Chapter 15: Other Issues

Department: ERM
Project: Bowshiel Solar Farm and BESS
Document Code: 0733784

May 2025

INDEX

15 OTHER ISSUES

15.1 Introduction

15.1.1.1 This Chapter presents the assessment of environment topics that do not require an individual chapter due to the limited nature of the impact associated with the Proposed Development.

15.1.1.2 This Chapter describes and assesses the potential effects of the Proposed Development on:

- Glint and glare;
- Human health (involving electro-magnetic fields); and
- Major accidents and disasters.

15.1.1.3 Where relevant, the legislation and guidance, baseline conditions, assessment, methodology and mitigation measures are presented in the environmental topic section outlined below.

15.2 Consultation Scoping Responses

15.2.1.1 The stakeholders that were consulted for the Proposed Development involved statutory consultees, local landowners and local communities. **Table 15.1** outlines the feedback received that relates to this Chapter.

TABLE 15.1 FEEDBACK FROM CONSULTEES ON OTHER ENVIRONMENT ISSUES

CONSULTEE	TYPE OF CONSULTATION AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
Energy Consent Unit (ECU)	Statutory consultee 04 April 2025	The Scottish Ministers request that the company assess the impact of the Proposed Development on existing and/or planned infrastructure. In particular, the company should carry out the necessary assessments to confirm if any part of the Proposed Development is within the consultation zone of any of the following: • A licenced explosives site; • Gas (or any other) pipeline; • Existing overhead electric lines; • Underground cables;	**Section 15.5:** Major Accidents and Disasters of this Chapter assesses the impact of the Proposed Development on existing and/or planned infrastructure.

CONSULTEE	TYPE OF CONSULTATION AND DATE	SUMMARY OF CONSULTATION RESPONSE	RESPONSE TO CONSULTEE
		• Water pipes; and • Telecommunications links.	
Energy Consent Unit (ECU)	Statutory consultee 04 April 2025	Scottish Ministers request the company to assess if any flammable, toxic or explosive chemicals detailed in The Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015 would be stored on site in quantities such that a Hazardous Substances Consent would be required under section 2 of the Planning (Hazardous Substances) (Scotland) Act 1997.	**Section 15.5**: Major Accidents and Disasters of this Chapter assesses the effects of major accidents involving dangerous chemicals.

15.3 Glint and Glare

15.3.1.1 This section provides an assessment of potential glint and glare effects resulting from the Proposed Development. The full glint and glare assessment is provided in **Technical Appendix 15.1** of the EIAR.

15.3.1.2 The specific issues covered by this document are:

- The potential for glint and glare effects to ground based receptors such as railway lines, roads and fixed receptors within 5 km of the Proposed Development; and
- The potential for glint and glare effects to aviation receptors within 10 km of the Proposed Development.

15.3.2 Methods

15.3.2.1 The methodology for the glint and glare assessment is provided in **Technical Appendix 15.1** of the EIAR and assesses occurrence of 'green glare' and 'yellow glare'. Extended periods of yellow glare can pose a safety risk to road and rail users and be a nuisance to fixed receptors. Limitations to the model include:

- The geometry of the entire system is not considered, such as gaps between panels and heights of the mounting structures and individual panels. Therefore, a module height of 2.33 m above ground assumes this is the only elevation at which sunlight reflects from the module (i.e. the lower and higher portions of the array are not considered);
- The shape of surrounding obstacles and obstructions (such as trees, electricity poles and fences) are not fully considered. For example, a tree is considered as uniform in its circumference from its tip to the ground as opposed to thinner at the bottom from the trunk and widest in the middle. This can lead to an obstacle's ability to shield a receptor

from G&G being both under and overestimated. Further, the precise height of shading obstacles is not known, and estimates are therefore made;

- The model does not consider daily variations in weather conditions (e.g. cloud cover) and instead uses a typical clear day as a default. The software also assumes it is sunny, at the maximum intensity possible, 365 days per year. Since the computer model indicates when glare 'can' happen, not when it 'will' happen, it considerably overstates the realistic glare duration, which is why further interpretation is essential. This also overestimates the impacts of glint and glare; and
- Only ten obstructions can be modelled. As a result, many existing obstructions such as tree and hedgerows and other buildings may not be present in the model. Glint and glare is therefore overestimated in this instance.

15.3.2.2 No aviation receptors were identified within the 10 km study area for the glint and glare assessment; therefore, this has been scoped out for further consideration within the EIAR.

15.3.3 Baseline

15.3.3.1 The relevant receptors that were identified to have the potential for glint and glare effects from the Proposed Development include the following ground-based receptors within 5 km of the Site:

- Rail Receptors: There is one railway line on the east of the Proposed Development within the Study Area;
- Road Receptors: Numerous roads and small country lanes within the 5 km study area of the Proposed Development were identified. The assessment focused on the main road (Great North Road - A1) that is east of, and in close proximity to, the Proposed Development;
- Fixed Receptors: There are a number of dwellings and commercial premises within the study area. In some cases, the identified location is considered to be representative of several discrete receptors in close proximity. The locations of interest include:
  - Buildings dispersed to the south, east and north of the Proposed Development; and
  - Other small structures are scattered throughout the surrounding fields, likely related to agricultural use.

15.3.3.2 There are a total of 38 ground-based observation points (OP) which represent the buildings. These are all offsite residential and commercial dwellings of single or two storeys.

15.3.4 Assessment

15.3.4.1 The results of the Glint and Glare Assessment are detailed in **Technical Appendix 15.1.**

15.3.4.2 For the rail receptors, the impact is assessed as **negligible** and unlikely to pose a safety risk due to low intensity and short duration of green glare, the transient nature of vehicle movement, existing screening (i.e., trees, hedgerows and undulating topography), and the large distance of impact point from the Proposed Development's PV array.

15.3.4.3 In the case of the A1 (Great North Road) for road users, the glint and glare impact has been identified as **negligible** and is unlikely to pose a risk to safety due to the transient nature of

vehicle movement and the existing screening positioned between the PV array and the point on the A1 where the short exposure duration of yellow glare occurs.

15.3.4.4 Out of the 38 fixed ground receptors, or Observation Points (OPs), included in the modelling, five of them were impacted. OP5 is predominately affected by yellow glare during May and mid-July to mid-August in the evening hours. This is due to the sun's angle moving from the west and causing reflections eastward. The overall impact on the receptor (OP5) is considered **negligible** due to the short duration of yellow glare, existing screenings between the PV array and the receptor, and the distance from the PV array to the receptor.

15.3.4.5 The other four OPs impacted experienced green glare. The green magnitude observed at these receptors indicates a low potential for after-image formation and is considered to be **Not Significant** to health or safety. Among the fixed ground receptors, glint and glare effects were determined to be **negligible** due to the short duration and low intensity of the glare.

15.3.5 Mitigation Measures

Ground-Based Receptors

15.3.5.1 The glint and glare assessment indicates that existing screening (i.e., trees, hedgerows and undulating topography) at the Site will mitigate glint and glare effects from the Proposed Development to **negligible**; therefore, no further mitigation measures are required.

15.3.6 Summary of Residual Significant Effects

Railway Line, Road Users and Fixed Receptors

15.3.6.1 Residual glint and glare effects from the Proposed Development's operation will be negligible.

15.3.7 Findings

15.3.7.1 This section presents the potential glint and glare effects of the Proposed Development on fixed receptors, road users, and rail lines.

15.3.7.2 In all cases, any glare would be no worse than seeing sunlight reflection from a window or still water, as solar panels have lower reflective properties than these materials. Drivers regularly experience conditions where the sun is low in the sky, which is more intense than any glare effect from solar panels. In the cases where glare is experienced at ground-based receptors, the duration and intensity of this glare will be mitigated by the existing screening measures previously mentioned. Consequently, no significant glint and glare effects are anticipated resulting from the operation of the Proposed Development.

15.4 Human Health

15.4.1.1 This section outlines the potential electromagnetic field (EMF) effects of the Proposed Development on human health receptors located in close proximity. It is important to note

that there are no human health receptors within a 15 m setback distance[1] from the EMF-emitting components of the Proposed Development. Consequently, the impact of the Proposed Development on human health is considered **negligible**.

15.4.1.2 Overhead high voltage (HV) lines are recognised as substantial sources of EMF radiation. However, this concern is not relevant in this instance, as a desk-based analysis of the site, supported by site walkover, has verified that there are no overhead high voltage lines present at the Site.

15.4.1.3 Based on the aforementioned factors, EMF effects resulting in impacts to human health from the Proposed Development will not occur and has not been considered further in this chapter.

15.5 Major Accidents and Disasters

15.5.1.1 This section provides an assessment of the major accidents & disasters issues.

15.5.1.2 This assessment includes a brief consideration of events that are not likely but if they were to occur, effects on the environment would be made worse by the Proposed Development. This assessment has also considered whether there is anything in the vicinity that could be particularly affected by an accident at the Proposed Development.

15.5.1.3 In addition, the potential for significant effects from unexploded ordnance has also been considered in the EIAR.

15.5.1.4 The specific issues covered by this document are therefore:

- The potential for Major Industrial Accidents;
- The potential for battery fire in the Battery Energy Storage Systems (BESS);
- The potential for accidental Unexploded Ordnance (UXO) Detonation; and
- The potential for damage to existing utilities as a result of the Proposed Development.

15.5.2 Methods

15.5.2.1 'Major Accidents and Disasters in EIA: An IEMA Primer[2]' provides guidance on the consideration of major accidents and disasters, it has been structured around a typical assessment approach and offers a proportionate method for considering major accidents and/or disasters through screening, scoping and assessment. This guidance defines Major Accidents and Disasters as described below:

> *A 'Major Accident' is an event "that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources*

[1] UK Policy on public exposure limits to EMF radiation: The UK complies with the 1998 ICNIRP guidelines as per the 1999 EU Recommendation. Also, source: EMFs.info
[2] IEMA (2020), Major Accidents and Disasters in EIA: A Primer'. Available online at: https://www.iema.net/content/major-accidents-and-disasters-in-eia-an-iema-primer-october-2020/ Accessed April 2025

beyond those of the client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events"; and

A 'Disaster' "may be a natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident".

15.5.2.2 Following the IEMA guidance, potential hazards that meet the below criteria have been scoped out of the EIA:

- The Proposed Development is not vulnerable to the hazard or does not have the potential to cause the hazard;
- The hazard is not likely to result in effects that lead to fatality, multiple fatalities, permanent injury, widespread/irreversible harm or damage i.e. the hazard will not result in a major accident and/or disaster;
- There is no potential pathway or receptor in terms of EIA regulations;
- It is a workplace hazard that will only impact the workers directly involved i.e. fall from height or misuse of tools. These are considered to be an occupational health and safety incident that is not included within an EIA and instead managed through compliance of the Management of Health and Safety at Work Regulations; or
- The hazard has been assessed within another chapter within this EIAR.

15.5.2.3 This assessment of major accidents and disasters follows the standard industry guidance set out in the IEMA document Major Accidents and Disasters in EIA: A Primer[3]. The guidance sets out that assessments should comprise of the following:

- Setting out the baseline, including:
  - Identifying hazards (noting that hazards can be grouped into high-level 'risk events' which have the same potential consequence);
  - Identifying receptors relevant to the identified hazards/risk events;
- Identifying the reasonable worst-case impacts on receptors resulting from the hazards/risk events. This process includes:
  - Reviewing the hazards/risk events to establish how they could impact the receptors;
  - Noting where risk events are screened out on the basis that there is no source-to-receptor pathway, and/or the consequence of the hazard/risk events do not meet the criteria of a significant effect;
- Describing the primary and tertiary (embedded and best practice) mitigation for the risk events, plus any secondary (additional) mitigation measures proposed, noting whether these mitigation measures eliminate, reduce, isolate and/or control the risk events; and
- Providing a residual assessment of risks.

[3] IEMA (2020), Major Accidents and Disasters in EIA: A Primer'. Available online at: https://www.iema.net/content/major-accidents-and-disasters-in-eia-an-iema-primer-october-2020/ Accessed April 2025

15.5.3 Baseline

15.5.3.1 Some hazards have been scoped out as they have been considered in other chapters of this EIAR. The existing environmental baselines for those hazards scoped out of this assessment have been defined and impacts assessed within the following chapters of this EIAR:

- Chapter 8: Ecology and Nature Conservation;
- Chapter 9: Water Resources and Flood Risk;
- Chapter 10: Geology and Soils;
- Chapter 11: Traffic and Transport;
- Chapter 12: Noise and Vibration;
- Chapter 14: Greenhouse Gas Assessment; and
- Chapter 15: Other Issues – **Section 15.3.3**.

Major Industrial Accidents

15.5.3.2 The Control Of Major Accident Hazards Regulations 2015 (COMAH)[4] aims to prevent and mitigate the effects of major accidents involving dangerous substances which can cause serious damage/harm to people and/or the environment. COMAH treats risks to the environment as seriously as those to people.

15.5.3.3 The Seveso III Directive (European Commission, 2012[5]) is aimed at preventing major accidents involving dangerous substances and limiting the consequences in the event of such a major accident. As defined in the Directive, if a development stores dangerous substances above certain thresholds, it is classified as either a lower tier or upper tier Seveso site.

15.5.3.4 The Proposed Development will contain a BESS compound. The BESS will have a generating capacity of up to 80 MW. There will be a total of up to 40 energy storage units. These would be oriented into 2 groups, with 2 rows of 10 containers. Each container will house rows of battery modules, arranged in racks. The battery cells are likely to be Lithium iron Phosphate (LFP) type, although this assumption is subject to pre-construction procurement. Further details on the BESS and associated infrastructure are included in **Chapter 3: Development Description.**

15.5.3.5 Composition of the BESS will be confirmed during the pre-construction procurement process. The Proposed Development will be assessed to determine whether it classifies as a lower and/or upper tier Seveso Site based on the threshold stated in Seveso III Directive and COMAH regulations once the final composition of the BESS has been confirmed.

---

[4] Health and Safety Executive (HSE), (2015) Control Of Major Accident Hazards Regulations 2015. Available online at: https://www.hse.gov.uk/comah/background/comah15.htm Accessed April 2025

[5] EC, (2012). Seveso III Directive (2012/18/EU). Available online at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:197:0001:0037:EN:PDF Accessed April 2025

15.5.3.6 In addition, once the final composition of the BESS has been confirmed an assessment will be conducted to determine if any flammable, toxic, or explosive chemicals, as detailed in The Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015, will be stored on site in quantities that would require a Hazardous Substances Consent under section 2 of the Planning (Hazardous Substances) (Scotland) Act 1997.

15.5.3.7 For the purposes of this assessment, lower tier and upper Tier Seveso sites within 3 km of the Site boundary were considered. No Seveso sites were identified within 3 km of the Proposed Development Site boundary.

- Torness Power Station, operated by EDF Energy Nuclear Generation Limited and located in Dunbar, East Lothian, is approximately 4 km north of the Proposed Development. This facility is registered as a lower tier Seveso Establishment. However, it has been scoped out due to distance from the Site.

Battery Fire/Explosion

15.5.3.8 The Proposed Development will contain a BESS compound, situated in Field 13 (approximate NGR 781 682). The footprint to this compound would measure approximately 80 X 85 m. This BESS compound would be co-located with the substation and surrounded by security fencing. The BESS will have a generating capacity of up to 80 MW.

15.5.3.9 There will be a total of up to 40 energy storage units. These would be oriented into 2 groups, with 2 rows of 10 containers. This indicative arrangement can be seen in **Figure 3.4.**

15.5.3.10 The following hazards relating to the BESS have been identified for assessment:

1. Lightning strike (a result of severe weather) leading to a thermal runaway fire event in a BESS container;
2. An electrical or battery fault during the operation of the BESS leading to a thermal runaway fire event in a BESS container; and
3. A conventional fire caused by arson, design fault, or design error leading to a thermal runaway fire event in a BESS container.

15.5.3.11 For hazards leading to a fire in a BESS container, the relevant receptors are:

- Ecological receptors: habitats local to the BESS containers; key receptors are species including badger, bats, red squirrel, breeding birds and brown hare;
- Human receptors: those residential dwellings closest to the BESS containers. The Proposed Development is surrounded by arable land on all sides, and some nearby residential areas. Cockburnspath is the largest and closest settlement and is approximately 2.7 km north of the BESS;
- Emergency responders (including fire service staff); and

Other industrial facilities where the Proposed Development could interact if a major accident or disaster takes place.

Accidental UXO Detonation

15.5.3.12 A Preliminary Desk Study Assessment for the Site was completed by Zetica to assess the UXO Risk on the Site. This assessment found the following that could pose a risk of UXO:

- Transport infrastructure and public utilities;

- Auxiliary Unit Operational Base (AUOB) which was established near Penmanshiel, in the immediate vicinity of the Site;
- Royal Air Force (RAF) Drone Hill and RAF Cockburnspath;
- British fighter-bomber aircraft crashed on the Site;
- Military camps and training areas; and
- Anti-Aircraft (AA) and anti-invasion defences.

15.5.3.13 The following hazards related to a UXO explosion have been identified:

- Explosion: Potential explosion causing physical damage to nearby structures and injury to personnel; and
- Fire: Potential fire resulting from the explosion, spreading to nearby areas.

15.5.3.14 The relevant receptors for these hazards include:

- Ecological Receptors: Local wildlife and habitats within the vicinity of the Proposed Development;
- Human Receptors: Residents and workers at the Proposed Development; and
- Infrastructure: The solar panels, BESS containers, and associated infrastructure.

Damage to Existing Utilities

15.5.3.15 The following hazards relating to utility assets have been identified:

- Physical damage to a utility resulting from construction and decommissioning works for the Proposed Development;
- Potential explosion/fire causing physical damage to utilities during operation;
- Potential failure of the National Grid affecting the operation of the solar farm and BESS; and
- Potential impact of the Proposed Development on the stability and reliability of the National Grid.

15.5.3.16 The relevant receptors which could be affected by the identified hazard are:

- Construction staff working close to the existing utility assets during the construction of the Proposed Development;
- Communities dependent on the utility assets who may experience a reduction or loss of services provided by the utilities; and
- Proposed Development infrastructure, as well as the National Grid infrastructure.

15.5.4 Assessment

Aircraft Disasters

15.5.4.1 For completeness the potential for glint and glare to affect aviation receptors has been assessed within the Glint and Glare Assessment (**Technical Appendix 15.1**) as summarised in **Section 15.3** of this Chapter. No aviation receptors were identified within the glint and

glare Study Area; therefore, the Proposed Development will not contribute to any increased risks of aircraft disasters due to effects to aviation operators from glint and glare.

Major Industrial Accidents

15.5.4.2 The Seveso III Directive is aimed at preventing major accidents involving dangerous substances and limiting the consequences in the event of such a major accident. As detailed in **Section 15.5.3.7** the Torness Power Station, Dunbar, East Lothian is approximately 4 km north of the Proposed Development and is registered as a lower tier Seveso Establishment. However, it is located outside of the study area and therefore the facility's impacts are scoped out of this assessment.

15.5.4.3 For ecological receptors the potential impacts from the identified hazards are contamination of soil and water, affecting local wildlife and habitats and physical damage or destruction to habitats and wildlife.

15.5.4.4 For human receptors the potential impacts from the identified hazards are risk of injury or death to workers and residents.

15.5.4.5 Emergency Response Procedures for the Proposed Development will be contained within the Construction Phase Plan (CPP) written by the Principal Contractor. Fire suppression systems have been incorporated into the design of other critical infrastructure including BESS containers. In addition, robust health and safety procedures and Fire Prevention and Control procedures are detailed in **Technical Appendix 3.1 oCEMP**.

15.5.4.6 With the implementation of the mitigation measures outlined above, including safety procedures for fire prevention and control, fuel storage, equipment maintenance, and incident response plans, no significant effects from a major incident at Bowshiel Solar Farm and BESS are anticipated.

Battery Fire/Explosion

15.5.4.7 The main fire risk concern is known as 'thermal runaway'. This is a cycle where excessive heat then goes on to create more heat until the energy stored within the batteries runs out.

15.5.4.8 For a lightning strike, the potential risk is that energy from the lightning could directly causes a thermal runaway event in a BESS container or cause a conventional fire which then could cause a thermal runaway event: both could lead to a battery fire within a BESS container.

15.5.4.9 For an electrical or battery fault during the operation of the BESS, the potential risk is that the fault directly results in a thermal runaway event, which could lead to a battery fire within a BESS container.

15.5.4.10 For conventional fire caused by arson, design fault, or design error, the potential risk is that a conventional fire could heat one or more of the BESS battery cells to a temperature which causes thermal runaway, which could lead to a battery fire within a BESS container.

15.5.4.11 For an uncontrolled fire within a BESS container, the reasonable worst-case event is a pressure build-up or explosion within the containers leading to vent panels on the container roof opening and smoke and contaminants venting to atmosphere for the duration of the fire.

15.5.4.12 The risk of fire at BESS sites is low, however, the risks have been considered and mitigated through design and operation practices as detailed in **Chapter 3: Development Description.**

15.5.4.13 In addition, the likelihood for a fire or explosion at the Proposed Development is significantly reduced due to the robust health and safety procedures and Fire Prevention and Control procedures provided for in **Technical Appendix 3.1 oCEMP**.

15.5.4.14 Embedded design mitigation (e.g. buffer zones surrounding the BESS containers and separation distances) and safety procedures for fire prevention and control, fuel storage, equipment maintenance, and incident response plans mitigate the overall likelihood that a fire and/or explosion will occur as a result of the Proposed Development to unlikely, and a significant effect upon the identified receptors from such is unlikely in relation to major accidents and disasters.

Accidental UXO Detonation

15.5.4.15 The potential impacts of the clearance of UXOs are discussed within this EIAR for completeness. Prior to any construction works a geophysical survey will be undertaken which will identify any UXO presence. However, there is a possibility that in the process of UXO removal, accidental detonation may occur impacting the receptors people, the Proposed Development and the environment.

15.5.4.16 During the pre-construction surveys, protocol will be followed in the event that UXO is discovered including micro siting or possible deflagration. The likelihood of this hazard occurring and impacting receptors can be greatly reduced with embedded mitigation measures in place. For example, advance warning and accurate location details of construction, maintenance and decommissioning operations, and associated Safety Zones.

15.5.4.17 In addition, an oCEMP has been provided alongside this EIA in **Technical Appendix 3.1**. Prior to commencement of construction, a final, detailed CEMP will be prepared that expands upon the oCEMP and details all measures required during construction to avoid and minimise environmental harm, including guidance and best practice for potential UXO.

15.5.4.18 Alongside these embedded mitigation measures, standard procedures will be followed including the monitoring of survey equipment at all times, and there will be access to geophysical and magnetometer data onboard throughout the survey. With this in consideration the likelihood of this hazard is unlikely for all receptors.

Damage to Existing Utilities

15.5.4.19 For workers working in the immediate vicinity of high voltage electricity utility assets, the potential impacts are physical injury or death as a result of a utility strike.

15.5.4.20 For communities dependent on the utility assets, the potential impact is the disruption to services provided by the assets.

15.5.5 Mitigation Measures

Major Industrial Accidents

15.5.5.1 No additional mitigation measures have been identified for this effect above and beyond the embedded and best practice mitigation.

Battery Fire/Explosion

15.5.5.2 A comprehensive Battery Safety Management Plan (BSMP) will be developed post-submission to ensure the safe and efficient operation of the BESS.

Accidental UXO Detonation

15.5.5.3 It is recommended that a pre-construction geophysical survey is commissioned to assess, and potentially zone, the UXO hazard level on the Site.

Damage to Existing Utilities

15.5.5.4 The Proposed Development has carried out engagement and consultation with utilities owners, namely consultation during the EIA scoping process, with utilities companies and the Health & Safety Executive identifying the major utilities for consideration.

15.5.5.5 Prior to construction and decommissioning phases, the design team and Principal Contractor will review the locations and alignments of the utilities using utilities plans and use them to inform the plans for the proposed works to ensure all known utilities are avoided.

15.5.5.6 Signage and height-restricted gates will be placed around high voltage power lines identified during construction to ensure that all construction vehicles adhere to adequate cable clearances.

15.5.5.7 Good construction working practices to manage the risk to any minor utilities which are not mapped by utilities companies will be implemented.

15.5.6 Summary of Residual Significant Effects

Major Industrial Accidents

15.5.6.1 The embedded mitigation measures and standard procedures associated with the Proposed Development are such that no significant effects from a major incident at Bowshiel Solar Farm and BESS is anticipated.

Battery Fire/Explosion

15.5.6.2 The preventative measures included in the design of the BESS and associated systems are such that an uncontrolled battery fire event is highly unlikely, and as such a significant effect upon the identified receptor from such is unlikely in relation to major accidents and

disasters. A comprehensive BSMP will be developed post-submission to ensure the safe and efficient operation of the BESS.

Accidental UXO Detonation

15.5.6.3 It is proposed to carry out a geophysical survey pre-construction to confirm the absence of UXO at the Site.

Damage to Existing Utilities

15.5.6.4 The mitigation measures will reduce the likelihood of a utility strike to a level such that a utility strike is highly unlikely and a significant effect upon the identified receptors from such is unlikely in relation to major accidents and disasters.

15.5.6.5 No significant effects to major accidents and disasters from the Proposed Development's construction, operation and decommissioning are anticipated.

15.6 Cumulative Effects

Major Accidents and Disasters/Glint and Glare

15.6.1.1 The cumulative assessment for major accidents and disasters and glint and glare considers the potential for cumulative effects to arise from the interaction of the Proposed Development with other future developments set out in **Chapter 4: EIA Methodology.**

15.6.1.2 Of the future planned developments detailed in **Chapter 4: EIA Methodology,** the following developments have the potential to contribute cumulative major accidents and disaster effects. The other future planned developments identified within **Chapter 4: EIA Methodology** of this EIAR are outside the 3 km Study Area.

- 23/00616/PM - Branxton Substation;
- 23/00162/PPM – Branxton connection;
- ECU00004659 - Branxton BESS;
- ECU00004993 - Braxbess BESS;
- 22/00852/PPM - Eastern Green Link 1; and
- Decommissioning of the Torness Nuclear Power Station (indicatively scheduled for 2030).

15.6.1.3 With embedded mitigation and additional mitigation identified within this EIA chapter, the Proposed Development's contribution to cumulative major accident and disaster effects will be minimal. It can be assumed that similar measures have been implemented for the future developments considered in this cumulative assessment, as these measures would be necessary to secure planning permission.

15.6.1.4 The proposed Springfield Solar Farm and BESS site is within the 5 km Study Area and contains solar PV arrays that could contribute to cumulative glint and glare effects. Based on the results provided in **Technical Appendix 15.1** the Proposed Development contribution to glint and glare effects will be negligible. Consequently, when considering the Proposed

Development in combination with the proposed Springfield development, **No Significant** cumulative effects are anticipated.