	11.4	Good	There are currently no pressures identified on this waterbody	Good
Whiteadder Water (Whiteadder Reservoir to Dye Water confluence)	8.2	Moderate	The water body has been designated as a heavily modified water body on account of modifications that cannot be fully addressed without a significant impact on water storage for public drinking water	Good
Whiteadder Water (Dye Water to Billie)	25.7	Moderate	The water body has been designated as a heavily modified water body on account of modifications that cannot be fully addressed without a	Good

²² SEPA, 2021, River Basin Management Plan Data, <https://informatics.sepa.org.uk/RBMP3/MP3> [Accessed June 2022]

²³ SEPA, 2020 Water Classification Data, <https://www.sepa.org.uk/data-visualisation/water-classification-hub> [Accessed: June 2022]

²⁴ Environment Agency, 2019, Catchment Data Explorer, <https://environment.data.gov.uk/catchment-planning> [Accessed: June 2022]



River	Length (km)	Current Ecological Status (as of 2022) ²³²⁴	Reasons for classification	2027 Targeted Ecological Status
Burn confluences)			significant impact on water storage for public drinking water	
Whiteadder Water (Billie Burn to tidal limit)	17.5	Moderate	-	Good
River Tweed (Transitional)	-	Moderate	-	Good

Source: SEPA

Designated Areas

The following paragraphs highlight the designated sites of relevance to hydrology within immediate vicinity of the Proposed Development. Information specific to each has been obtained from the SNHi²⁵. Following a review of this information there are five designated sites within 5 km of the Proposed Development.

River Tweed is designated as both a Special Area of Conservation (SAC) for Atlantic salmon, brook, river and sea lamprey, otter and as a river with floating vegetation often dominated by water-crowfoot, and a Site of Special Scientific Interest (SSSI) for the above as well as fly and beetle assemblages. The Bothwell Water, that drains the site, is a headwater to the River Tweed which is included in the SAC (1.4 km southeast) and SSSI (3.5 km southeast) designations.

Woodhall Dean is a SSSI designated for its upland oak woodland. The SSSI is situated 3.9 km to the northeast in a catchment outside the influence of the Proposed Development and is therefore not hydrologically connected.

Lammermuir Deans is a SSSI designated for upland mixed ash woodland, grassland and wetland. The SSSI is situated 4.3 km to the east in a catchment outside the influence of the Proposed Development and is therefore not hydrologically connected.

Rammer Cleugh is a SSSI designated for upland oak woodland and geology. The SSSI is situated 3.8 km to the north in a catchment outside the influence of the Proposed Development and is therefore not hydrologically connected.

Flood Risk

The Flood Risk Management (Scotland) Act 2009²⁶ sets in place a statutory framework for delivering a sustainable and risk-based approach to managing flooding. In addition to this

²⁵ NatureScot SiteLink, <https://sitelink.nature.scot/home> [Accessed: June 2022]

²⁶ Scottish Government, 2009, The Flood Risk Management (Scotland) Act 2009



Policy 22 of NPF4²⁷ outlines the flood risk considerations for developments. This includes the placement of development outside of the future functional flood plain and consideration for managing runoff.

A flood risk assessment will be undertaken as part of the planning application. The assessment will be carried out in accordance with NPF4. The document states that “It should be demonstrated that all risks of flooding are understood and addressed, that there is no reduction in flood plain capacity, increased risk for others, or a need for future flood protection schemes. In addition the development must remain safe during flooding and future adaptations can be made to accommodate the effects of climate change. Development proposals will not increase the risk of surface water flooding to others or itself be a risk”

Flood information provided by SEPA²⁸ indicates that within the Proposed Development area there is a high risk from flooding in the Bothwell Water catchment (1:10 chance of flooding each year). This risk is mainly associated with fluvial flooding however it is restricted to the valley floors of the Bothwell Water and its tributaries. There is also a risk of surface water flooding in some localised areas in the valleys of the tributaries in Gullions Cleugh and Hazelly Cleugh.

The Proposed Development is located approximately 11 km to the nearest coast. The lower reaches of the River Tweed are tidal but given the distance to the coast along with the topographical position of the Proposed Development it will not be affected by tidal flooding.

Soils and Peat

The distribution of soils across the site is dependent upon land use, geology, topography and hydrological regime of the area. Information on site soils has been provided by the James Hutton Institute, specifically from its online Soil Information for Scottish Soils (SIFSS) portal²⁹. The soils present on the Proposed Development comprise of peaty gleyed podzols or brown earths of the Etrick soil association.

The above soils information as well as previous peat surveys on the Proposed Development area indicate that there is no peat >0.5 m in depth present in the area occupied by the Proposed Development. Site survey work is therefore not required to confirm the presence and depth of peat on site, and there will be no requirement to produce a Peat Management Plan or peat side risk assessment.

Bedrock and Superficial Geology

The following information has been obtained from the digital data available from the British Geology Survey³⁰. The Proposed Development is underlain by the sedimentary bedrock of

²⁷ Scottish Government, 2023, National Planning Framework 4

²⁸ SEPA, 2015, Interactive Flood Map, <http://map.sepa.org.uk/floodmap/map.htm> [Accessed: June 2022]

²⁹ James Hutton Institute, Soil Information for Scottish Soils, <https://sifss.hutton.ac.uk/> [Accessed: June 2022]

³⁰ British Geological Society Geindex, <http://mapapps2.bgs.ac.uk/geindex/home.html> [Accessed: June 2022]



the Gala group. The Gala group is a wacke, silt and mudstone succession from the Silurian Period, and formed between approximately 433 and 444 million years ago.

Part of the Proposed Development is underlain by superficial deposits of glacial till. Typically, tills are poorly sorted and often have clasts of many sizes, including boulders, within a finer matrix of gravel, sand and clay sized particles derived from fine-grained sediments and rock flour. Tills may contain erratic blocks of apparently un-weathered rock, which in a site investigation may be sufficiently large to be mistaken for bedrock. Recent alluvial deposits of clay, silt, sand and gravel are present in both Gullions Cleugh and Hazelly Cleugh.

It is noted that no specific geological feature of interest has been identified within the Proposed Development, including peat which is discussed above. Although understanding the underlying bedrock and superficial geology is critical for the effectiveness of the construction design of the proposed development, specific mitigation to protect the geodiversity during construction, operation and decommissioning are not required.

Hydrogeology

The Gala group, which underlies the Proposed Development, is classified by the BGS³⁰ as a low productivity aquifer, containing only limited groundwater in the near surface weathered zone and secondary fractures. If present, groundwater movement within the Gala Group bedrock will be extremely limited due to the intergranular matrix. Percolation of surface waters into these areas will be restricted due to the presence of superficial glacial till.

The volume of water corresponding to the aquifer transmissivity will be a primary function of the effective porosity derived from the content of clays and silts. Since most of these deposits are mapped around watercourses it is likely these locations may well support perched aquifers, supplying baseflow to some of the catchments. These may also support species and be considered as groundwater dependant terrestrial ecosystems (GWDTE), which again will require further assessment during the completion of the EIAR.

Water Resources and Private Water Supplies

Existing knowledge of the water supply arrangements surrounding Crystal Rig Wind Farm highlight that it is highly probable that no public water supply infrastructure is located within the vicinity of the Proposed Development. The Whiteadder reservoir is a Scottish Water asset but is up catchment of the waters draining the Proposed Development and is therefore hydrologically disconnected and there will be no significant impacts on public water supply assets. Due to the time that has passed since this information was gathered, further requests for information will be made to Scottish Water to confirm this.

A request will be made to SEPA for information on any abstractions and/or discharges within the site boundary or within 2 km of the site.

Previous requests to East Lothian Council and Scottish Borders Council regarding the presence of private water supplies (PWS) highlight that there are two known PWS, both



groundwater borehole supplies, within 2 km of the Proposed Development (Crystal Rig and Friardykes). Based on the information presented in the hydrogeology section it is likely that the hydrogeological catchments are constrained by the same topographic controls as the surface water catchments. Therefore, any properties not located within the catchments occupied by the Proposed Development do not need to be considered, which covers these two PWS. Given that the PWS information was supplied several years ago a further data request will be submitted to Scottish Borders Council and East Lothian Council prior to EIA production to ensure there are no new PWS in the area.

Question 5: Do the consultees agree with the Geology, Hydrology and Hydrogeology methodologies proposed?

7. Traffic and Access

Solar developments do not generate significant levels of traffic on a permanent basis. Once the construction phase of the development is complete, visits to site are limited to weekly occurrences by a handful of operatives. Abnormal Indivisible Loads (AILs) are not required for solar developments; all materials can be delivered on standard HGVs using existing road networks.

Current access to the proposal site for vehicles is from the A1 at the Innerwick Junction, following the Thorsten Manor road to the existing Crystal Rig wind farm site. The existing wind farm tracks would provide access to the solar site with no upgrades envisaged being required to the existing tracks. An alternative access to the south of the site is also being considered and will be assessed in the planning application should it be proposed.

A formal Transport Assessment (TA) is not required to accompany the planning application as TAs principally relate to developments that generate significant permanent increase in travel as a direct consequence of their function, such as residential developments. It is considered that as the construction phase is likely to be short term in duration, the effect on traffic levels will not be significant. The potential effects identified above will be addressed through the production of a Transport Summary Statement and preliminary Construction Traffic Management Plan (CTMP).

The Transport Summary Statement and CTMP will set out the proposed access arrangements to the proposal site; vehicle routing from the public road to the proposed site access; the anticipated construction programme, construction vehicle numbers; construction worker numbers and the proposed construction hours.

Question 6: Do the consultees agree with the Traffic and Access methodologies proposed?



8. Archaeology and Cultural Heritage

Introduction

The cultural heritage section of the EIAR will characterise the historic environment within the Proposed Development Area and in the wider study area. Consultation, desk-based research including LIDAR assessment and walkover surveys, a zone of theoretical visibility (ZTV) and setting visits will be used to define proportionate study areas for the assessment. A baseline of designated and non-designated heritage assets will be assembled to assess the potential direct, indirect, and setting effects of the Proposed Development. Where likely significant effects are identified, mitigation measures will be identified.

The cultural heritage of an area comprises archaeological sites, historic buildings, gardens and designed landscapes, historic battlefields and other sites, features or places in the landscape that have the capacity to provide information about past human activity, or which have cultural relevance due to associations with folklore or historic events. Sites of cultural heritage interest may also derive some, or all, of that interest from their setting within the wider landscape. The cultural heritage section of this EIA Scoping Report is thus intended to identify likely significant effects of the Proposed Development upon the physical fabric and settings of heritage assets within the Proposed Development Area, and likely significant effects on the cultural significance of assets within the wider landscape through development within their setting, which would need detailed consideration through EIA.

Direct physical impacts involve physical alteration or destruction of heritage assets and could result from the construction of solar panel foundations, new or upgraded access tracks, substations, transformers, cables etc.

Effects on the setting of heritage assets can arise due to the relative scale of infrastructure, their potential to detract from understanding of key views from/towards a heritage asset, or a change resulting in an adverse experience of a heritage asset.

Cultural significance is a quality that applies to all heritage assets and as defined by Historic Environment Scotland (HES)³¹ (NatureScot & HES 2018, Appendix 1 page 175), relates to the ways in which a heritage asset is valued both by specialists and the general public; it may derive from factors including the asset's fabric, setting, context and associations. Following National Planning Framework NPF4³² 'Policy Principles', the analysis of a heritage asset's cultural significance aims to identify its 'special characteristics' which should be protected, conserved, or enhanced. Such characteristics may include elements of the asset's setting, which is defined in Historic Environment Scotland's guidance as "the way in

³¹ <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf>

³² <https://www.gov.scot/publications/national-planning-framework-4-revised-draft/documents/>



which the surroundings of a historic asset or place contribute to how it is experienced, understood and appreciated” (HES 2016³³, updated 2020, Section 1).

This use of the word cultural ‘significance’, referring to the range of cultural values or interest attached to an asset, should not be confused with the unrelated usage in EIA where the ‘significance of an effect’ reflects the weight that should be attached to it in a planning decision.

Historic landscape is not treated as a heritage asset for the purposes of this assessment except where a defined area of landscape has been designated for its cultural heritage interest (including Conservation Areas and areas included in the Inventory of Gardens and Designed Landscapes). It is recognised that all landscapes have a historic dimension, and this will be considered as part of the assessment of Landscape Character (covered in the LVIA chapter of the EIA Report). Further, although any effects on the cultural significance and importance of heritage assets due to change in their setting are likely to be visual in nature, the assessment of these visual effects is distinct from the assessment of visual change in the LVIA. The assessment of effects on setting may be informed by visualisations prepared as part of the LVIA but the conclusions reached regarding visual change in the setting of a heritage asset are distinct.

Legislation, Policy and Guidance

8.1.1. Legislation

- The Ancient Monuments and Archaeological Areas Act 1979³⁴;
- The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997³⁵;
- The Historic Environment Scotland Act 2014³⁶.

8.1.2. Policy

- National Planning Framework NPF4;
- Historic Environment Policy Scotland (HEPS) (HES, 2019)³⁷; and
- Policies in the Scottish Borders Local Development Plan (SBLDP)³⁸ (adopted 2016): Policies EP7-10.

³³ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationid=80b7c0a0-584b-4625-b1fd-a60b009c2549>

³⁴ <https://www.legislation.gov.uk/ukpga/1979/46>

³⁵ <https://www.legislation.gov.uk/ukpga/1997/9/contents>

³⁶ <https://www.legislation.gov.uk/asp/2014/19/contents/enacted>

³⁷ <https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/historic-environment-policy-for-scotland-heps/>

³⁸ https://www.scotborders.gov.uk/info/20051/plans_and_guidance/121/local_development_plan



8.1.3. Technical Guidance

- Historic Environment Scotland Circular (HES, 2019)³⁹;
- Planning Advice Note (PAN) 2/2011: Planning and Archaeology⁴⁰;
- IEMA/CIfA/IHBC Principles of Cultural Heritage Impact Assessment in the UK (2021)⁴¹;
- Designation Policy and Selection Guidance (DPSG), (HES 2019)⁴²
- Standard and Guidance for Historic Environment Desk-Based Assessment (Chartered Institute for Archaeologists (CIfA 2020)⁴³;
- Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (CIfA 2020)⁴⁴;
- Managing Change in the Historic Environment: Setting (Historic Environment Scotland (HES) 2016, updated 2020)⁴⁵; and
- Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment Process in Scotland (NatureScot and HES, 2018)⁴⁶.

Baseline

8.1.4. Study Area

Within the Proposed Development Area boundary and any access track routes, all known and potential heritage assets will be assessed for potential direct, indirect, and setting effects.

Data will be gathered for a 1 km Study Area in order to inform the assessment of archaeological potential for currently unknown heritage assets.

Within the 1 km Study Area, heritage assets have been appraised in this Scoping Report based on their significance and a bare earth ZTV to identify those beyond the Proposed Development Area that may be affected through development within their setting.

³⁹ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=a768f3cb-eb44-4473-be7b-aa2500e4892b>

⁴⁰ <https://www.gov.scot/publications/pan-2-2011-planning-archaeology/>

⁴¹ https://www.archaeologists.net/sites/default/files/j30361_iema_principlesofchia_v8.pdf

⁴² <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=8d8bbaeb-ce5a-46c1-a558-aa2500ff7d3b>

⁴³ https://www.archaeologists.net/sites/default/files/CIfAS%26GDBA_4.pdf

⁴⁴ https://www.archaeologists.net/sites/default/files/CIfAS%26GCommissioning_2.pdf

⁴⁵ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationid=80b7c0a0-584b-4625-b1fd-a60b009c2549>

⁴⁶ <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf>



Criteria for the identification of assets of particular sensitivity or importance is based on the approach set out in Managing Change in the Historic Environment: Setting (Historic Environment Scotland, 2016, updated 2020)⁴⁷ that sets out a range of factors which might form part of the setting of a heritage asset.

It is proposed that further detailed assessment of the Proposed Development upon the setting of heritage assets, located out with the Proposed Development Area boundary is scoped out of the EIAR. Due to the scale and nature of the Proposed Development and its proposed location within an active wind farm, significant environmental effects through development within the setting of heritage assets in the 1 km Study Area are considered very unlikely.

8.1.5. Preliminary Baseline

The baseline information used for this Scoping Report has been compiled using existing data on the historic environment:

- HES designations data available as Geographical Information Systems (GIS) datasets;
- Scottish Borders Council (SBC) Historic Environment Record (HER) data provided in May 2022;
- East Lothian Council (ELC) Historic Environment Record (HER) data provided in May 2022;
- National Record of the Historic Environment (NRHE) comprising the Canmore database.

8.1.6. Proposed Development Area

There is one designated heritage asset located partially within the Proposed Development Area boundary: Scheduled Monument SM4443 Yadlee stone circle itself is located just out with the Proposed Development Area boundary, however the designation boundary extends partially within it. The listing describes it as follows: *The monument is a stone circle of a type found in SE Scotland especially. It is one of three located within close proximity to each other; one at Kingside Burn and the other at 'Crow Stones'. The monument is c. 8.5m in diameter comprising seven small stones, all but one of which are still earthfast. The stones measure from 25cm to 40cm across and 20cm in maximum height. The interior of the circle is on the same level as the surrounding ground and numerous stones were met with on probing. An area measuring 50m in diameter centred on the circle is proposed for scheduling to include ancillary activities, remains of which will survive around the circle.*

There is one further known non-designated heritage asset recorded within the Proposed Development Area on the SBC HER: 353655 Ling Rig marker cairn (post medieval); Evidence for this site, or the origins of this site, comes from documentary sources.

⁴⁷ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationid=80b7c0a0-584b-4625-b1fd-a60b009c2549>



8.1.7. Study Area

There are no designated heritage assets in the 1 km Study Area.

There are 37 known non-designated heritage assets recorded on the SBC (26) and ELC (11) HERs in the 1 km Study Area. These comprise prehistoric assets including a findspot, a cairn and a hut circle, and possible prehistoric assets comprising two possible stone circles and a possible standing stone. Medieval period heritage assets comprise a grange and a spring. Later historic or undated heritage assets are mostly related to upland agriculture and comprise five farm buildings/sheilings, four sheepfolds, five enclosures, three clearance cairns, two areas of rig and furrow, two quarries, two trackways, and one each of a boundary stone, a boundary wall, and a bridge.

Proposed Surveys and Assessments Methodologies

8.1.8. Desk-based assessment

A baseline Desk-based Assessment will be conducted to establish the baseline condition of the Proposed Development Area. The principal sources of information will be the Historic Environment Record (HERs), supplemented by relevant published documentary and cartographic material as appropriate. Various sources will be consulted for the collation of data, including but not limited to:

- Designation data downloaded from Historic Environment Scotland;
- Historic Environment Record (HER) data, digital extract from Scottish Borders Council;
- Historic Environment Record (HER) data, digital extract from East Lothian Council (ELC);
- The National Record of the Historic Environment (NRHE), including the Canmore database and associated photographs, prints/drawings and manuscripts held by HES;
- Historic Landscape Assessment data;
- The National Collection of Aerial Photography (NCAP);
- Geological data available online from the British Geological Survey;
- Historic maps held by the National Library of Scotland;
- Unpublished maps and plans held by the National Records of Scotland;
- Relevant internet resources, including Google Maps, Google Earth, Bing satellite imagery and PastMap;
- Readily available published sources and unpublished archaeological reports.
- Phase 3 LIDAR data;
- ZTV; and
- Findings of other environmental topics (LVIA, peat depth, ground conditions).

Phase 3 LIDAR DTM data is available from the Scottish Remote Sensing Portal which will be utilised for the survey of potential hitherto unknown heritage assets within the Proposed Development Area.

A site visit will be undertaken to 'ground-truth' the results of the LIDAR survey, as well as to record site characteristics, any visible archaeology and geographical/geological features



which may have a bearing on previous land use and archaeological survival, as well as those which may constrain subsequent archaeological investigation.

8.1.9. Stage 1 Settling Assessment

It is proposed that due to the receiving environment, detailed assessment in the EIAR of the Proposed Development upon the setting of heritage assets located out with the Proposed Development Area boundary is scoped out of the assessment. However, in the event that consultees require this assessment, a 1 km Study Area and an outline methodology is proposed and presented as follows:

Likely significant effects on the settings of heritage assets will be identified from an initial desk-based appraisal of data from HES, the HER and consideration of current maps and aerial images available via online sources. The methodology adopted for the identification and assessment of potential effects on setting follows the approach set out in Managing Change in the Historic Environment: Setting (Historic Environment Scotland, 2016, updated 2020⁴⁸) and the Environmental Impact Assessment Handbook (Ver 5, NatureScot & HES, 2018, Appendix 1⁴⁹). The guidance sets out three stages in assessing the impact of development on the setting of a heritage asset or place as follows:

- *“Stage 1: Identify the historic assets that might be affected by a development;*
- *Stage 2: define and analyse the setting by establishing how the surroundings contribute to the ways in which the historic asset or place is understood, appreciated and experienced; and*
- *Stage 3: evaluate the likely significant effect of the proposed changes on the setting, and the extent to which any negative impacts can be mitigated.”*

The Stage 1 Setting Assessment will consider each heritage asset in the 1 km Study Area to identify those that have a wider landscape setting that contributes to their cultural significance, and whether it is likely that its cultural significance could be harmed by the Proposed Development. Where heritage assets are located out with the ZTV, third-party viewpoints within the ZTV which may provide a key view towards the heritage asset and the Proposed Development Area are considered.

Where the Stage 1 Setting Assessment identifies the potential for a significant effect, the asset will be visited to define baseline conditions and identify key viewpoints.

8.1.10. Assessment of Potential Effects

To assess the effect of the Proposed Development upon cultural heritage, the significance of any effect is calculated through comparison of the importance of each heritage asset against the potential magnitude of change upon it. Impacts from cumulative developments will also be considered.

⁴⁸ <https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationid=80b7c0a0-584b-4625-b1fd-a60b009c2549>

⁴⁹ <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf>



Effects on cultural heritage can arise through direct physical effects, indirect effects, or effects on setting.

- Direct physical effects describe those development activities that directly cause damage to the fabric of a heritage asset. Typically, these activities are related to construction works and will only occur within the Proposed Development Area.
- Indirect effects describe secondary processes, triggered by the Proposed Development, that lead to the degradation or preservation of heritage assets. For example, changes to hydrology may affect archaeological preservation; or changes to the setting of a building may affect the viability of its current use and thus lead to dereliction.
- An effect on the setting of a heritage asset occurs when the presence of a development changes the surroundings of a heritage asset in such a way that it affects (positively or negatively) the cultural significance of that asset. Visual effects are most commonly encountered but other environmental factors such as noise, light or air quality can be relevant in some cases. Impacts may be encountered at all stages in the life cycle of a development from construction to decommissioning, but they are only likely to lead to significant effects during the operational phase of the Proposed Development.

Likely significant effects on unknown heritage assets will be discussed in terms of the risk that a significant effect could occur. The level of risk depends on the level of archaeological potential combined with the nature and scale of disturbance associated with construction activities and may vary between high and negligible for different elements or activities associated with a development, or for the Proposed Development as a whole.

Potential Significant Effects

8.1.11. Construction

Any infrastructure or access tracks associated with the Proposed Development will be designed to avoid the two identified heritage assets within the Proposed Development Area.

Should any previously unknown heritage assets be noted during the desk-based assessment or LIDAR/walkover survey, any infrastructure associated with the Proposed Development will take into account the presence of these heritage assets and avoid them through design.

8.1.12. Operation

Appraisal of heritage assets within the Proposed Development Area and 1km Study Area against the scoping ZTV has identified the following heritage asset where change in setting will require detailed assessment in the EIAR.

- SM4443 Yadlee stone circle, located within the Proposed Development Area.
- No heritage assets are identified in the 1km Study Area that would require further detailed assessment.

Cumulative effects will be considered in cases where an effect of more than negligible significance would occur upon a heritage asset, as identified through EIA, as a result of the Proposed Development. Developments (under construction, consented or at application



stage) are included in the cumulative assessment where they also feature prominently within views of or towards heritage assets identified as affected by the Proposed Development, thus also have a potential to impact upon cultural their significance

Approach to Mitigation

8.1.13. Construction

Where potentially significant impacts are identified, mitigation measures will be proposed. The preferred mitigation option is always to avoid or reduce impacts through design, or through precautionary measures such as fencing off heritage assets during construction works. Effects which cannot be eliminated in these ways will lead to residual effects.

Cultural heritage constraint areas will, where appropriate, be defined to include an appropriate buffer around known heritage assets. Proposed ground works in constraint areas may lead to direct impacts.

Where potential direct impacts are identified, evaluation methodologies may be employed (such as intrusive works) to better understand the extent and cultural significance of archaeological remains.

Adverse effects may be mitigated by an appropriate level of survey, excavation, recording, analysis and publication of the results, in accordance with a written scheme of investigation (SPP paragraph 150⁵⁰ and PAN2/2011, sections 25-27⁵¹). Archaeological investigation can have a beneficial effect of increasing knowledge and understanding of an asset, thereby enhancing its archaeological and historical interest and offsetting adverse effects.

8.1.14. Operation

Design will take into account any identified likely significant effects of the Proposed Development on the settings and cultural significance of any heritage assets identified during assessment.

Suitable buffer zones will be recommended around known heritage assets where solar panels would not be placed in order to preserve a heritage asset's setting.

Effects Scoped Out

The extent of ground disturbance associated with decommissioning will not extend beyond the construction footprint and so decommissioning effects on heritage assets within the Proposed Development Area will not occur. Any residual operational phase setting effects will be reversed. Decommissioning effects are therefore proposed to be scoped out of the assessment.

⁵⁰ <https://www.gov.scot/publications/scottish-planning-policy/>

⁵¹ <https://www.gov.scot/publications/pan-2-2011-planning-archaeology/>



Construction phase setting effects will be temporary and are not considered to be significant in EIA due to their very short duration. Construction phase setting effects are therefore proposed to be scoped out of the assessment.

Within the 1 km Study Area, heritage assets have been appraised based on their significance and a bare earth ZTV to identify assets that may be affected through development within their setting. The only asset identified is a Scheduled Monument located partially within the Proposed Development Area boundary. Due to the scale and nature of the Proposed Development, therefore, and its receiving environment within an active wind farm, significant environmental effects through development within the setting of heritage assets in the 1 km Study Area are considered very unlikely. It is proposed that further detailed assessment of the Proposed Development upon the setting of heritage assets located out with the Proposed Development Area boundary is scoped out of the EIAR.

Question 7: Do consultees agree with the proposals for ‘Effects Scoped Out’ in this Scoping Report?

Question 8: Are consultees content with the proposed study area presented in this Scoping Report?

Question 9: Are there any other relevant consultees other than HES, SBC and ELC who should be contacted with respect to the Cultural Heritage and Archaeology assessment?

Question 10: Do consultees wish to request any specific heritage assets to be assessed in the EIAR?

8.2 Other Considerations

Noise

There are no anticipated significant impacts arising from noise as a result of the construction, operation, or subsequent decommissioning, of the Proposed Development and therefore it is proposed that noise is scoped out of the EIA.

Aviation

Solar PV panels have the potential to cause glint and glare which may affect pilots of aircraft flying in the vicinity. In 2010, the CAA published interim guidance⁵² which advised developers of solar PV installations to be cognisant of Articles 137, 221 and 222 of the Air Navigation Order⁵³ and to consult with the operators of nearby aerodromes before construction is initiated. The interim guidance also advised that, following review of research and guidance by the US Federal Aviation Administration and other national aviation authorities, the CAA would develop policy and guidance material on the installation of solar PV, principally on or in the vicinity of licensed aerodromes but also on installations away from aerodromes.

⁵² Civil Aviation Authority. (2010) *Interim CAA Guidance - Solar Photovoltaic Systems*.

⁵³ UK Government. (2016) *The Air Navigation Order 2016* [Online] Available at: [The Air Navigation Order 2016 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukdsi/2016/01/01/4000165000000001) [Accessed: May 2022]



The CAA's formal policy and guidance on solar PV was published in a new edition of CAP 738 – Safeguarding of Aerodromes – in 2020⁵⁴. The policy states:

'In the United Kingdom there has been a further increase in solar PV cells, including some located close to aerodrome boundaries; to date the CAA has not received any detrimental comments or issues of glare at these established sites. Whilst this early indication is encouraging, those responsible for safeguarding should remain vigilant to the possibility.'

There are no licensed, certificated or Government aerodromes within 30 km of the Proposed Development. The nearest airfield is Winfield (Horndean) at approximately 28 km from the Proposed Development, however it is noted this is disused at present.

In view of the absence of airfields in the vicinity of the Proposed Development and the stated CAA policy on solar PV, **it is concluded that there are no potential adverse glint and glare effects on aviation from the proposed development and it is proposed to scope these effects out of the EIA assessment.**

Glint and Glare

Glint and Glare assessments can often be required for solar PV developments. The key receptors for a glint and glare assessment are:

- Road users on regional or national roads within 1 km of a solar panel; and
- Residential properties within 1 km of a solar panel.

If deemed necessary, impacts on road users will be determined based on whether reflections are predicted and the relative position of the reflection to the observer. Impacts on dwelling occupants will consider glare duration due to the observer in that instance being static. All assessments would be conducted in accordance with industry best practice and applicable guidance.

Based on the ZTV and lack of visibility of the proposed development from public roads, it is proposed that glint and glare **can be scoped out if the final layout for solar PV is further than 1 km from either residential properties and/or regional or national roads.**

Forestry

There is one small patch of potentially affected commercially forested area within the Proposed Development site boundary. The design process will ensure impact to the forestry is limited and if possible, negligible. It is proposed that forestry is scoped out of the EIA.

Public Access

The locations of any footpaths will be considered during the iterative design process. Scoping responses from the local planning authority and ScotWays will be considered during the final design process with mitigation proposed for any effects on the use access routes. The visual impact on footpaths will be considered in the LVIA section.

⁵⁴ Civil Aviation Authority. (2020) *Safeguarding of Aerodromes, Cap 738* [Online] Available at: [Safeguarding of Aerodromes \(caa.co.uk\)](https://www.caa.co.uk/Safeguarding-of-Aerodromes) [Accessed: May 2022]



Utilities

Potential utilities including gas and electricity will be investigated and assessed during the EIA, with the final layout designed to avoid potential direct effects.

Question 11: Do consultees agree with the proposed approach to scope out noise from the EIA?

Question 12: Do consultees agree with the proposed approach to scope out aviation from the EIA?

Question 13: Do consultees agree with the proposed glint and glare approach?

Question 14: Do consultees agree with the proposed forestry approach?

9. Environmental Impact Assessment

The EIA is a statutory procedure which draws together in a systematic way, an assessment of the potential significant environmental effects arising from the Proposed Development. As the process has numerous steps, it allows for the opportunity to 'design out' adverse environmental effects at an early stage through the design of the project. This of course is generally preferable to mitigation or remedy at a later stage in the development cycle.

An iterative design approach is already underway for this project and will continue throughout the EIA process, which will allow the Proposed Development to have a design that works well for both the local environment and environmental resources within the area as well as being an economically viable scheme. The steps taken for informing and developing the EIA process are identified in the flow diagram below (**Diagram 1**).

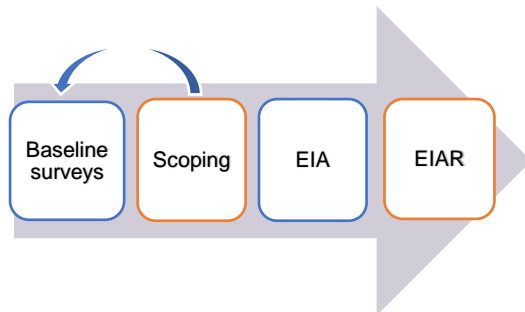


Diagram 1: EIA Process

Consultees are requested to respond where possible to scope in those features and topics that are likely to experience a significant impact, and thus scope out the rest. In doing so the impact assessment will be focussed on those effects that will influence the determination of the planning application.

The impact assessment will determine what the impact may be for the assessed receptors from the inclusion of the Proposed Development, either directly or indirectly. This will be done by comparing the baseline conditions with the conditions that would prevail should the Proposed Development be constructed, operated and subsequently, decommissioned. The



environmental effects of the Proposed Development will be predicted in relation to environmental receptors (i.e., people), built resources and natural resources.

A distinction will be made in the assessments between impacts and effects, where:

- 'Impacts' mean the predicted change to the baseline environment attributable to the scheme; and
- 'Effects' which are the consequence of impacts on environmental resources or receptors.

What will the EIA Assess?

The EIA will address:

- The construction phase of the solar farm which may last approximately 12 months;
- The operational and maintenance phase which would last approximately 35 years; and
- The decommissioning phase, expected to take around 6 months.

The geographical coverage of the EIA will take account of the following:

- The physical extent of the proposed works;
- The nature of the baseline environment and the manner in which effects are propagated; and

The governmental administrative boundaries which provide the planning and policy context for the solar farm.

Gathering Baseline Information

Baseline data is being collected for this project and the assessment team working on behalf of The Applicant will ensure that sufficient data is obtained to enable a robust assessment, appropriate to the nature and scale of the Proposed Development. The extent of the baseline assessment will be determined using both professional judgement and industry and consenting authority best practice. The EIA will also identify areas where the baseline may change, prior to the construction and operational phases of the project from current conditions (for example, maturation of landscaping).

The collection of baseline data will be achieved through desk study, consultation, field survey and monitoring. Should there be an expected significant impact from the development the baseline data will be clearly reported in the subsequent sections within the EIAR. In line with the regulations, the EIAR will also indicate any difficulties encountered in compiling environmental baseline conditions, such as not being granted permission to access areas where surveys were required.

Due to The Applicant's existing presence within the development area, extensive baseline data is also available from the neighbouring Crystal Rig Wind Farm complex. This will ensure the most accurate assessment approach is adopted throughout the EIA process.



Predication and Evaluation of Impacts and Effects

The prediction of impacts examines the change to the baseline environment that could result from the construction and operation of the Proposed Development. The effects will be classified in to one or more of the following:

- Positive effects that have a beneficial influence, negative effects that have an adverse influence;
- Temporary effects that persist for a limited period only due, for example, to particular construction activities;
- Permanent effects that result from an irreversible change to the baseline environment or which persist for the foreseeable future;
- Direct effects that arise from activities that form an integral part of the project;
- Indirect effects that arise from activities not explicitly forming part of the project;
- Secondary effects that arise as a result of an initial effect of the scheme; and
- Cumulative effects that arise from the combination of different impacts at a specific location, the recurrence of impacts of the same type at different locations, the interaction of different impacts over time, or the interaction of impacts arising from the scheme in conjunction with other development projects.

There is no statutory definition of what constitutes a significant effect although each EIA discipline aims to provide its own guidance. A significant effect may be broadly defined as an effect which, either in isolation or combination with others, should be taken into account in the decision-making process. This general definition will be used as the basis against which the significance criteria for environmental disciplines will be developed. The assessment team will ensure that a consistent approach is applied between disciplines to prevent undue weight being given to a particular discipline to the detriment of another.

Mitigation of Environmental Effects

Mitigation measures will be considered for each significantly adverse effect identified. The EIAR will include a description of the measures envisaged to prevent, reduce and, where possible, remedy any significant adverse effects. In line with the regulations, when identifying mitigation measures, the project will take into account the practicability and cost effectiveness of the proposals and their efficiency in reducing environmental impacts. Where practical, mitigation measures will be set out as commitments, which will ensure they are implemented.

Once the final design has been adopted and account has been taken of any mitigation measures, residual adverse effects will be listed. The significance of a residual adverse effect will be determined by correlating the magnitude of the change arising from the Proposed Development with the sensitivity of the particular attribute under consideration. The magnitude of change will be evaluated in accordance with **Table A5**.



Table A5: Magnitude of Change

High	Total loss or major alteration to key elements/features of the baseline conditions
Medium	Partial loss or alteration to one or more key elements/features of the baseline conditions
Low	Minor shift away from the baseline conditions
Negligible	Very slight change from baseline conditions

Source: Natural Power

Where applicable in carrying out individual assessments, a scale of increasing sensitivity of the resource or receptor will be defined. This may be defined in terms of quality, value, rarity or importance and can be classed as 'Low', 'Medium' or 'High'. For certain assessment areas, guidance will be taken from the value attributed to elements through designation or protection under law. Where assessment of this nature takes place the correlation of magnitude against sensitivity will determine a qualitative expression for the significance of the residual adverse effect. This is demonstrated in the matrix in **Table A6**.

Table A6: Significance of Effect

		Sensitivity of Resource / Receptor		
		Low	Medium	High
Magnitude of Impact	High	Moderate	Moderate / Major	Major
	Medium	Low / Moderate	Moderate	Moderate / Major
	Low	Low	Low / Moderate	Moderate
	Negligible	Negligible / Low	Low	Low / Moderate

Source: Natural Power

Those residual adverse **effects indicated as Major and Moderate/Major will be regarded as being significant** effects in terms of the relevant legislation. However, other factors may have to be considered including the duration and the reversibility of the effect.

As per the aim of the Scoping Report, we intend to focus the EIAR on the significant effects and will therefore seek agreement that non-significant effects can be scoped out.

Securing Commitments and Mitigation through Planning Conditions

Where commitments have been discussed within this Scoping Report, they will form part of the EIAR and therefore ensure that they are secured through specific planning conditions if the Proposed Development receives consent. These conditions may include, for example, requirements for detailed documents including a CEMP to be produced prior to construction.

Question 15: Do the consultees agree with the approach to the EIA and the associated mitigation monitoring?



10. Environment Impact Assessment Report (EIAR)

EIAR Production

The EIA process will result in the production of an EIAR. The EIAR will identify the features/receptors that have been agreed with the competent authority and their advisers as features that are likely to be affected by a significant effect from the Proposed Development and will make an influence on their decision process.

It will focus on each of the broad topics identified within this Scoping Report, plus any others that develop through the progression of the EIA process, until submission.

Where features are considered, the assessment methodology, results and effects, and any mitigation proposed will be included. This will allow for the residual effect from the Proposed Development to be identified to give the competent authority sufficient information to consider the application.

The EIAR will supplement the application and will also be accompanied by a Non-Technical Summary (NTS). A Pre-application Consultation (PAC) Report, a Planning Statement and a Design and Access Statement (DAS) are also likely to be provided. The EIAR is likely to follow the below structure:

Chapter 1: Introduction, (Approach to EIA and Legal/Planning Policy)

Chapter 2: Project Description including Existing Infrastructure

Chapter 3: Design Evolution

Chapter 4: Landscape and Visual Impact Assessment (LVIA)

Chapter 5: Ecology and Ornithology

Chapter 6: Population and Human Health

Chapter 7: Cultural Heritage

Chapter 8: Traffic and Transport

Chapter 9: Synergistic Effects, Summary of Mitigation and Residual Effects

As per Regulation 17 of the EIA Regulations, the EIAR will be submitted to Scottish Ministers. Upon submission of the application, the EIAR will be made available for public inspection at appropriate locations to be agreed with Scottish Borders and East Lothian local authorities respectively and will be distributed to the relevant consultees. An NTS will be submitted alongside the EIAR, which will provide a summary of the main findings and will be written in a non-technical language for ease of understanding by the general public.

Legal and Policy Context

The EIAR will set out the relevant policies that have been considered as part of the assessments undertaken throughout the EIA. A separate Planning Statement will provide a



detailed appraisal of the Proposed Development against any relevant Development Plan policies, national planning policy and other material considerations. The EIAR will also concisely reference climate change policy and the contribution of Proposed Development to the UK and Scottish Government's climate change goals and policy targets.

Policies and Development Plans that will be considered within the EIA include:

- National Planning Framework 4 (2021)⁵⁵
- The Strategic Development Planning Authority for Edinburgh and South-east Scotland Strategic Development Plan (SDP) (adopted 27 June 2013) (SESplan)⁵⁶;
- The Scottish Borders Local Development Plan (LDP) (adopted 12 May 2016) (the LDP)⁵⁷; and
- Supplementary Guidance 'Renewable Energy' (July 2018) (the SG)⁵⁸.

11. Responding to this Scoping Report

Consultee Questions

Consultees are kindly requested to provide responses to those questions within the report that specifically relate to their specialism.

12. Appendices

Appendix A – Figure, Site Constraints (IFS doc no. 1264916)

Appendix B – Figure, Indicative PV Array Layout (IFS doc no. 1264918)

Appendix C – Figure, Zone of Theoretical Visibility 2km (IFS doc no. 1281565)

⁵⁵ Scottish Government (2021) *Scotland 2045 – fourth National Planning Framework – draft: consultation* [Online] Available at: [Scotland 2045 - fourth National Planning Framework - draft: consultation - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/documents/2021/06/Scotland_2045_-_fourth_National_Planning_Framework_-_draft_consultation_-_gov.scot) [Accessed 31/05/2022]

⁵⁶ City Region Deal (2013) *The Strategic Development Planning Authority for Edinburgh and South East Scotland Strategic Development Plan (SDP)* [Online] Available at: [SES Regional Planning – The Edinburgh and South East Scotland City Region Deal \(esescityregiondeal.org.uk\)](https://www.esescityregiondeal.org.uk/) [Accessed 24/05/2022]

⁵⁷ Scottish Borders Council (2016) *The Scottish Borders Local Development Plan (LDP)* [Online] Available at: [Local development plan - adopted | Local development plan | Scottish Borders Council \(scotborders.gov.uk\)](https://www.scotborders.gov.uk/development-plan-adopted/) [Accessed 24/05/2022]

⁵⁸ Scottish Borders Council (2018) *Renewable Energy Supplementary Guidance* [Online] Available at: [Renewable Energy Supplementary Guidance | Scottish Borders Council \(scotborders.gov.uk\)](https://www.scotborders.gov.uk/renewable-energy-supplementary-guidance/) [Accessed 24/05/2022]





Fred. Olsen Renewables Ltd
Ochil House, Springkerse Business Park
Stirling FK7 7XE

Phone: +44-20-7963 8904
Telefax: +44-20-7931 7449
www.fredolsenrenewables.com