



# Appendix G - Revised Natura Impact Assessment

Seabank Solar Farm and Battery Enclosure Storage System

20/04/2026



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# 1. EXECUTIVE SUMMARY

- 1.1. Neo Environmental Ltd has been appointed by BNRG Seabank Limited. (the “Applicant”) to undertake a Stage 2: Natura Impact Statement for a proposed solar farm and Battery Energy Storage System (the “Proposed Development”) within the townland of Ballymoney, Arklow, Co. Wicklow (the “Application Site”).
- 1.2. The Stage 2: Natura Impact Statement (NIS) has been undertaken for the proposed solar farm and BESS in order to assess the impacts of the proposal on the integrity of European sites within 15km, considering the conservation objectives of the sites and their ecological structure and function.
- 1.3. Within the 15km Zone of Influence (ZOI) surrounding the Application Site there are five European Sites. There are five Special Areas of Conservation (SACs), Vale of Clara (Rathdrum Wood) SAC, Deputy's Pass Nature Reserve SAC, Buckroney-Britas Dunes and Fen SAC, Magherabeg Dunes SAC and Buckroney-Brittis Dunes and Fen SAC.
- 1.4. The Appropriate Assessment (AA) Screening within this report concluded that there is hydrological connectivity between the Application Site and the Buckroney-Brittis Dunes and Fen SAC. The remaining European Sites do not have any hydrological, ecological or ornithological connectivity with the Proposed Development.
- 1.5. This NIS has concluded that the Proposed Development will not adversely affect the integrity of these European designated sites, due to lack of suitable habitat impacted under the Proposed Development footprint, suitably effective mitigation measures, inaugurated design measures and following best practice pollution prevention during the construction and operation phases.
- 1.6. It is therefore considered that the next stage (**Stage 3; Assessment of Alternatives**) of the Appropriate Assessment is not required.

## 2. INTRODUCTION

### Background

- 2.1. Neo Environmental Ltd has been appointed by BNRG Seabank Limited (the “Applicant”) to undertake a Natura Impact Statement (“NIS”) for a proposed solar farm and BESS (the “Proposed Development”) within the townland of Ballymoney, Arklow, Co. Wicklow (the “Application Site”).
- 2.2. Please see **Figure 4 and 5 (Appendix E of this FI Response)** for the layout of the Proposed Development.

### Development Description

- 2.3. The proposed solar farm and BESS will consist of the construction of PV panels mounted on metal frames, battery storage infrastructure (BESS enclosures and MV Stations), new access tracks, underground cabling, perimeter fencing with CCTV cameras and access gates, temporary construction compound, a substation and all ancillary grid infrastructure and associated works.

### Site Description

- 2.4. The area of the Proposed Development (the “Application Site”) lies at an elevation of approximately 20 – 43m AOD and covers a total area of c. 27.2 hectares. It is centred at approximate Irish Grid Reference (ITM) X 725828 Y 676256 and is located c. 24m southeast of the M11 at its closest point and c. 143m west of the R750 at its closest point.
- 2.5. Comprising of 4 fields of agricultural land, the site is currently being used for arable farming. The fields are bound by a mixture of trees, hedgerows and post-and-wire fencing. Access is gained from the access point to the southwest which is part of the consented Ballymoney Solar Farm (PI Ref: 19/627 and ABP Ref: 305289-19).

### Adopted Design Principles

- 2.6. Measures incorporated into the Proposed Development design include the following:
- Hedgerow buffer (5m)
  - Tree buffer (1-2m from the crown)
  - Buffer from drainage ditches (2m)

- Buffer from watercourse (25m)

## Statement of Authority

- 2.7. The assessment has been conducted by experienced ecologists. All work has been carried out in line with the relevant professional guidance; Chartered Institute of Ecology and Environmental Management ("CIEEM") Guidelines for Ecological Impact Assessment<sup>1</sup> and the Environment, Heritage and Local Government's Guidance on Appropriate Assessments<sup>2</sup>.
- 2.8. Kellie Kerr, who is a co-author of this report, is a Graduate Ecologist with over 2 years of professional experience in the ecology and conservation sector. Kellie holds a BSc Environmental Science (Hons) with a Diploma in Professional Practice, achieved qualifying Chartered Institute of Ecology and Environmental Management (CIEEM) membership and has valid Construction Skills Register (CSR), manual handling and first aid qualifications. Kellie has experience completing Phase 1, Fossitt, and ornithological and bat-protected species surveys. Kellie has authored and co-authored various ecological reports supporting solar developments including Ecological Appraisal (EcA/EcIA), Biodiversity Management Plan (BMP), Natura Impact Statement (NIS) as well as species-specific reports. Kellie has also authored and co-authored reports supporting wind farm projects including an Environmental Impact Assessment Report (EIAR) chapters and Habitat Management Plans (HMP).
- 2.9. David Mulholland, who is a co-author of this report, is a Graduate Ecologist with 2 years of experience working in the ecology and conservation sectors. David is a Qualifying member of CIEEM, holding a BSc (Hons) in Biological Sciences with Professional Studies, along with a MSc in Conservation Biology and Ecological Management. He has experience conducting Biodiversity Checklist Reports, Preliminary Roost Assessments, Dawn & Dusk Bat Surveys, Reconnaissance Bird Surveys along with aiding in the construction of Bat Survey Reports, Ecological Appraisals, Natura Impact Statements and Ornithology Reports.
- 2.10. Eiméar Rose Cunningham, who reviewed this report, is a Senior Ecologist at Neo Environmental and is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM), with over 5 years' experience in the environmental/planning sector. She has experience of conducting habitat surveys as well as protected species surveys, including bats, birds and otter. In previous roles Eiméar Rose has experience of GIS map interpretation for large scale infrastructure projects. Furthermore, Eiméar Rose has experience in the completion of ecological report writing having authored and co-authored a number of reports including Ecological Appraisals, Natura Impact Statements, Biodiversity Management Plans and Net Gain Reports, in addition to contributing to Biodiversity Chapters for EIA Developments. Furthermore, Eiméar Rose is a qualified tree

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<sup>1</sup> CIEEM (2024) Guidelines for Ecological Impact Assessment in the UK and Ireland. v1.3 Terrestrial, Freshwater, Coastal and Marine

<sup>2</sup> Environment, Heritage and Local Government, 2009. Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities. Available at [www.npws.ie](http://www.npws.ie)

climber and aerial rescuer, certified by LANTRA and utilises this qualification for bat endoscopy.

### 3. LEGISLATION

#### Requirement for Appropriate Assessment

- 3.1. The requirement for Appropriate Assessment (AA) of plans or projects originates from Article 6 (3) and (4) of European Union (EU) Habitats Directive. This is implemented in Ireland through the European Communities (Birds and Natural Habitats) Regulations 2011 – 2015 (as amended).
- 3.2. The wording of Article 6 (3) of the Directive is as follows:
- “Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*
- 3.3. As outlined in the European Commission document ‘Assessment of plans and projects significantly affecting Natura 2000 sites’<sup>3</sup>, any project that is not directly connected with or necessary to the management of a Natura 2000 site, but likely to have a significant effect upon it, either individually or cumulatively will be subject to Appropriate Assessment. Furthermore, the European Commission’s most recent guidance on Article 6: "Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"<sup>4</sup> has also been considered.
- 3.4. Where significant effects are uncertain or unknown at the screening stage an AA will be required, due to the need to apply the precautionary principle. Conversely, if a project will have impacts on a site, but these impacts will clearly not affect or undermine those conservation objectives, it is not considered that it will have a significant effect on the site concerned.
- 3.5. The aim of Stage 2, ‘Natura Impact Statement’ is to inform the assessment of the impacts of the Proposed Development on the integrity of the Natura 2000 site, considering the conservation objectives of the site and its ecological structure and function. This is done by considering the type of development and the conservation objectives of any Natura 2000 sites

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<sup>3</sup> European Commission (2021) *Assessment of plans and projects in relation to Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021XC1028%2802%29>

<sup>4</sup> Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat’s Directive 92/43/EEC (European Commission, 2018)

which may be impacted. The NIS will assess connectivity between the development and the Natura 2000 sites and their qualifying interests.

- 3.6. In addition, s177(T)1(b) and (2) of the Planning and Development Act 2000 (as amended) sets out the requirements for an NIS and states:
- 3.7. *“s177(T) (1)(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one F722 [ European site], in view of the conservation objectives of the site or sites.*
- 3.8. *(2) Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one F722 [ European site] in view of the conservation objectives of the site or sites.”*

## Mitigation

- 3.9. The European Commission (EC 2001) states that mitigation should not be considered during the AA (i.e. Stage 1) Screening stage. On 12<sup>th</sup> April 2018, the Courts of Justice of the EU (CJEU) ruled in case C-323/17 (*People over Wind v Coillte*) that measures intended to avoid or reduce a proposed plan or project's harmful effects on a European site ('mitigation measures') cannot be considered during the Screening for AA stage.
- 3.10. Therefore, unless it can be shown that the proposed plan or project would not have a significant effect on the conservation objectives of the relevant European site in the absence of mitigation, it is necessary to carry out a Stage 2 AA. Mitigation measures should be considered at Stage 2, when a 'full and precise analysis' can be carried out. This is contrary to the previous guidance whereby inherent mitigation at the screening stage could be considered.

## The Precautionary Principal

- 3.11. The Precautionary Principle, is referenced in Article 191 of the Treaty on the Functioning of the EU, is defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as:

*When human activities may lead to morally unacceptable harm [to the environment] that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis.*

- 3.12. The reasoned employment of the 'Precautionary Principle' is fundamental to every AA.

## 4. ASSESSMENT METHODOLOGY

4.1. The AA process comprises of four stages in order to identify whether proposals have the potential to significantly impact upon European designated sites. The stages are as follows:

- **Stage 1 Screening:** To determine the likelihood of significant impacts.
- **Stage 2 Natura Impact Statement:** To assess the impact of proposals on the integrity of the European designated sites, considering the conservation objectives of the site and its ecological structure and function.
- **Stage 3 Assessment of alternatives:** Where significant impacts are anticipated despite mitigation measures, the proposal should progress to Stage 3 and consider alternatives or no longer proceed.
- **Stage 4 Assessment where no alternative exists and where adverse impacts remain:** The final stage involves examining whether there are imperative reasons of overriding public interest for allowing the proposal to adversely impact upon a European designated sites.

### Source – Pathway - Receptor Model

4.2. The 'source-pathway-receptor' conceptual model is a tool used for environmental assessment. In order for an effect to occur, all elements of this model must be linked. The removal or absence of one of the elements of the model results in there being no likelihood for the effect in question to occur. For example:

- Source(s), e.g., blasting.
- Pathway(s) e.g., vibration and noise.
- Receptor(s) e.g., disturbance of nesting birds.

4.3. For an NIS, this model is focused solely on the selection features of European designated sites as defined by National Parks and Wildlife Services (NPWS) and referenced within this report.

4.4. The Proposed Development may have the potential to result in a number of impacts, which could potentially affect the selection features of European designated sites. The analysis of these effects, using scientific knowledge and professional judgement, leads to the identification of a "zone of influence" for each effect (i.e., the distance at which the impact of

the Proposed Development could have potential effects, using professional judgement and published guidance).

## Study Zone Identification

4.5. The 'Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities'<sup>5</sup> states that the NIS should include the following:

- *"Any Natura 2000 sites within or adjacent to the plan or project area.*
- *Any Natura 2000 sites within the likely zone of impact of the plan or project.*
- *A distance of 15km is currently recommended in the case of plans and derives from UK guidance (Scott Wilson et. al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects. In some instances, connectivity may go beyond 15k and will also need to be considered.*
- *Natura 2000 sites that are more than 15km from the plan or project area depending on the likely impacts of the plan or project, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle. In the case of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment."*

4.6. It is considered that the ZOI for the European designated sites and their qualifying features will fall within a 15km radius of developments.

4.7. Sites further than 15km from the Application Site with a hydrological connection have been considered. These sites are not considered to fall with ZOI, for reasons outlined below.

## Desk Study

4.8. Sources of material that were consulted as part of the desk study for the purposes of the assessment are as follows:

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<sup>5</sup> Department for Environment, Heritage and Local Government (2009) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Available at:  
[http://www.npws.ie/sites/default/files/publications/pdf/NPWS\\_2009\\_AA\\_Guidance.pdf](http://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf)

- NPWS natural heritage database for Natura 2000 sites within the 15km ZOI of the Application Site<sup>6</sup>.
- NPWS site synopses, Natura 2000 Data Form and conservation objectives relating to each site and aerial images.
- Environmental Protection Agency (EPA) interactive maps<sup>7</sup>.

## Impact Assessment Process

4.9. The assessment process involves:

- Identifying and characterising European designated sites identified within the 15km zone of influence surrounding the Application Site and their qualifying features and addressing whether any of these designated sites have any connectivity with the Application Site. If any site is found to have no connectivity, then these designated sites will be 'scoped out' or not considered further.
- Using the Source-Pathway-Receptor model, assess whether there will be any significant impacts to any of the European designated sites, in regard to changes that result from the construction, operation and decommissioning phases of a project. Qualifying features of European designated sites that lie outside of the ZOI and not subject to any impacts from the Proposed Development then these will be 'scoped out' or not considered further.
- Identify any significant impacts on the integrity of the European designated sites from the development and 'in combination' with any other development within 5km.
- Identify the need for the AA process to move to Stage 3: 'Assessment of alternatives' or, if there are no impacts from the development, the competent authority may allow the development to proceed, subject to other requirements being satisfied.

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<sup>6</sup> Environment, Heritage and Local Government (2009) Appropriate Assessment of Plan and Projects in Ireland. Available at: [https://www.npws.ie/sites/default/files/publications/pdf/NPWS\\_2009\\_AA\\_Guidance.pdf](https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf)

<sup>7</sup> Available at: <https://gis.epa.ie/EPAMaps/>

## 5. STAGE 1: APPROPRIATE ASSESSMENT SCREENING

- 5.1. Following NPWS guidance, this stage of the AA has identified all SAC and SPA sites within 15km of the Application Site and adjoining grid route. Potential impacts associated with the Application Site have been identified.
- 5.2. Potential impacts can depend more on the nature of impacts, sensitivity of receptors and causal linkage, rather than actual distances. The assessment below considers connectivity, either ecological or hydrological, that may exist between the Application Site and the designated sites.

### Identification of European sites

- 5.3. Within 15km of the Application Site boundary there are five Special Areas of Conservation (SAC). The Application Site does not lie within or directly adjacent to any statutory or non-statutory designated environmental sites. The designated features of each have been outlined in **Table 5-1** below. **Appendix A; Figure 1** of this report details the location of these sites in relation to the Application Site.

**Table 5-1: European designated sites within 15km.**

| Site Code | Site Name                           | Qualifying Features                                                                                                                                                                                                                                                                                                                                          | Distance and Direction (km) | Potential Connectivity with the Proposed Development Site |
|-----------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------|
| SAC       |                                     |                                                                                                                                                                                                                                                                                                                                                              |                             |                                                           |
| 000729    | Buckroney-Brittis Dunes and Fen SAC | Annual vegetation of drift lines [1210]<br>Perennial vegetation of stony banks [1220]<br>Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [1410]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] | 1.37km northeast            | Hydrological Connectivity                                 |

|        |                                   |                                                                                                                                                                                                                                                                                                                     |                   |                 |
|--------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|
|        |                                   | Atlantic decalcified fixed dunes ( <i>Calluno-Ulicetea</i> ) [2150]<br>Dunes with <i>Salix repens ssp. argentea</i> ( <i>Salicion arenariae</i> ) [2170]<br>Humid dune slacks [2190]<br>Alkaline fens [7230]                                                                                                        |                   |                 |
| 001742 | Kilpatrick Sandhills SAC          | Annual vegetation of drift lines [1210]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>Atlantic decalcified fixed dunes ( <i>Calluno-Ulicetea</i> ) [2150]   | 9.35km south      | No connectivity |
| 001766 | Magherabeg Dunes SAC              | Annual vegetation of drift lines [1210]<br>Embryonic shifting dunes [2110]<br>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]<br>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>Petrifying springs with tufa formation ( <i>Cratoneurion</i> ) [7220] | 11.17km northeast | No connectivity |
| 000717 | Deputy's Pass Nature Reserve SAC  | Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]                                                                                                                                                                                                                              | 13.49km north     | No connectivity |
| 000733 | Vale Of Clara (Rathdrum Wood) SAC | Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]                                                                                                                                                                                                                              | 14.24km southwest | No connectivity |

- 5.4. Buckroney-Brittass Dunes and Fen SAC is designated for a variety of coastal habitats such as alkaline fens, dune habitats, and Mediterranean salt meadows. Buckroney-Brittass Dunes and Fen, is also designated for pNHA status as outlined above. Fugitive dust emissions could travel from the Application Site to the SAC, however solar farms use piling techniques and any land clearance of foliage will only last an extremely short period of time during the construction phase. Due to low likelihood of interference, minimal land disturbance due to piling and the 1.37km distance between the Proposed Development and SAC at its closest point, we expect no significant impacts in the absence of mitigation due to dust emission. However, the Application Site demonstrates potential hydrological connectivity. The Johnstown North 1<sup>st</sup> order watercourse located along the eastern boundary of the Application Site and the Johnstown South 1<sup>st</sup> order watercourse intersects the Application Site as shown in the Fossitt habitat map (Appendix 2a; Figure 2.2). These watercourses meet within the 50m ESA and travel approximately 0.65km from the Application Site before the Johnstown North 2<sup>nd</sup> order

watercourse discharges into the Irish Sea. The Buckroney-Brittis Dunes and Fen SAC is north of this location and along the coast and has the potential to be impacted littoral by drift.

- 5.5. The remaining designated sites within the ZOI and outlined in **Table 5-1** above: Vale of Clara (Rathdrum Wood) SAC, Deputy's Pass Nature Reserve SAC, Kilpatrick Sandhills SAC and Magherabeg Dunes SAC have been assessed potential connectivity. However, due to the nature of their qualifying features, no pathways exist for impacts to occur. Therefore, there is no potential for significant impacts on the habitats of these sites as there is no pathway for connectivity and therefore no significant impacts are anticipated on the designated sites resulting from the Proposed Development. No qualifying features associated with any of the European designated sites outlined in **Table 5-1** were identified during the Fossitt habitat survey efforts or in the 2km desk-study data search completed within **Vol 3- Technical Appendix 2; Ecological Appraisal**.
- 5.6. This AA Screening Assessment has concluded that there is potential hydrological connectivity between the Application Site and the Buckroney-Brittis Dunes and Fen SAC. In the absence of mitigation, there is potential for the Proposed Development to have significant impacts on the Buckroney-Brittis Dunes and Fen SAC. Therefore, a further Stage 2: Natura Impact Statement assessment is required to assess potential impacts on the integrity of these designated sites.

## 6. STAGE 2: NATURA IMPACT STATEMENT

### Impact Assessment

- 6.1. Standard best practice pollution prevention measures will be adhered, which will reduce the potential for impacts on ecology during the construction stage. As these are standard requirements, they are separate to mitigation measures which are outlined later in this report.
- 6.2. Relevant measures include but are not limited to:

#### Pollution Prevention

- Plant and equipment will be stored on dedicated hardstandings within the construction compound. This will minimise the risk of pollution caused by leakages occurring out of hours. Drip trays will be used where appropriate.
- Plant and equipment will be regularly checked to ensure their correct operation and verify no leakages.
- All plant and equipment will utilise biodegradable hydraulic oil where possible.
- Spill kits will be readily available to all personnel. The spill kits will be of an appropriate size and type for the materials held on site.
- Diesel fuel will be stored in a bunded diesel bowser which will be located within a fenced off area in the construction compound.
- Refuelling and maintenance of vehicles and plant will take place in designated areas of hardstanding.
- All other chemicals will be stored in a secure area with an accompanying COSHH Datasheet.
- Wastewater from the temporary staff toilets and washing facilities will be discharged to sealed containment systems and disposed via licensed contractors.

#### Waste management

- 6.3. The contractor on site during each phase will ensure that all waste will be disposed of responsibly from the site. Potential waste generated during the construction phase is likely to include:

- Wooden crates or cardboard boxes in which the materials will be packaged. These will be removed from the site and recycled appropriately at regular intervals.
- Packaging materials from various components including cabling, mounting frames screws, etc. These will also be removed regularly and recycled.
- Aggregate and substrate from groundworks – soil will be excavated for the construction of the tracks, construction slabs, cable trenches, sub stations and inverter and transformer units. All of which is expected to be reused on site.
- As the Proposed Development involves a minor amount of groundworks (ground works are limited to tracks (approximately 2,402.4m<sup>3</sup>), Inverters (approximately volume 72.4m<sup>3</sup>), MV Power Stations (approximately volume 24.2m<sup>3</sup>), BESS Containers (approximately volume 95.2m<sup>3</sup>), CCTV bases (approximately volume 6.2m<sup>3</sup>), ESB Switch Room (approximately volume 29.4m<sup>3</sup>, and Customer Control Room (approximately 11.1m<sup>3</sup>), and any topsoil and subsoil extracted will be kept separate on site to ensure contamination does not occur and to avoid damage to soil quality and structure. Any excavated soil which is not re-used or dispersed across the site shall be stored on an impermeable surface at the site compound and covered in order to prevent silt runoff and dust creation. Any spoil storage will be done in accordance with the development buffers specified, i.e. 2m from drains and ditches, 25m from watercourses, etc. Spoil heaps will be deposited as per standard spoil heap ratios.
- Site office waste will be collected separately in order to maximise the potential for recycling.
- Any kitchen waste will be taken off site in refuse containers and disposed of off-site.
- Oils/fuels, paints, solvents or other chemicals will be stored at the temporary site compound and disposed of appropriately.
- Burning of waste on site will be prohibited.

### Environmental monitoring

- 6.4. Contractor to nominate member of staff as the environmental officer with the responsibility to ensure best practice measures are implemented and adhered to, with any incidents or non-compliance issues being reported to the project team.

## Assessment of Impacts

- 6.5. This Section discusses and evaluates the likely impacts of the Proposed Development affecting European designated sites which are within the Zone of Influence (ZOI) of the Application Site (i.e., there is some connection between the Application Site and the European designated sites).
- 6.6. As outlined within **Table 5-1** above, the Application Site has potential hydrological connectivity with the Buckroney-Brittass Dunes and Fen SAC. As outlined previously the Application Site does not have connectivity with the remaining European designated sites within the study area and has therefore been 'scoped out' of this assessment.
- 6.7. Potential impacts for qualifying features associated with the Buckroney-Brittass Dunes and Fen SAC from the construction, operation and decommissioning of a solar farm and BESS may occur from the contamination of surface and/or ground waters.
- 6.8. Aquatic systems and the species/habitats which are dependent on these systems are sensitive to pollution/contamination of surface waters. Pollution can result from any of the following entering a body of surface or groundwater:
- Poisonous, noxious or polluting matter;
  - Waste matter (including silt, cement, concrete, oil, petroleum spirit, chemicals, solvents, sewage and other polluting matter);
  - Other harmful activities detrimentally affecting the status of a water body.
- 6.9. The status of a waterbody can be affected not only by chemical pollution but also by activities directly or indirectly affecting ecology, including changes in physio-chemical parameters such as temperature and turbidity or physical modification to the hydrology of a waterbody.
- 6.10. **Table 6-1** below details common water pollutants and their effect on the aquatic environment (Table extracted from Ciria guidance<sup>8</sup>).

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<sup>8</sup> Ciria (2015) Environmental good practice on site guide, fourth edition

Table 6-1: Common water pollutants and their effects on the aquatic environment

| Common Water Pollutants                         | Adverse effect on aquatic environment                                                                                                                                                                                                                         |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Silt                                            | Reduces water quality, clogs fish gills, covers aquatic plants, impacts aquatic invertebrates, leads to a reduction in prey for species including otter and fish species, leads to degradation of habitat including that of juvenile freshwater pearl mussels |
| Bentonite (very fine silt)                      | Reduces water quality, clogs fish gills, covers aquatic plants, impacts aquatic invertebrates, leads to a reduction in prey for species including otter and fish species, leads to degradation of habitat including that of juvenile freshwater pearl mussels |
| Cement or concrete wash water (highly alkaline) | Changes the chemical balance, is toxic to fish and other wildlife. This can lead to direct impacts for aquatic species (including otters), or indirect through loss of prey resources                                                                         |
| Detergent                                       | Removes dissolved oxygen, can be toxic to fish and other wildlife present within the aquatic environment                                                                                                                                                      |
| Hydrocarbons (e.g. oil, diesel)                 | Suffocates aquatic life, damaging the wildlife (e.g. birds), and water supplies including industrial abstractions                                                                                                                                             |
| Sewage                                          | Reduces water quality, is toxic to aquatic wildlife including otters, and damages water supplies                                                                                                                                                              |

- 6.11. An integral part of the Proposed Development design involves methods for controlling the movement of surface water within the Proposed Development Site. Movement of surface water will be managed by a Sustainable Drainage System (SuDS) following best practice guidelines on the use of SuDS<sup>9</sup>.

<sup>9</sup> Ciria (2007) The SuDS Manual. Available at: <https://www.ciria.org/>

- 6.12. The proposed drainage strategy (see **Technical Appendix 4: Flood Risk and Drainage Impact Assessment**<sup>10</sup> for further details) outlines SuDS will be installed as part of the site preliminary works prior to the main equipment deliveries. This SuDS feature will take the form of infiltration drains / soakaways as well as an infiltration/detention pond. Additional drainage measures to be implemented on-site include the following: Swales or similar shall be utilised to collect runoff from access tracks, however these will be designed at the detailed design stage.

**Table 6-2: Environmental Monitoring**

| Environmental Aspect                      | Monitoring Location | Monitoring Frequency                        | Monitoring Arrangements |
|-------------------------------------------|---------------------|---------------------------------------------|-------------------------|
| Site housekeeping                         | Entire site         | Daily                                       | Visual inspection       |
| Surface water courses                     | All water courses   | After periods of rain<br>Weekly, if no rain | Visual inspection       |
| Fuels and chemicals – appropriate storage | Entire site         | Daily                                       | Visual inspection       |

- 6.13. Operations and activities that have the potential to impact on the water environment will be regularly monitored throughout the construction of the Proposed Development. This is to ensure compliance with planning conditions and environmental regulations. The Site Manager is responsible for ensuring that all monitoring is carried out according to the Environmental Monitoring Programme, summarised in
- 6.14. These measures will **significantly reduce the potential** for contaminated surface waters entering the aquatic environment.
- 6.15. Standard best practice pollution prevention measures will be adhered to, which will reduce the potential for impacts on sensitive ecological receptors during the construction stage. As these are standard requirements, they are separate from mitigation measures which are outlined later in this report.

<sup>10</sup> McGhee, M. *Technical Appendix 4: Flood Risk and Drainage Impact Assessment Seabank Solar Farm and BESS Neo Environmental Ltd.*

## The Buckroney-Brittass Dunes and Fen SAC

6.16. The Buckroney-Brittass Dunes and Fen SAC is designated for its important Annex I habitats of the E.U. Habitat Directive, which are detailed within **Table 5-1** above.

### Conservation Objectives for the Buckroney-Brittass Dunes and Fen SAC<sup>11</sup>

- To maintain the favourable conservation condition of Annual vegetation of drift lines in Buckroney-Brittass Dunes and Fen SAC;
- To restore the favourable conservation condition of Perennial vegetation of stony banks in Buckroney-Brittass Dunes and Fen SAC;
- To maintain the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in Buckroney-Brittass Dunes and Fen SAC; and
- To restore the favourable conservation condition of Embryonic shifting dunes in Buckroney Brittass Dunes and Fen SAC.

### Character of the Qualifying Interests of the Buckroney-Brittass Dunes and Fen SAC

6.17. **Table 6-3** below identifies the percentage of the extent of various habitat types within the SAC.

**Table 6-3: Habitats of the Buckroney-Brittass Dunes and Fen SAC and their extent within the SAC**

| Code | Qualifying Habitats                           | Extent and Character (%) |
|------|-----------------------------------------------|--------------------------|
| N05  | Shingle, Sea cliffs, Islets                   | 3.00                     |
| N08  | Heath, Scrub, Maquis and Garrigue, Phygrana   | 3.00                     |
| N07  | Bogs, Marshes, Water fringed vegetation, Fens | 18.00                    |
| N03  | Salt Marshes, Salt pastures, Salt steppes     | 1.00                     |
| N10  | Humid grassland, Mesophile grassland          | 2.00                     |
| N09  | Dry Grassland, Steppes                        | 1.00                     |
| N04  | Coastal sand dunes, Sand Beaches, Machair     | 65.00                    |
| N14  | Improved Grassland                            | 6.00                     |

<sup>11</sup> NPWS Buckroney-Brittass Dunes and Fen SAC (2021): <https://www.npws.ie/protected-sites/sac/000729>

|     |                                                     |      |
|-----|-----------------------------------------------------|------|
| N06 | Inland water bodies (Standing water, Running Water) | 1.00 |
|-----|-----------------------------------------------------|------|

### Threats and Pressures on the Buckroney-Brittass Dunes and Fen SAC

6.18. **Table 6-4** lists the threats, pressures and activities impacting the Buckroney-Brittass Dunes and Fen SAC.<sup>12</sup>

**Table 6-4: Threats, pressures and activities impacting Buckroney-Brittass Dunes and Fen SAC<sup>12</sup>**

| Code      | Threats and Pressures                                                   | Rank | +/- | Inside/Outside |
|-----------|-------------------------------------------------------------------------|------|-----|----------------|
| A04.01.01 | intensive cattle grazing                                                | L    | -   | I              |
| K02.01    | Species composition change (succession).                                | H    | -   | B              |
| G01.02    | Walking, horse riding and non-motorised vehicles                        | M    | -   | B              |
| H02.07    | Diffuse groundwater pollution due to non-sewered population.            | M    | -   | B              |
| G02.08    | Camping and caravans                                                    | M    | -   | O              |
| I01       | Invasive non-native species                                             | M    | -   | I              |
| J02       | Human-induced changes in hydraulic conditions                           | H    | -   | B              |
| G02.01    | Sport and leisure structures: Golf Course                               | M    | -   | B              |
| G05.04    | Other human intrusions and disturbances: Vandalism                      | M    | -   | B              |
| E01.02    | Discontinuous urbanisation                                              | L    | -   | B              |
| A08       | Fertilisation                                                           | M    | -   | B              |
| G01.02    | Walking, horse riding and non-motorised vehicles                        | M    | -   | B              |
| A05.02    | Livestock farming and animal breeding (without grazing): stock feeding. | M    | -   | I              |

<sup>12</sup> EUNIS Site Information (2024) Available at: <https://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0000729>

|        |                                                      |   |   |   |
|--------|------------------------------------------------------|---|---|---|
| J01    | Fire and fire suppression                            | H | - | B |
| E03.01 | Disposal of household / recreational facility waste. | L | - | B |
| A04.02 | Non-intensive grazing                                | H | - | I |
| F03.01 | Hunting and collection of wild animals (terrestrial) | L | - | I |
| D04.01 | Airport                                              | L | - | O |
| G05.01 | Trampling, overuse,                                  | H | - | B |
| K01.01 | Erosion                                              | M | - | I |
| A04.02 | Non-intensive grazing                                | H | + | I |
| A03.02 | Non-intensive mowing                                 | H | + | B |
| A10.01 | Removal of hedges and copses or scrub                | H | + | B |

(Rank: H = High, M = Medium, L = Low, I = inside, O = outside, B = both & +/- = Positive/Negative Impact)

### Assessment of Likely Impacts Affecting the Buckroney-Brittias Dunes and Fen SAC

- 6.19. The Buckroney-Brittias Dunes and Fen SAC is located 1.37km northeast of the Application Site and is designated for a variety of Annex I habitats of the EU Habitats Directive comprising coastal habitats such as alkaline fens, dune habitats, and Mediterranean salt meadows. Buckroney-Brittias Dunes and Fen, is also designated for pNHA status as outlined in **Table 5-1** above.
- 6.20. No ecological connectivity is thought to exist between the Proposed Development Site and this SAC as none of these habitats are found within the Proposed Development Site boundary. The qualifying habitats outlined in **Table 6-3** above were not present within or adjacent to, the Application Site. It can therefore be concluded that there will be no direct loss of these habitats due to the Proposed Development as they are not present within the site. It's considered that with the implementation of best practice, design and mitigation measures the development will **not result in significant adverse effects** for the designated Annex I habitats of the Buckroney-Brittias Dunes and Fen SAC.
- 6.21. The Application Site demonstrates potential hydrological connectivity with this SAC. The Johnstown North 1<sup>st</sup> order watercourse is located along the eastern boundary of the Application Site and the Johnstown South 1<sup>st</sup> order watercourse intersects the Application Site. These watercourses meet within the 50m ESA and travel approximately 0.65km from the Application Site before the Johnstown North 2<sup>nd</sup> order watercourse discharges into the Irish Sea. The 0.65km stretch of the Johnstown North 2<sup>nd</sup> order watercourse offers a substantial area for dilution to occur, before reaching the Irish Sea. The Irish Sea is capable of further

diluting any pollutants to an extremely large extent over the 2km stretch of coastline, greatly minimising any impact contaminants could have on the SAC. The Buckroney-Brittis Dunes and Fen SAC is north of this discharge location along the coast and has the potential to be impacted by littoral drift.

6.22. Potential for contamination of waters within the Johnstown North and South 1<sup>st</sup> order watercourse may be directly impacted during the construction phase of the Proposed Development, there is potential for significant impacts to the qualifying features of the SAC in the absence of mitigation.

6.23. Measures have been included within the Proposed Development Design to prevent pollution entering the aquatic environment. These are outlined below:

- Silt/Bentonite
  - During the construction and decommissioning phase, ground disturbance is limited to the Application Site. As part of the Proposed Development design, Sustainable Drainage Systems (SuDS) will be implemented to control surface water movement and prevent silt/bentonite entering the aquatic environment. These have been incorporated into the design of the Proposed Development and are required due to relevant regional drainage policies in light of the objectives of the Water Framework Directive and associated water quality Directives and Regulations.
  - This includes the use of silt traps at drainage ditches throughout the site.
- Cement or concrete wash water
  - Best practice pollution prevention measures will be followed during the use of these materials during the construction phase, which will ensure cement/concrete wash water does not enter the aquatic environment.
  - This includes no use of wet concrete within 20m of the drainage ditch within the site.
- Detergent
  - This material will not be used within the Application Site.
- Hydrocarbons (e.g. oil, diesel)
  - During the construction phase, all work will be undertaken following best practice pollution prevention measures, which include suitable storage of oil/fuels and correct refuelling processes. This will prevent hydrocarbons entering the aquatic system.
- Sewage

- The only potential sewage produced within the Application Site will be from the welfare facilities provided for staff during the construction phase. These facilities shall include an appropriate storage facility for sewage, which shall be collected regularly by a licensed waste contractor. Therefore, sewage will not enter the local environment, including aquatic habitats.

6.24. Further details on the drainage arrangements and waste management during the construction phase are outlined in the Mitigation Measures section below.

6.25. It can be concluded that the Proposed Development **will not result in significant adverse effects** to the integrity of the Buckroney-Brittis Dunes and Fen SAC.

### Summary of Potential Impacts on European Designated Sites within 15km

6.26. From the findings of the above assessment, it is considered that the Proposed Development will **not adversely affect the integrity of the Buckroney-Brittis Dunes and Fen SAC or any other outlined European sites** within the study area. This is relevant for the construction, operation and decommissioning stages.

## 7. DESIGN, BEST PRACTICE AND MITIGATION MEASURES

- 7.1. In the absence of mitigation measures, the Proposed Development is unlikely to have adverse effects on any European designated sites. However, with potential hydrological connectivity, there have been mitigation measures outlined to limit potential impacts for the qualifying features of Buckroney-Brittis Dunes and Fen SAC. These are outlined in **Table 7-1** below:

**Table 7-1: Design, best practice and mitigation measures**

| FEATURE                                 | POTENTIAL IMPACT | PHASE OF DEVELOPMENT | MEASURES IMPLEMENTED                                                                                                                                                                                                                                                             |
|-----------------------------------------|------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>INTEGRAL DESIGN MEASURES</b>         |                  |                      |                                                                                                                                                                                                                                                                                  |
| Aquatic environment and aquatic species | Pollution        | Construction         | 2m Buffer from field drains<br>25m Buffer from watercourses                                                                                                                                                                                                                      |
| <b>STANDARD BEST PRACTICE MEASURES</b>  |                  |                      |                                                                                                                                                                                                                                                                                  |
| Aquatic environment and aquatic species | Pollution        | Construction         | Best practice pollution prevention measures implemented prior to and throughout the construction phase to prevent contaminants entering the aquatic environment (outlined below).<br><br>Best practice biosecurity measures to be implemented throughout the construction phase. |

- 7.2. The measures outlined above will be implemented prior to or during the construction phase of the development.
- 7.3. Furthermore, relevant guidance will be adhered to prior to and throughout the construction phase to prevent contaminants entering the aquatic environment. The following CIRIA (Construction Industry Research and Information Association) Guidance Documents have been considered:
- CIRIA Technical Note 138 'Planning to Reduce Noise Exposure in Construction' – a good source of guidance on design and assessment for noise control (ISBN 0 86017 317 8).

- Control of Water Pollution from Construction Sites (C532)
- Control of Water Pollution from Linear Construction Projects: Technical Guidance (C648)
- Environmental Good Practice on Site (C692)

## Pollution Prevention

7.4. Suitable protection will be installed prior to relevant works proceeding. These measures will be in-line with Environmental Protection Agency (EPA) Pollution Prevention Guidelines. Protection measures will include:

- Plant and equipment will be stored on dedicated hardstandings within the construction compound. This will minimise the risk of pollution caused by leakages occurring out of hours. Drip trays will be used where appropriate;
- All plant and equipment will utilise biodegradable hydraulic oil;
- Spill kits will be readily available to all personnel. The spill kits will be of an appropriate size and type for the materials held on site;
- Diesel fuel will be stored in a bunded diesel bowser which will be located within a fenced off area in the construction compound;
- Refuelling and maintenance of vehicles and plant will take place in designated areas of hardstanding;
- All other chemicals will be stored within a storage contained with an accompanying COSHH Datasheet;
- Wastewater from the temporary staff toilets and washing facilities will be discharged to sealed containment systems and disposed via licensed contractors;
- Brushing or scraping roads to reduce dust and mud deposits, appropriately disposing of material collected;

7.5. All staff on site will be made aware of the pollution prevention measures being implemented throughout the construction and decommissioning phases using appropriate toolbox talks and the site induction.

## Noise and Vibration

- 7.6. Operating plant noise will be kept within the standards and time periods dictated for the site. Any noncomplying plant will be stopped and stood down until it can be rectified or removed from the Application Site.
- 7.7. The British Standard which gives guidance on noise from construction and mineral working sites is BS 5228. This document does not specify absolute noise limits relating to construction activities; however, it does provide detailed guidance on the steps that can be taken to minimise potential noise & vibration effects. Reasonable mitigating measures are as follows: vehicles and machinery will be switched off when not in use.
- 7.8. Operation of plant, including fitting and proper maintenance of silencers and/or enclosures, avoiding excessive and unnecessary revving of engines and parking of equipment in locations which avoid possible effects on residential properties.
- 7.9. Traffic movement limited to:
- 07.00 to 19.00 Monday to Friday.
  - 08.00 to 16.00 Saturdays.
  - Public holidays will be observed unless otherwise agreed with the local planning authority.
  - When loading and unloading material, attempts shall be made not to drop material from a height.
- 7.10. Any noise complaints shall immediately be directed to the site agent. Depending on the nature of the complaint, the initial response could be to immediately cease the activity until suitable mitigation measures have been put in place and agreed with the affected individual.

## Dust

- 7.11. In order to control, prevent and minimise dirt on the access route and emissions of dust and other airborne contaminants during the construction works, the following measures will be implemented:
- Wheel washing equipment will be available and used on-site, as required to prevent the transfer of dirt and stones onto the public highway. All drivers will be required to check that their vehicle is free of dirt, stones and dust prior to departing from the site. Wheel washing will likely be a water bowser and power spray. It will not have any cleaning additives and will drain into the temporary drainage feature at the site compound.

- During windy conditions, any dust generating activities will be avoided or minimised, where practical.
- Any soil stockpiles will be covered when left for extended periods of time.
- Driving practices which minimise dust generation will be adopted.
- Loads into and out of the site will be covered where required.

## DRAINAGE MANAGEMENT PLAN

- 7.12. The measures described in this section will be adopted during the construction phase in order to manage on-site drainage in accordance with current best practice and legislation.

### Monitoring Records and Emergency Spill Response

#### Monitoring

- 7.13. To ensure compliance with the detailed Drainage Management Plan ("DMP"), drainage management works will be supervised by the site engineer.

#### Emergency Spill or Pollution Response

- 7.14. In the event of a liquid spill occurring on a construction site, the Contractor shall cease work immediately in the vicinity. Contractor's trained personnel shall do an appropriate PPE and as follows:

- Locate the source of the pollution and stop/contain any further flow if possible;
- If spillage is flammable, extinguish all ignition sources;
- Immediately deploy the spill kit in accordance with the manufacturer's instructions;
- Clean up the spill; and
- All used spill kit materials should be disposed of in the proper manner as outlined in spill summary procedures.

- 7.15. The Site Manager shall contact:

- The Client;
- Environmental Protection Agency ("EPA") 24-hour emergency incident line 1890 33 55 99; and
- Inland Fisheries 24-hour pollution line 1890 34 74 24. The pollution hotline number shall be referenced in the construction site rules and displayed in the Site Office and in the Emergency preparedness & response plan.

- 7.16. Each Contractor working with controlled substances shall supply appropriate spill kits which shall be kept on site. The spill kits shall be made accessible at all times to all site personnel.

- 7.17. In the event of a fire, all personnel must evacuate the site and assemble at the site entrance. The Site Manager is responsible for calling the Fire Service, who will handle the emergency.

### Proposed Drainage Arrangements

- 7.18. As outlined within the supporting **Technical Appendix 4: Flood Risk & Drainage Impact Assessment: Volume 3**, SuDS will be installed as part of the site preliminary works prior to the main equipment deliveries. This SuDS feature will take the form of soakaway channels / infiltration drains. The layout of the drainage design is indicated within **Figure 4.4 and 4.5, Appendix 4A of Technical Appendix 4**.<sup>13</sup>

### Construction Phase

- 7.19. Due to the addition of the temporary construction compounds during the construction phase, additional drainage measures will be implemented to help attenuate the increase in surface water flows, from the construction compound.
- 7.20. Runoff from these areas is anticipated to potentially have high silt loading due to mobilised soils from excavated surfaces, fines from track aggregate and sludge due to traffic.
- 7.21. Attenuation storage limits the rate of surface runoff discharge from the Proposed Development to match the pre-development greenfield runoff rates

### Operational Phase

- 7.22. Any existing on-site drainage ditches or features will be cleaned out as part of the preliminary works and maintained throughout the construction period and will continue to intercept overland flows from the site.
- 7.23. It is proposed to construct multiple filter drains / soakaways within the Application Site. The location of the schemes have been chosen on the downward slope, near to the existing watercourse which run through the Application Site. The idea is to capture any overland flow in the SuDS device, prior to releasing into the natural surface water system. The drainage design is in outline form and are indicative only at this stage and subject to detailed design.
- 7.24. The proposed filter drains / soakaways will have an overall length of approximately 1050m, with a base width of 0.5m, a 0.5m design depth and a 0.15m freeboard. It will be filled with drainage stone with a void ratio of 20% and will provide a total storage volume of approximately 52.5m<sup>3</sup>. This is greater than the volume of additional runoff generated as a result of the impermeable buildings (5.0m<sup>3</sup>). It is therefore considered that this not only adequately mitigates the increase in flow rates as a result of the minor increase in impermeable area but provides improvement.

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<sup>13</sup> Ho. J (2025) Technical Appendix 4 - Flood Risk and Drainage Impact Assessment – Seabank Solar Farm and BESS

- 7.25. Should the underlying soils infiltration capacity prove to be too low for infiltration drainage, the scheme will discharge into the nearest drain / watercourse.
- 7.26. Additional drainage measures to be implemented on-site include the following:
- Solar Panels: current grass cover is to be retained or reinstated adjacent to and under panels in order to maximise bio-retention;
  - Tracks: tracks are to be unpaved and constructed from local stone. Temporary swales or similar shall be utilised to collect runoff from tracks with discharge to ground through percolation areas, where required. Where swales are utilised, frequent checks of dams formed from gravels and other excavated material should be undertaken; and
  - Inverter, transformers, etc: Filter strips will surround the concrete bases of the ancillary buildings to capture any runoff from the roofs. This will be discharged to a percolation area or into the sites drainage network where it is close enough. Should surface water accumulate around any of these locations then a simple soakaway can be constructed to allow water soak into the underlying subsoils.

## Drainage Mitigation

### Clean Water Diversion

- 7.27. Where feasible, clean water (e.g. water that has yet to meet any disturbed construction or working areas), will be kept separate from the watershed or intercepted by the solar farm and BESS construction drainage.
- 7.28. Up-gradient cut-off ditches and water diversion measures will be installed, where required, in order to intercept and divert clean water around construction compound area. These measures will be installed ahead of the main construction works. This will reduce or prevent the amount of potential silt-laden or polluted water that might require treatment.
- 7.29. Clean runoff that has been diverted around an area of working should be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques.
- 7.30. Sediment control measures, such as silt traps, gravel, sandbags, anchored straw bales or silt fencing might be required at the discharge point to prevent erosion at the outlet and aid dispersion of the diverted water.

### Silt Control

- 7.31. Silt-laden runoff should be expected from any areas of recently exposed soil or rock. There is also potential for pollution to occur from machinery used in the solar farm construction.

- 7.32. Any introduced or artificial materials required (e.g. silt fencing, straw bales, sandbags etc.) that might need to be deployed onsite, will be removed on completion of the works.
- 7.33. Discharge from the silt control measures will be discharged into an area of vegetation for dispersion or infiltration, in accordance with SuDS techniques or discharged into the existing drainage network within the Application Site.

## 8. CONSIDERATION OF CUMULATIVE EFFECTS

- 8.1. As well as singular effects, cumulative effects also need to be considered. Article 6 of the EU Habitats Directive and Regulation 15 of the European Communities (Natural Habitats) Regulations state that any plan or project that may, either alone or in combination with other plans or projects, significantly affect any European site, should be the subject of an Appropriate Assessment (AA).
- 8.2. Cumulative impacts can be an issue when proposals have a small impact on European sites. If other proposals have a small impact, the combined result can significantly impact the European sites.
- 8.3. The European Commission Habitats Directive and the Habitats Regulations 2011 require that the impacts on European sites be assessed from the plan or project in question and also in the presence of other plans and projects that could affect the same European sites.
- 8.4. This Stage 2 AA screening has identified other plans and projects that could act in combination with the Proposed Development and its associated future elements, to identify if they pose likely significant effects on European sites.
- 8.5. It concludes that if these other Plans and Projects have undergone an AA themselves and have either been adopted or consented following an AA then it cannot pose likely significant adverse effects on European sites.

### PLANS

- 8.6. A review of the following plans was undertaken;

#### National Planning Framework 2040

- 8.7. The National Planning Framework (NPF) 2040 is a high-level, national vision and provides the strategic framework and principles to manage future population and economic growth in Ireland over the next 20 years. It informs the parameters for the preparation of Regional Spatial and Economic Strategies (RSEs) by each of the three Regional Assemblies, established under the Local Government Reform Act 2014.
- 8.8. In order to comply with the requirements of Article 6(3) of the EU Habitats Directive an AA screening was undertaken at an early stage in the drafting of the NPF.
- 8.9. Adopting the precautionary principle, it was concluded that a NIS should be prepared. An NIS was prepared by RPS on behalf of the Minister for Housing, Planning and Local Government. The NIS considered the potential for the NPF to adversely affect the integrity of any Natura 2000 site(s); with regard to their qualifying interests, associated conservation status, the structure/function of the site(s) and the overall site(s) integrity. This was done in a two-stage

process, initially assessing the draft NPF and subsequently assessing the changes made post consultation for the NPF.

- 8.10. The Minister of Housing, Planning and Local Government, having considered the AA and its conclusions determined that;

*“the adoption and publication of the NPF as a replacement of the National Spatial Strategy for the purposes of section 2 of the Planning Development Act 2000 will not individually or in combination with any other plan or project adversely affect the integrity of any European Site (as defined).”*

- 8.11. Thus, the in-combination impacts from the NPF, with the Proposed Development are **not predicted to result in any Likely Significant Effects** to any European site(s).

#### **Regional Spatial and Economic Strategy for the Eastern and Midland Region**

- 8.12. To comply with the requirements of Article 6 (3) of the EU Habitats Directive and Part XAB of the Planning and Development Act 2000 (as amended), Screening for AA was undertaken at an early stage in the drafting of the RSES.
- 8.13. The AA Screening undertaken by ecologists at RPS on behalf of the Eastern and Midland Regional Assembly assessed whether the RSES was likely to have significant effects on any European Sites within the Natura 2000 network, either alone or in combination with other plans and projects.
- 8.14. The screening concluded that an AA of the RSES was required, as the Plan is not directly connected with or necessary to the management of the sites as European sites and as it cannot be excluded, based on objective information, that the Plan, individually or in combination with other plans or projects, would have a significant effect on a European site.
- 8.15. Therefore, adopting the precautionary principle, it was concluded that a NIR should be prepared. The NIR (prepared by RPS on behalf of the Eastern and Midland Regional Assembly) considered the potential for the RSES to adversely affect the integrity of any Natura 2000 site(s), concerning their qualifying interests, associated conservation status, the structure/function of the site(s) and the overall site(s) integrity.
- 8.16. The Assembly determined that according to Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act 2000-2018, the adoption and publication of the RSES as a replacement for the “Regional Planning Guidelines” for Section 24 (4) of the Planning and Development Act 2000 (as amended) **would not either individually or in combination with any other plan or project adversely affect** the integrity of any European Site.

**Wicklow County Development Plan 2022-2028<sup>14</sup>**

- 8.17. A consolidated Appropriate Assessment Screening Report (AA Screening) has been prepared in support of the Appropriate Assessment (AA) of the Wicklow County Development Plan 2022-2028 following the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
- 8.18. All projects within the Plan area and receiving environment were considered in combination with any lower tiers projects that may arise due to the implementation of the Plan. Given the uncertainties that exist concerning the scale and location of developments facilitated by the Plan, it is recognised that the identification of in-combination effects is limited and that the assessment of in-combination effects will need to be undertaken more comprehensively at the project level.
- 8.19. The effects that could arise from the Plan were examined in the context of several factors that could potentially affect the integrity of any European site. Based on the findings of this Screening for AA, it is concluded that the Plan:
- Is not directly connected with or necessary to the management of any European site; and
  - May, if unmitigated, have significant effects on Natura 2000 Designated European sites.
- 8.20. Consequently, a Stage 2 AA was required for the Plan. This assessed whether the Plan alone, or in combination with other plans, programmes, and/or projects, would result in adverse impacts on the integrity of the 19 European sites located within County Wicklow.
- 8.21. The Assessment of potential impacts on European sites was conducted utilising a standard source-pathway model (see approach referred to under Sections 1.3 and 3). The 2001 European Commission AA guidance outlines the following potential changes that may occur at a designated site, which may result in effects on the integrity and function of that site: loss/reduction of habitat area; habitat or species fragmentation; disturbance to key species; reduction in species density; changes in key indicators of conservation value (water quality etc.); and climate change.
- 8.22. The risks to the safeguarding and integrity of the qualifying interests, special conservation interests and conservation objectives of the European sites have been addressed by the inclusion of mitigation measures that will prioritise the avoidance of effects in the first place and mitigate effects where these cannot be avoided. In addition, all lower-level plans and projects arising through the implementation of the County Development Plan will themselves be subject to AA/screening for AA when further details of design and location are known. In-combination effects from interactions with other plans and projects were considered in the assessment and the mitigation measures incorporated into the plan are seen to be robust to

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<sup>14</sup> Wicklow County Development Plan (2021) Available at: <https://www.wicklow.ie/Living/CDP2021>

ensure there will be no significant effects as a result of the implementation of the plan either alone or in combination with other plans/projects.

- 8.23. With the incorporation of mitigation measures, it is concluded that the Wicklow County Development Plan is not foreseen to give rise to any significant effects on designated European sites, alone or in combination with other plans or projects

The above plan **is not predicted to result in any significant effects** to any Natura 2000 sites and there will be **no effects on Natura 2000 sites from the Proposed Development**. Therefore, it has been concluded from the above assessments that there will be no combination effect from the reviewed plans with the Proposed Development and associated future elements.

## PROJECTS

- 8.24. A search of the Wicklow County Council planning portal was undertaken in December 2024 to identify key planning applications (projects) beyond the vicinity of Proposed Development.
- 8.25. The search included key developments preceding the date of issue of this report and excluded retention applications and incomplete, withdrawn or refused applications. The relevant projects with the potential for in-combination likely significant effects on European sites are detailed in **Table 8-1** below.

Table 8-1: Developments within 5km of the Application Site

| Planning Reference      | Planning Status        | Description                                                                                                                                                                                                  | Direction and Distance from the nearest section of the Application Site |
|-------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 211131                  | Approved-Conditional   | A 10-year permission for the construction of a Solar PV Energy development                                                                                                                                   | 2.2km northwest                                                         |
| 171497                  | Approved-Conditional   | Solar farm within a site area of approximately 39 hectares consisting of solar photovoltaic panels                                                                                                           | 0.7km north                                                             |
| 2360437                 | Approved - Conditional | The installation of circa. 3,492sq.m array of solar photovoltaic (PV) panels                                                                                                                                 | 3km southwest                                                           |
| 23756                   | Approved - Conditional | 86 no. residential units with a mix of detached                                                                                                                                                              | 2.0km southwest                                                         |
| 161285                  | Approved - Conditional | Ten-year permission for the construction of a solar PV Energy development within a total site area of up to 21.5 h                                                                                           | 0.6km southwest                                                         |
| 171440                  | Approved - Conditional | 10-year permission for the construction of a Solar PV Energy development within a total site area of up to 58.9 ha                                                                                           | 1.2km northwest                                                         |
| 19627 and ABP 305289-19 | Approved - Conditional | solar farm within a site area of approx. 19 ha consisting of solar photovoltaic panels covering an area of up to 9.8 ha                                                                                      | 0.2km west                                                              |
| 310090                  | Granted                | The proposed development will comprise onshore grid infrastructure including 220kV export cable circuits and fibre optic cables, a new 220kV GIS substation at Shelton Abbey and an overhead line connection | 0.1km east                                                              |

|         |         |                                                                                                                                      |                 |
|---------|---------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 301726  | Granted | Solar farm within a site area of approximately 39 hectares consisting of solar photovoltaic panels covering an area of up to 27.2 ha | 1.2km north     |
| 312936  | Granted | Development of a 110kV substation and associated compound and ancillary equipment                                                    | 0.3km southwest |
| 302037  | Granted | Solar PV energy development                                                                                                          | 0.2km west      |
| 309252  | Granted | Proposed development of a two-storey 110kV GIS substation                                                                            | 2.6km southwest |
| 2560313 | Live    | amend the design of the approved development (Planning Reference: 19/627 and ABP-305289-19)                                          | 0.2km west      |

- 8.26. **Planning consent 211131** consists of the construction of a solar farm consisting of photovoltaic panels, a substation, electrical transformer station modules, mounted panels, access tracks, fencing and other ancillary works. An Appropriate Assessment was carried out and **it was determined that the development would not have a significant impact on the qualifying interests or conservation objects of any European Designated sites.** The Proposed development is unlikely to have a significant impact on any European sites due to the implementation of mitigation measures. As **planning reference 211131** is highly unlikely to have a significant impact due to lack of connectivity, **any significant impact resulting from this development, alone or in combination with the Proposed development, is unlikely.**
- 8.27. **Planning consent 171497** consists solar farm with mounted PV panels, a substation, an electrical transformer and other associated works. An Appropriate Assessment Screening was conducted, and **it was determined that the development was unlikely to have any significant effect on the qualifying interests or conservation objectives of any European Designated sites.** It can therefore be concluded that, as the Proposed development will have mitigation implemented throughout the Application site, **any impact resulting from the development, alone or in combination with the Proposed development, will not be significant.**
- 8.28. **Planning consent 2360437** consists of a solar farm with mounted PV panels, ducting, electrical underground cabling and other associated work. An Appropriate Assessment was carried out and it was determined that **the development would not have any significant impacts on the qualifying interests or conservation objectives of any European Designated sites.** It can therefore be concluded that, due to mitigation measures to be implemented within the

- Application site for the Proposed Development, **any impacts as a result of the development, alone or in combination with the Proposed development, are unlikely to be significant.**
- 8.29. **Planning consent 23756** involves the construction of 86 residential units. An Appropriate Assessment Screening was conducted, and it was determined that the development is **unlikely to have an impact on the integrity of any European Designated site due to distance from the designated site**, lack of ecological and hydrological connectivity and the dilution effect. It was also concluded this development, alone or in combination with other projects such as the Proposed development, **would not have a significant cumulative impact on the integrity of any European Designated sites.**
- 8.30. **Planning consent 161285** involves the construction of a wind farm with mounted PV panels, a substation, electrical transformer nodules and associated works. An Appropriate Assessment Screening was conducted, and it was determined that due to the nature of the development, **there will be no significant impacts on the qualifying interests or conservation objectives of any European Designated site.** It can therefore be concluded that **this development, alone or in combination with the Proposed Development and other projects, will not have a significant cumulative effect on the integrity of any European Designated sites.**
- 8.31. **Planning consent 171440** involves the construction of a solar farm with mounted PV panels and other ancillary and associated works. An Appropriate Assessment Screening was conducted for this development, and it was determined that **this development was unlikely to have a significant impact on the integrity of qualifying features and conservation objectives within the Application site.** I can therefore conclude that **this development, alone or in combination with the Proposed Development which will have mitigation measures implemented to prevent any impacts, will not have a significant cumulative impact on the integrity of any European Designated site.**
- 8.32. **Planning consent 19627 and ABP 305289-19** involves the construction of a large-scale solar farm consisting of mounted PV panels, a substation, an electrical transformer, and other associated works. An Appropriate Assessment Screening was conducted for this development, and it was determined that this development **would not have any significant impacts on the integrity of any surrounding European Designated sites.** In-combination effects were also considered, and it was concluded that this **development, alone or in combination with other projects such as the Proposed development, would not generate a significant cumulative impact on any European Designated sites.**
- 8.33. **ABP-310090** involves the construction of an onshore grid connection with export cable circuits and fibre optic cables, and all associated and ancillary works. An Appropriate Assessment Screening was conducted, and it was determined that there was potential for impacts on the integrity of European Designated sites as a result of the development. A Natura Impact Statement ("NIS") was then produced, and this report concluded that, with the implementation of appropriate mitigation within the Application site, **this development would not have any significant impacts on the qualifying interests or conservation objectives of any European Designated sites.** In-combination effects were also considered within the report,

and it was concluded that **this development, alone or in combination with other projects such as the Proposed Development, would not have a significant cumulative effect on the integrity of any European Designated sites.**

- 8.34. **ABP-301726** involves the construction of a solar farm within a site area of approximately 39 hectares consisting of solar photovoltaic panels covering an area of up to 27.2 ha. An Appropriate Assessment screening report was submitted alongside this application. The report concludes that **no direct, indirect or cumulative significant impacts are envisaged** for the European sites within 15km Zol of the Proposed Development. It is not considered that the **Proposed Development would give rise to any adverse impacts on the qualifying interests and conservation objectives of any European sites.**
- 8.35. **ABP-312936** involves the development of a substation and associated compound and ancillary equipment. An Appropriate Assessment Screening was conducted for this development, and **it was determined that this site would not have any impacts on the qualifying interests or conservation objectives of any European Designated sites.** It can therefore be concluded that this development, or alone or in combination with other projects such as the Proposed development, which will have no impact on other European Designated sites, **will have no cumulative impact on the integrity of European Designated sites.**
- 8.36. **ABP-302037** involves a 10-year permission for the construction of a Solar PV Energy development. An Appropriate Assessment screening report was prepared for this proposal, this determined that the Proposed Development has **no direct connectivity** to any European Sites and therefore **no likely impacts are anticipated alone or in combination with any other developments.**
- 8.37. **ABP-309252** involves the construction of a two-storey substation with all associated and ancillary works. An Appropriate Assessment was included with the Environmental Impact Assessment Report ("EIAR") and it was concluded that this development **would not have any significant impact on the qualifying interests or conservation objectives of any European Designated sites.** It can be concluded, therefore, that this development, alone or in combination with other surrounding projects, **would not have a significant cumulative effect on any European Designated sites.**
- 8.38. **Planning reference 2560313** involves the amendment of **Planning consent 19627 and ABP 305289-19** as mentioned in **Paragraph 8.32** above. The minor changes of the amendment application did not change the conclusion of the Appropriate Assessment previously undertaken and therefore it can also be concluded that this development **would not have any significant impacts on the integrity of any surrounding European Designated sites.** In-combination effects were also considered, and it was concluded that this **development, alone or in combination with other projects such as the Proposed development, would not generate a significant cumulative impact on any European Designated sites.**
- 8.39. For this assessment, it is therefore confirmed that **no likely significant cumulative effects** will occur upon any nearby environmental designated site, habitats or protected and Priority species.

## 9. CONCLUSION

- 9.1. Neo Environmental Ltd has been appointed by BNRG Seabank Limited. (the “Applicant”) to undertake a Stage 2: Natura Impact Statement for a proposed solar farm and BESS (the “Proposed Development”) within the townland of Ballymoney, Arklow, Co. Wicklow (the “Application Site”).
- 9.2. The Stage 2: Natura Impact Statement (NIS) has been undertaken for the proposed solar farm and BESS in order to assess the impacts of the proposal on the integrity of European sites within 15km, considering the conservation objectives of the sites and their ecological structure and function.
- 9.3. Within the 15km Zone of Influence (ZOI) surrounding the Application Site there are five European Sites. There are five Special Areas of Conservation (SACs), Vale of Clara (Rathdrum Wood) SAC, Deputy's Pass Nature Reserve SAC, Buckroney-Britas Dunes and Fen SAC, Magherabeg Dunes SAC and Buckroney-Brittis Dunes and Fen SAC.
- 9.4. The Appropriate Assessment (AA) Screening within this report concluded that there is hydrological connectivity between the Application Site and the Buckroney-Brittis Dunes and Fen SAC. The remaining European Sites do not have any hydrological, ecological or ornithological connectivity with the Proposed Development. As no connectivity (pathway for impacts) exists between the Proposed Development and the remaining European Sites within the study area, these have been ‘scoped out’ from further assessment.
- 9.5. To minimise potential impacts on European Sites, design measures have been incorporated into the Proposed Development as part of the iterative design process. These include 2m buffers from all drainage ditches and 25m buffers from all watercourses. Standard best practice pollution prevention measures for the construction stage have also been outlined and considered as part of the impact assessment stage.
- 9.6. This NIS has concluded that the Proposed Development will not adversely affect the integrity of these European designated sites, due to the lack of suitable habitat impacted under the Proposed Development footprint, suitably effective mitigation measures, inaugurated design measures and following best practice pollution prevention during the construction and operation phases.
- 9.7. It is therefore considered that the next stage (**Stage 3; Assessment of Alternatives**) of the Appropriate Assessment is not required.

## APPENDICES

### Appendix A -Figures (Submitted with original application)

- Figure 1.1 – European Sites Map

# neo



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