Proposed Solar Energy Development and Associated Infrastructure, 'Coltsdene Solar Farm'

Land near Kibblesworth, Gateshead.

ENVIRONMENTAL IMPACT ASSESSMENT: SCOPING REPORT

On behalf of RES Ltd.

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Document Management.

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V0.1	01/08/2025	WH	-	Initial Draft
V0.2	11/02/2026	ACK	-	Second Draft for Client Review
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V0.6	16/04/2026	ACK	SD	Client comments
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Contents.

Appendices.

PART ONE – INTRODUCTION

1. INTRODUCTION

Overview

1.1. This Scoping Report has been prepared to accompany a formal Environmental Impact Assessment (EIA) Scoping Request to Gateshead Council in relation to 'Coltsdene Solar Farm', the proposed solar development and associated infrastructure with the capacity to deliver 49.9MW of energy at land near Kibblesworth, Gateshead (referred to in this report as 'the Proposed Development').

1.2. The Scoping Request is made under Regulation 15 of the Town and Country Planning (Environment Impact Assessment) Regulations 2017. The purpose of the Scoping Request is to seek a formal Scoping Opinion from Gateshead Council on the information to be contained within an Environmental Statement (ES) to be prepared to form part of the forthcoming planning application in full for the Proposed Development.

1.3. The Scoping Report invites Gateshead Council, statutory consultees, non-statutory consultees and other stakeholders and interested parties to provide input into the EIA process and comment upon the proposed content of the ES.

1.4. The Application Site (referred to in this report as 'the Site') is located in an area of agricultural fields to the north, south and west of Kibblesworth village, totalling 93.01 hectares (approximately 93ha). A plan showing the location of the Site is illustrated in **Figure 1.1**. The centre of the Site has an approximate grid reference of NZ232566.

1.5. Pre-application advice request was submitted in December 2024 and Gateshead Council responded in March 2025.

Need for EIA

1.6. Within the Town and Country Planning (Environmental Impact Assessment) Regulations 2017[1] (the "EIA Regulations"), Schedule 1 identifies those types of development for which Environmental Impact Assessment is mandatory. The Proposed Development is not described within Schedule 1, and it is therefore considered that the proposal does not comprise Schedule 1 development.

1.7. The EIA Regulations also require that any Proposed Development falling within the description of a 'Schedule 2 Development' within the meaning of the Regulations, may be subject to an EIA where such development is likely to have 'significant' effects on the environment by virtue of factors such as its nature, size or location (Regulation 2b).

1.8. An EIA Screening Request was submitted to Gateshead Council in February 2025 (EIASCR/25/001), and a response was received on 7th May 2025.

[1] https://www.legislation.gov.uk/uksi/2017/571/contents/made

1.9. The EIA Screening response states that the LPA is of the opinion that the proposal falls within the Schedule 2 list of developments under Category 3 – Energy Industry, part a) Industrial Installations for the production of electricity, steam and hot water. The scale of the development exceeds the Schedule 2 area threshold of 0.5Ha. The LPA has given consideration to the request from Pegasus (on behalf of RES Ltd) for an EIA Screening Opinion in relation to this Proposed Development which constitutes Schedule 2 development.

1.10. Schedule 2 development need not necessarily comprise EIA Development. The determining factor in any consideration of the need for EIA of Schedule 2 development is the likelihood of significant effects. As stated in the EIA Screening response, the LPA are of the opinion that significant impacts are likely to result from the Proposed Development in terms of Biodiversity, Heritage and Landscape/Visual impacts, and therefore, the development is EIA development.

The Applicant – RES Ltd

1.11. RES Ltd is the world's largest independent renewable energy company working across 24 countries and active in wind, solar, Battery Energy Storage Systems (BESS), green hydrogen, transmission and distribution infrastructure. As an industry innovator for over 40 years RES has delivered more than 29GW of renewable energy projects across the globe and supports an operational asset portfolio of over 45GW worldwide.

1.12. RES is the power behind a clean energy future where everyone has access to affordable zero carbon energy. They bring together global experience, passion, and the innovation of 4,500 people to transform the way energy is generated, stored, and supplied.

1.13. RES has been playing a pivotal role in providing England with renewable energy since the early 1990s and has contributed to the growth of renewable energy in the UK from its beginnings. In the UK&I, RES has developed and/or constructed approximately 1.4GW of renewable energy, including around 745MW of solar generation.

Consultant Team

1.14. RES Ltd have appointed a team of specialist consultants to consider planning and environmental matters in relation to the Proposed Development and to provide input into the production of this Scoping Report.

Table 1.1: Consultant Team

Topic	Consultant
Planning, EIA, LVIA, & Cultural Heritage	Pegasus Group
Ecology	BSG Ecology

1.15. The Scoping Report has been produced by Pegasus Group. Pegasus are registered to the EIA Quality Mark, a scheme operated by the Institute of Sustainability and Environmental Professionals (ISEP, formerly IEMA) which allows consultancies that lead the co-ordination of statutory EIAs in the UK to make a commitment to excellence in their EIA activities and have this commitment independently reviewed.

Structure of the Scoping Report

1.16. The remainder of this EIA Scoping Report is divided into a number of sections. These are as follows:

PART 1 **BACKGROUND**

Section 2: **The Environmental Impact Assessment (EIA) Process**

A summary of the EIA process which will be undertaken

Section 3: **Site and Project Overview**

An overview of the Site and the development proposals

Section 4: **Planning Policy Context**

A summary of the relevant planning policy relevant to the proposals

PART 2 **PROPOSED CONTENT OF ENVIRONMENTAL STATEMENT**

Section 5: **Proposed Content of the Environmental Statement (ES)**

An overview of the proposed structure and format of the ES documents

Section 6: **Introductory ES Chapters**

Summary of the proposed approach to the Introductory Chapters of the ES

Sections 7-9: **Environmental Topic Chapters**

Summary of the assessment approach proposed for each of the environmental topics proposed to be included in the ES.

PART 3 **'TOPICS TO BE SCOPED OUT'**

Section 10: **Topics to be 'Scoped-out' and not included in the Environmental Statement (ES)**

Each environmental topic not to be considered in the ES is discussed in turn.

2. THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS

Overarching Legislation

2.1. The EIA process will be undertaken in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017[2], which are referred to in this document as the 'EIA Regulations'.

EIA Process Overview

2.2. The EIA process for the Proposed Development can be considered as having the following stages, each of which is discussed further in this section:

- Screening;
- Scoping (as initiated by this document);
- Baseline Studies;
- Assessment of environmental effects and evaluation of significance; and
- Production of the ES.

Screening

2.3. The Proposed Development lies within Section 3 (a) *'Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1)'* of Schedule 2 of the EIA Regulations, as the area of the development exceeds 0.5 hectares. A formal EIA Screening Opinion has been sought from Gateshead Council and a response was received 7th May 2025.

2.4. The response states that the LPA are of the opinion that significant impacts are likely to result from the Proposed Development in terms of Biodiversity, Heritage and Landscape/Visual impacts, and therefore, the development is EIA development.

2.5. The EIA Screening Response suggested that the development is EIA development due to the following:

- The potential for nearby designated Sites and onsite habitats to be adversely impacted as a result of the proposals, as well as for protected, important or sensitive species of flora and fauna which use areas on or around the Site.
- The potential for the development to cause a significant impact on the openness of the Green Belt, landscape character and visual amenity of the area.

[2] https://www.legislation.gov.uk/uksi/2017/571/contents/made

- The potential for significant effects on built heritage assets in the wider area, making particular reference to Lamesley and Ravensworth Conservation Areas, the Bowes Railway, and other locally listed assets.

Scoping

2.6. There is no formal requirement to undertake consultation on information to be contained within the ES, however, the EIA Regulations provide for obtaining a Scoping Opinion from the Local Planning Authority regarding the potential environmental impacts that should be considered in the EIA (Regulation 15) and it is considered good practice to do so. The purpose of this Scoping Report is to accompany the request for such a Scoping Opinion.

2.7. Regulation 15 requires that a Request for a Scoping Opinion shall include the following:

- a plan sufficient to identify the land;
- a brief description of the nature and purpose of the development, including its location and technical capacity;
- an explanation of the likely significant effects of the development on the environment; and
- such other information or representations as the person making the request may wish to provide or make;

2.8. This Scoping Report includes a plan identifying the location of the Site (**Figure 1.1**). It also includes a brief description of the Site, the proposal and of its possible effects on the environment, as required under this Regulation.

Baseline Studies

2.9. In the case of the environmental topics which will be covered in the ES, or which it is proposed to scope-out of the ES, baseline studies have already been undertaken, and details of this work can be found in the discussion of each environmental topic presented subsequently in this Report. Baseline conditions are established within each of the individual environmental assessments through the use of a number of sources including:

- desk top review of existing available data;
- Site specific survey work; and
- consultation.

Assessment of Environmental Effects and Evaluation of Significance

2.10. The EIA Regulations require that the ES identifies 'likely significant effects of the proposal on the environment'. It is recognised in the EIA Regulations however that not all environmental effects are significant.

2.11. The evaluation and determination of significant effects will be carried out using specific criteria defined within each of the technical chapters of the ES. Where available, published standards and guidelines will be used as the basis for the significance criteria.

2.12. The proposed methodologies for individual environmental topics are discussed in the subsequent section. However, the basic approach is the same for all environmental topics and is set out below:

- The sensitivity of the receiving environmental receptor is evaluated using defined criteria.
- The nature of the impact is established in terms of its duration, extent, frequency, likelihood of occurrence, reversibility, and compliance with recognised standards;
- The magnitude of the impact is determined. The magnitude of change is a consideration of how much the impact alters the baseline condition.
- The significance of the effect is determined by cross referencing the sensitivity of the receptor with the magnitude of change on the receptor

2.13. An example of this 'matrix' process is indicated below, however it should be noted that this is provided as a general guide only. Discipline-specific methodology is often used rather than generic criteria, as it is recognised that broad criteria do not always cater for particular disciplines, particularly where best practice and guidance require subtle differences.

Table 2.1: Matrix to determine level and significance of effect

Magnitude of Change	Sensitivity of Receptor			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor to Moderate	Negligible
Low	Moderate	Minor to Moderate	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Nature and Type of Effects

2.14. It should be noted that environmental effects may be direct or indirect, secondary, cumulative, transboundary, short, medium, long-term, permanent and temporary, positive and negative effects of the development and this will be noted in the ES. Effects will be considered both during the construction phase, when the development is being built (often temporary effects) and following completion of the development (often permanent effects).

2.15. Given the nature of the Proposed Development, construction and operational phases will be considered in the ES.

Cumulative Effects

2.16. The ES will respond to the requirement in the Regulations to assess the cumulative effects of the Proposed Development which will specifically consider two types of effect:

- Intra-project Cumulative Effects: The combined effect of individual effects (for example noise, airborne dust or traffic) on a single receptor where deemed potentially significant; and

- Inter-project Cumulative Effects: The combined effects of development schemes which may, on an individual basis be insignificant but, cumulatively, have significant effect.

2.17. With respect to inter-project cumulative effects, the Regulations state that consideration should be given to *"other existing and/or approved projects"* (Schedule 4, 5e). This is further supported by the National Planning Policy Guidance (NPPG) which states "*There are occasions….when other existing or approved development may be relevant in determining whether significant effects are likely as a consequence of a Proposed Development.*" (Paragraph: 024 Reference ID: 4-024-20170728)

2.18. Regard will therefore be had to relevant *"existing and/or approved projects"*, which alongside the development of the proposals and the Proposed Development, could potentially result in cumulative significant effects (discussed further below). It is relevant to note however that not all these projects will necessarily have the potential for cumulative impacts.

2.19. As per UK EIA Guidance[3], consideration has been given to the level of certainty of each development identified, in the context of the European's EIA Guidance [4] definition of cumulative effects and how "reasonably foreseeable" these are. For example, generally speaking it is relevant for development under construction to be considered 'certain', permitted applications not under construction to be considered 'likely', submitted undetermined applications which are local plan allocations to be considered 'potential' and undetermined applications with no other status are considered 'uncertain'.

2.20. Each 'certain', 'likely' or 'potential' development has then been considered whether it would, in combination with the Proposed Development, have potential to give rise to significant cumulative effects over and above those potentially as a result of the Proposed Development in isolation. 'Uncertain' developments are not considered as reasonably foreseeable in the context of the European's EIA Guidance definition of cumulative effects.

2.21. A review has therefore been undertaken of relevant *"existing and/or approved projects"* and also other potential developments which have been subject to planning applications (generally these are major applications within 3km of the Site). Each has been considered in relation to how certain the development is in coming forward and if likely or certain, whether they may influence the baseline or have the potential for significant cumulative effects with the Proposed Development; thus, identifying what 'other developments' are considered appropriate to consider in any cumulative scenario within the resultant ES. This review is set out in the table below.

2.22. Where developments are already operational (or *'existing'*), these will be included in the baseline; and those which are currently under construction but likely to be completed prior to the Proposed Development (and sufficient environmental information known) will be considered as part of the future baseline.

[3] Planning Inspectorate (PINS) 2024 – Guidance. Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment.

[4] European Commission (EC) 1999 – Adapted from Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions

2.23. Whilst this Scoping Report seeks to identify relevant schemes to be considered, it is to be acknowledged that the extent to which schemes need to be considered within each environmental discipline will inevitably vary.

2.24. The below table summarises the above process and sets out the potential 'other Sites' that the team are aware of and whether these are considered appropriate to assess and in what manner.

2.25. The assessment of cumulative effects is an iterative process which will be updated as the proposals and the planning application for the Proposed Development progresses. If any further schemes are identified which are likely to give rise to cumulative effects in-combination with the Proposed Development, the cumulative impact assessment will be re-evaluated.

2.26. We welcome comments from the Council on any other cumulative schemes that they consider would be relevant for the cumulative assessment.

Table 2.2: Potential Other Developments Subject to Planning Applications in relation to Cumulative Assessment

Application Reference	Description	Location	Distance from Proposed Development	Status	Certainty and relevance to consider in cumulative assessment	How considered (baseline, cumulative assessment or N/A)
TR010031 Planning Inspectorate	A1 Birtley to Coal House Improvement Scheme Widening the existing carriageway between junction 67 (Coal House) and junction 65 (Birtley) to provide additional lanes and increase capacity. The widening would be mainly online widening, with a short section of realignment (offline) where the A1 crosses the ECML between junction 67 (Coal House) and Smithy Lane Overbridge. The main areas of land take for the replacement of Allerdene Bridge and southbound verge are located between junction 66 (Eighton Lodge) and junction 65 (Birtley).	Land between Coal House and Birtley	850 m north of the Site boundary, where the substation is to be situated (see **Figure 3.1**)	DCO Granted January 2021	Certain: Under construction. Work expected to complete imminently (as of January 2026). No overlap in construction between this scheme and the Proposed Development is assumed, and so will therefore be considered within the future baseline.	Future Baseline
DC/22/01009/FUL Gateshead Council	Demolition of farm buildings and erection of 270 dwellings including associated access, infrastructure, landscaping, open space and sustainable drainage on land to the north and south of Kibblesworth Bank (additional information received and amended April 2023, May 2024, March 2025 and November 2025)	West Farm Kibblesworth Bank Kibblesworth NE11 OJB	c. 90m north of the Site boundary, where the solar panels are to be situated. c. 280m south of the Site boundary, where the substation is to be situated (see **Figure 3.1**)	Application submitted August 2022 Awaiting Decision	Potential: Planning application yet to be determined, therefore is not an existing or approved development. The land is however an allocation (GTSH163) in the Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne. Given the nature and location of the scheme, it is relevant to consider as part of the cumulative assessment	Cumulative Scenario
DC/22/00125/FUL	Erection of 276no. 2, 3 and 4 bedroom dwellings (reduced from 298no.) and associated works (amended/additional	Former BAE System Site Ravensworth Road Birtley	c. 1.6km east of the Site boundary, where the solar panels are to	Application granted August 2025	Likely: Planning permission granted but construction not yet started. Given the nature and location of the scheme, it is	Cumulative Scenario

Gateshead Council	information received 22/08/24, 29/08/24, 04/02/25 and 06/05/25).		be situated (see **Figure 3.1**)		relevant to consider as part of the cumulative assessment	
DC/21/00774/FUL Gateshead Council	Erection of 73 residential dwellings with associated infrastructure, landscaping and SUDS drainage (additional information and amended plans received 11/10/21, 12/10/21, 11/11/21, 12/11/21, 16/11/21, 26/11/21 and 14/12/21).	Land Bounded North and South of Blackfell Way. North Side Gateshead Birtley	c. 2.6km east of the Site boundary, where the solar panels are to be situated (see **Figure 3.1**)	Application Granted December 2021	Likely: Planning permission granted but construction not yet started. Given the scale and nature of the scheme, distance from the Site and intervening development, there is little likelihood of significant cumulative effects.	N/A
DC/25/01310/FUL Gateshead Council	Development of up to 106 no. residential dwellings with associated infrastructure (Updated supporting information received 19.12.25 and 03.03.26, additional plan received 23.12.25 and 03.03.26 and amended description 02.03.26)	Land At Lansbury Drive Elisabethville Birtley	c. 1.7km east of the Site boundary, where the solar panels are to be situated (see **Figure 3.1**)	Application submitted December 2025 Awaiting Decision	Uncertain: Planning application yet to be determined, therefore is not an existing or approved development. Given the scale and nature of the scheme, and distance from the Site, there is little likelihood of significant cumulative effects.	N/A
DC/21/00938/FUL Gateshead Council	Relocation of concrete batching plant, installation of new tarmac plant and associated material storage areas, plant workshops, processing of recycled and secondary aggregate and creation of new office building and associated parking (additional information received 07/12/21, amended information received 22/12/21, amended plans received 31/1/22 and 15/02/22).	North East Concrete Ltd Longshank Lane Birtley Chester Le Street DH3 1QZ	c. 1.3km east of the Site boundary, where the solar panels are to be situated (see **Figure 3.1**)	Application Granted July 2022	Likely: Planning permission granted but construction not yet started. Given the scale and nature of the scheme, distance from the Site and intervening development, there is little likelihood of significant cumulative effects.	N/A
EIA/23/004 Gateshead Council	Request for Screening Opinion under Part 2 of the Town and Country (Environmental Impact Assessment) Regulations 2017 (as amended) for a solar farm development at Ravensworth Park Estate, Gateshead.	Land At Ravensworth Park Estate Gateshead	c. 1.1km north of the Site Boundary, where the substation is to be situated. (see **Figure 3.1**)	Screening Response provided January 2024	Uncertain: Planning application yet to be submitted, therefore is not an existing or approved development. If brought forward, it is expected that the Proposed Development may be considered within this scheme's assessment of cumulative effects, as necessary.	N/A

DM/25/01101/FPA Durham County Council	Erection of 79 no. residential dwellings (Class C3) with associated access, landscaping, and infrastructure.	Land North and East Of Pelton House Farm Estate Station Lane Pelton DH2 2RF	c. 3km south of the Site Boundary, where the substation is to be situated. (see **Figure 3.1**)	Application Granted January 2026	Certain: Construction has started. Some overlap in construction is assumed possible. Given the scale and nature of the scheme, and distance from the Site, there is little likelihood of significant cumulative effects.	N/A

3. SITE AND PROJECT OVERVIEW

Site Location and Overview of Environmental Baseline

3.1. The Site is illustrated in the 'Location Plan' **(Figure 1.1)** and has an overall Site area of approximately 93ha. The centre of the Site has an approximate grid reference of NZ 23734 57358. The Site is situated entirely within the administrative area of Gateshead Council, though Durham County Council (DCC) lies c.600m south of the Site.

3.2. The Site is in a predominantly agricultural setting, comprising arable land with associated margins and boundary hedgerows, scrub and trees, with pockets of modified grassland dense scrub and woodland. Desk study and fieldwork data on protected and notable species suggests presence and/or suitable habitat for Bats, Breeding and Wintering Birds, Owls and Otter. The type, extent and distribution of habitats and species within the Site are discussed further in **Part 2 Section 9: Ecology & Biodiversity.**

3.3. The Site is not covered by any national, regional or local landscape designations. The eastern side of the Site is located within National Character Area (NCA) Profile 14 – Tyne and Wear Lowlands, and the western side is located within NCA Profile 16 - Durham Coalfield Pennine Fringe. Local Plan Policy MSGP33 'Countryside and Landscape Protection' sets out that the entire Site is within land identified as 'medium' landscape sensitivity.

3.4. A Screened Zone of Theoretical Visibility (SZTV) plan has been prepared for the Proposed Development (**Figure 7.1**) that illustrates the theoretical extent of where the Proposed Development may be visible from, assuming 100% atmospheric visibility, and includes the screening effect from woodland and buildings.

3.5. No internationally designated Sites are present within 10 km of the Site. Four nationally designated Sites were identified within 5 km of the Site, all of which are SSSIs of which the Site lies within their Impact Risk Zones (IRZ):

- Pockerly Farm Pond SSSI, c. 0.8 km south-west of the Site;
- Ridley Gill SSSI, c. 0.95 km east of the Site;
- Causey Bank Mires SSSI, c. 1.8 km east of the Site; and
- Gibside SSSI, c. 4 km north-west of the Site.

3.6. No locally designated (or equivalent) statutory Sites are present within 2 km of the Site, however 23 non-statutory designated Sites are located within 2 km of the Site.

3.7. The Site is located entirely within Flood Zone 1; an area identified as being at lowest risk of flooding from rivers and the sea.

3.8. The Site is situated on a secondary A Aquifer. The Site is not in a Drinking Water Safeguard Zone in relation to groundwater nor is it located in a Source Protection Zone.

3.9. The geology of the Site is made up of Glacial Till - Diamicton (aka Boulder Clay) with deposits of Glaciofluvial sand and gravel in the west and southeast. Bedrock beneath Site comprises

Pennine Middle Coal Measures Formation (PUCM) including Mudstone, Siltstone and Sandstone with several named workable coal seams.

3.10. The Site is located within a Minerals Safeguarding Area for Coal and parts of the Site fall into a Development High Risk Area as defined by the Coal Authority. A Coal Mining Risk Assessment (CMRA) has been produced for the wider area, which has identified the coal mining legacy hazards within and close to the Site. These include mine entries, coal outcrops, probable/recorded past shallow coal mine workings, opencast activity and deep infilled ground across the majority of the Site bar the area proposed for the siting of the substation.

3.11. The Site is not located in close proximity to any world heritage Sites, or any registered battlefields, parks or gardens.

3.12. According to Natural England's Provisional Agricultural Land Classification (ALC) mapping [5], the entirety of the Site is located within Good to Moderate Grade 3 Agricultural Land. Detailed mapping [6] is currently available only for the substation area and part of the connection corridor, and is shown in **Plate 3.1** below. This indicates the majority of the area surveyed is made up of Grade 3b (moderate quality) agricultural land, which is not considered to be Best and Most Versatile (BMV).

Plate 3.1: Mapping of Agricultural Land Classification (ALC) Grades - Post 1988 Survey

3.13. No active Air Quality Management Areas (AQMAs) or Noise Action Plan Important Areas (NIAs) are in the vicinity of the Site. The nearest NIA is situated on the A1 (ID 2498), c.1.1km north of the Site.

[5] https://naturalengland-defra.opendata.arcgis.com/datasets/provisional-agricultural-land-classification-alc-england/

[6] https://naturalengland-defra.opendata.arcgis.com/datasets/agricultural-land-classification-alc-grades-post-1988-england

3.14. The Site is made up of different areas which relate to different parts of the Proposed Development, and the existing site conditions of these are summarised below and indicated in the plan in **Figure 3.1**.

Solar Array Area

3.15. The area of land proposed for siting of the Solar Arrays is of an irregular shape, comprising of several parcels of arable fields divided by hedgerows and individual trees. The landscape generally slopes eastwards from a height of around 159m AOD (the area known as Whinnel Hill) and down to around 33m.

3.16. The entire northern edge of the solar array area is directly adjacent to a bridleway (known as Lamesley No 072) which follows an old industrial wagon way (the former Bowes Railway Path, also a designated LWS). The area northwest of the Site beyond the bridleway is largely agricultural, and some isolated properties are present.

3.17. The northeastern edge of the Site is directly adjacent to the south of Kibblesworth village at its closest point, with Bowes Valley Nature Reserve LWS bounding the Site's eastern edge. Beyond these the Tyne Yard Rail Depot is located c.1.1km northeast of the Site, along with a minerals extraction Site and wastewater treatment plant 700m to the east. Beyond to the north are the A1 and Team Valley Trading Estate, while to the east are The East Coast Main Line and the urban edge of Birtley.

3.18. The land south and west of the solar array area is largely agricultural, with some isolated residential receptors located in proximity to the Site's southern and western edge. These include Kibblesworth Grange (directly adjacent) and Cooper House Farm (c.200m south). The Team Valley lies beyond to the south and southeast. Birkland Lane bounds the western edge of the Site. The nearest settlement is Ouston (c.1.1km southeast), and the Beamish Museum complex lies c.1.4km to the southwest.

3.19. There are several footpaths within or adjacent to the Site, shown in **Plate 3.2** and summarised as follows:

- Lamesley No.28, which runs adjacent to the southern boundary of the Site in the vicinity of Kibblesworth Grange;
- Lamesley No.29, originating at Kibblesworth Bank near the village of Kibblesworth and connecting the Lamesley No.72 Bridleway (Bowes Railway LWS) in the north to Riding Lane in the south, running across the centre of the Site from north to south;
- Lamesley No.31, which also connects to the Lamesley No.72 Bridleway (Bowes Railway LWS) in the north and runs across the east of the Site before running adjacent to the southeastern boundary of the Site. Here the path continues south and joins with Lamesley No.32; and

- Lamesley No.33, which runs adjacent to the eastern boundary of the Site along Clarty Lane.

Plate 3.2: PRoW Network in and around the Proposed Development Site

3.20. Existing access to the solar array area for farm vehicles is taken from Kibblesworth Bank, which crosses the west of the Site in a southwest to northeast direction.

3.21. A small section of the eastern corner of the solar array area falls within the Gateshead Wildlife Corridor (Gateshead Local Policy 37).

3.22. Some limited, unnamed drainage ditches are present on Site, which drain offsite and into the River Team c. 560m southeast of the Site boundary. The Environment Agency Surface Water Flooding Map identified that there are some small areas of low, medium, and high risk surface water flood risk on the Site.

3.23. The solar array area is located within 1km of a single Grade II listed building, 'East Farmhouse' (c.400m north). Part of Kibblesworth village is designated in Local Plan Policy MSGP23 as an 'Area of Special Character', from which the Site is c. 60m south. A section of Bowes Railway is a designated Scheduled Monument, and is c.1km north east of the Site at its nearest point.

Substation Area

3.24. The area of land proposed for siting of the substation (shown in **Figure 3.1**) is of a broadly rectangular shape, comprising a single arable field parcel bounded by hedgerows and individual trees. The Site generally slopes eastwards from a height of around 46m AOD down to around 22m. The area proposed for siting of the substation is considerably larger than the anticipated final footprint of the substation, in order to provide a degree of flexibility in the future design.

3.25. The substation area is broadly surrounded in all directions by agricultural land. The northeastern corner of the Site is directly adjacent to Lamesley Meadows LWS, and the northwestern corner of the Site is directly adjacent to a section of Hag Wood/Gill and Micheson's Gill LWS. The nearest features are a garden centre c.240m northwest, some residential dwellings c.320m to the northeast, a lane 'The Crescent' directly adjacent to the Site's eastern edge, and the village of Kibblesworth c.290m to the south. The substation area is situated in closer proximity than the solar array area to the urban edge of Newcastle Upon Tyne to the north.

3.26. As shown in **Plate 3.1**, no Public Rights of Way cross the substation area. Existing access to the Site for farm vehicles is taken from The Crescent on the eastern boundary, which in turn feeds into Lamesley Rd and the A1 beyond.

3.27. The entirety of the substation area falls within the Gateshead Wildlife Corridor (Gateshead Local Policy 37).

3.28. Coltspool Burn is a watercourse which crosses through the eastern extent of the substation area, draining into the River Team c. 610m northeast. A small area of high surface water flood risk is present in proximity to Coltspool Burn within the Site.

3.29. The substation area is located within 2km of two Scheduled monuments:

- Site of Ravensworth coalmill, 600m north east of Ravensworth Castle (c.2km north); and
- Ravensworth quadrangular castle (c.1.9km northwest).

3.30. The substation area is also located within 1km of 5 Grade II listed buildings:

- Kenmore The Old Vicarage (c.460m northeast)
- Temple Meads (c.700m northeast)
- Church Of St Andrew (c.700m northeast)
- Tomb Of Robert Moscrop (c.700m northeast)
- East Farmhouse (c.480m southeast)

3.31. The Site is c. 460m north of the area of Kibblesworth designated as an 'Area of Special Character' in Local Plan Policy MSGP23. It is also c.400m southwest of Lamesley Conservation Area, and c.900m south of Ravensworth Conservation Area.

Electrical Connection Corridor

3.32. The corridor proposed for routeing the electrical connection (shown in **Figure 3.1**) follows the boundaries of a number of arable fields in a northeast to southwest direction, from the northwestern corner of the substation area to the northwestern edge of the solar array area.

3.33. The majority of the corridor is made up of farmland edges and informal tracks, however a small section follows c.140m of Ouslaw Lane. Some parts of the corridor cross unnamed

drainage ditches, where a higher risk of surface water flooding is present. These drain ultimately into Coltspool Burn further east.

3.34. As shown in **Plate 3.1**, the corridor crosses the Lamesley Bridleway No.72 (Bowes Railway LWS) before connecting with the solar array area. Lamesley footpath No.37, which connects Haggs Lane with the village of Kibblesworth, also runs adjacent to the corridor for approximately 100m.

3.35. The corridor is located within 2km of the scheduled monuments 'Site of Ravensworth Coalmill' and 'Ravensworth Castle', and is located within 1km of 2 Grade II listed buildings:

- Ravensworth Park Farmhouse (c.920m north); and
- Kenmore The Old Vicarage (c.870m northeast).

3.36. The corridor is also c.600m south of Ravensworth Conservation Area.

Project Overview

3.37. The Proposed Development seeks to deliver solar development and associated infrastructure with the capacity to deliver up to 49.9MW of energy, offering significant CO2 savings during the operational life of the development.

3.38. Gateshead has an ever-increasing need for renewable energy and the development of this solar development will be a significant addition to the renewable portfolio in Gateshead.

3.39. Temporary planning permission is sought for a period of circa 40 years from the date of energisation, however an investment decision is likely to be made at the end of this period determining the current condition of the development and opportunities to extend its operation. Therefore, due to the uncertainty regarding the timeframe for decommissioning, it is not appropriate to consider at this stage and is scoped out of further assessment.

3.40. After the operational period, the Site would be decommissioned and returned to its current state. A Decommissioning Plan would be produced and agreed in advance with the LPA at the time these activities are planned.

3.41. Although the proposals are continuing to develop as the technical work progresses, it is likely that the Proposed Development will comprise the following:

- The installation of fixed-tilt, bi-facial, ground mounted solar arrays running from east to west across the Site. The solar arrays will be maximum 3m in height including a minimum 0.7m ground clearance to allow for dual purpose renewable energy generation and agricultural sheep grazing. The solar panels will be angled at approximately 10-35° to the horizontal, in order to capture maximum radiation. Furthermore, the solar panels will have a non-reflective surface, which will increase the proportion of radiation absorbed, removing the risk of unwanted reflection and glare;
- Invertors/transformer units which will convert the Direct Current (DC) into an Alternating Current (AC) which is compatible with the National Grid. These will be positioned beneath the solar panels as necessary, and locations will be determined later in the scheme design;

- Internal access tracks, to allow for the construction and maintenance of the solar panels.

- As the proposed solar farm will require little maintenance, the Site will be unmanned. In order to protect the installation, an unobtrusive deer fence will be installed around the perimeter of the Site. CCTV cameras with infra-red lighting will be installed, where required, on the perimeter fence;

- Additional landscaping including hedgerow planting and improved biodiversity management;

- An Independent Distribution Network Operator (iDNO) 132kV Substation would be provided to allow for the connection of the solar farm to the National Grid. The substation will be maximum of 7.5m in height, with an approximate compound footprint of 75m x 50m; and

- A single, High Voltage Alternating Current (HVAC) 33kV underground cable will be installed between the substation and the solar arrays.

3.42. Some elements of the design cannot be confirmed at this early stage, and options are still being considered for different parts of the Proposed Development. To allow a necessary degree of flexibility to account for future changes and refinement, the Rochdale Envelope approach has been employed to ensure the parameters assessed at the Scoping stage are sufficient to encompass the 'worst case' in relation to potential environmental impacts.

3.43. Although work is ongoing to produce a final Site Layout Plan for the Proposed Development, an Indicative Parameters Plan is enclosed at **Figure 3.1.** This illustrates the broad areas within which different elements of the Proposed Development could be built out on the Site. The layout will be developed further as the technical work continues.

3.44. Access arrangements for the Proposed Development are currently subject of ongoing liaison with the Highways Authority, with the intention that points of access will be secured direct from The Crescent, Kibblesworth Grange and Kibblesworth Bank during operation. These are indicated in **Plate 10.1.**

3.45. Access to the solar farm will be limited during operation to maintenance visits. Operational trip generation will be circa 52-104 LGV trips per year for maintenance purposes. HGVs are not anticipated to be required, unless a major component replacement is needed. Trips associated with operation will therefore be infrequent and are not anticipated to generate a material level of traffic on the local road network.

Construction

3.46. Access to the Site during construction will be gained via the same locations outlined above and in **Plate 10.1.**

3.47. It is estimated that there will only be a minimal increase in vehicle movements on the local highway network during the construction period, and it is not anticipated that the increase will be classed as significant.

3.48. The forecast construction and operation traffic associated with the Site will be obtained from the Applicant. This will include information on the construction programme, forecast traffic

(deliveries and workforce trips) and vehicle mix (including whether there will be any Abnormal Indivisible Loads (AIL)). This information will then be provided in the Scoping Note and analysed in the forthcoming CTMP.

3.49. The transport team is in the process of producing a Transport Scoping Note, for submission to National Highways and Gateshead Council Highways Authority for their consideration. This will detail the proposed approach to the CTMP.

3.50. Assuming planning permission is granted, it is anticipated that construction will commence soon after. The construction period will be approximately 12-18 months. The ES will provide further detail on the construction activities, timeframes and phasing for the Proposed Development.

3.51. The anticipated method of HVAC cable installation will be a cable duct system, predominantly using open trenching. The trench is anticipated to be approximately 1m wide and 1.1m deep. The land will be restored to its previous use after installation. Where cabling is required to cross Bowes Railway LWS, Horizontal Directional Drilling (HDD) will be utilised. HDD methodology for crossing of watercourses and Ouslaw Lane will also be considered, as detailed design and construction methodology progresses.

4. PLANNING POLICY CONTEXT

Introduction

4.1. This section considers the policy context which is applicable to the development. It includes consideration of the National context regarding the need for renewable energy and overarching policy set out in the National Planning Policy Framework (NPPF) and National Planning Practice Guidance (NPPG). It also considers the Local context with regard to the Gateshead Council and Newcastle City Council Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030 (Adopted 26 March 2015). A joint Local Plan is also under preparation, with the Core Strategy and Urban Core Plan forming the framework of the future plan. The call for Sites for the Local Plan closed in December 2025.

National Context

4.2. In June 2019, the UK became the first major economy to implement a legally binding net zero carbon emissions target by 2050.[7] Decarbonising the power sector is integral to achieving this target and requires major investments into renewable technologies, such as solar power, which are supported by planning policy at both local and national levels

4.3. Establishing and maintaining a low-carbon and abundant electricity system is key to accelerating to net zero. Government has therefore established a 'Clean Power target' to deliver a clean electricity system by 2030 and to keep it clean thereafter. A clean electricity system is defined by Government as one in which over 95% of total annual GB electricity generation is from clean (i.e. low-carbon) sources; and annual electricity generation from clean sources in GB is greater than total GB electricity consumption.

4.4. A low-cost, net zero consistent GB energy system is likely to be composed predominantly of wind and solar. Government's pathways include a total of 54 – 57 GW of operational rooftop and ground-mount solar capacity by 2030 as well as challenging capacity ranges for the deployment of many other low-carbon generation technologies.

4.5. Furthermore, the National Policy Statement for Renewable Energy Infrastructure (EN-3)[8] acknowledges that electricity generation from renewable sources of energy is an essential element of the transition to net zero. When specifically considering solar development this document outlines at paragraph 2.47.1 that the government has committed to sustained growth in solar capacity to ensure that we are on a pathway that allows us to meet net zero emissions. As such solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector.

National Planning Policy Framework (NPPF)[9] (2024)

4.6. The NPPF was revised in December 2024 and the most recent amendment was February 2025.

[7] https://www.legislation.gov.uk/ukdsi/2019/9780111187654
[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015236/en-3-draft-for-consultation.pdf
[9] https://www.gov.uk/government/publications/national-planning-policy-framework--2

4.7. The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development in its three dimensions; economic, social and environmental. Central to the NPPF is presumption in favour of sustainable development. For decision taking this means (paragraph 11):

- *Approving proposals that accord with the development plan without delay; and*
- *Where the development plan is absent, silent or relevant policies are out of date, granting permission unless;*
    - *Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies of the NPPF; or*
    - *Specific policies in the framework indicate development should be restricted."*

4.8. Paragraph 152 of the NPPF states that the planning system should support transition to a low carbon future in a changing climate and should support renewable and low carbon energy and associated infrastructure.

4.9. Paragraph 154 of the NPPF states that new renewables development should be planning for in ways that:

a) *Avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be manages through suitable adaptation measures, including through the planning of green infrastructure; and*

b) *Can help to reduce greenhouse gas emissions, such as through its location, orientation, and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards.*

4.10. Paragraph 157 outlines that when determining planning applications, local planning authorities should expect new development to:

a) *Comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and*

b) *Take account of landform, layout and building orientation, massing and landscaping to minimise energy consumption.*

4.11. Finally, Paragraph 158 states that, when determining planning applications for renewable and low carbon development, local planning authorities should:

a) *Not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale project provide a valuable contribution to cutting greenhouse gas emissions; and*

b) *Approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial*

scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

4.12. It is noted that on 16th December 2025 the Government published a revised NPPF for consultation purposes. As the Draft Framework is open for consultation until 10th March 2026, it considers that the policies, at this time, carry only limited weight.

4.13. The draft changes to the NPPF incorporate specific policies in relation to 'renewable and low carbon energy development and electricity network infrastructure' (Policy W3). It is noted that this policy accords substantial weight to the benefits of improving energy security, supporting economic development and moving to a net zero future.

National Planning Practice Guidance (NPPG)[10] (first published March 2014)

4.14. The Government's web-based NPPG went live on 6th March 2014 and contains guidance on the planning system and has been subject to updating periodically. The web-based guidance should be read alongside the NPPF and is a material consideration in the consideration of planning applications.

4.15. Renewable and Low Carbon Energy forms one of the chapters in the NPPG. This chapter was most recently updated in August 2023.

4.16. Paragraph 013 (ID: 5-013-20150327) is entitled "What are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic farms?" and sets out the following factors for consideration:

- *"encouraging the effective use of land by focussing large scale solar farms on previously developed and non-agricultural land, provided that it is not of high environmental value;*
- *where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays.*
- *that solar farms are normally temporary structure and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;*
- *the proposal's visual impact, the effect on landscape of glint and glare (see guidance on landscape assessment) and on neighbouring uses and aircraft safety;*
- *the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;*
- *the need for, and impact of, security measures such as lights and fencing;*

[10] https://www.gov.uk/government/collections/planning-practice-guidance

- *great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of largescale solar farms on such assets. Depending on their scale, design and prominence, a large-scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;*

- *the potential to mitigate landscape and visual impacts through, for example, screening with native hedges;*

- *the energy generating potential, which can vary for a number of reasons including, latitude and aspect."*

Local Context

Newcastle and Gateshead Joint Local Plan[11]

4.17. A joint Local Plan is currently under preparation by Gateshead Council and Newcastle City Council. The following documents currently make up the framework for this local plan and are the key documents which manage and influence future development in Gateshead, until such a time as the Joint Local Plan is adopted. The call for Sites for the Local Plan closed in December 2025. This involved landowners, stakeholders and organisations making the councils aware of any new sites with potential for sustainable development, which in turn would be used to inform the first Joint Housing and Economic Land Availability Assessment (HELAA).

Making Spaces for Growing Places (2021)[12]

4.18. Making Spaces for Growing Places (MSGP) will form part 3 of the Joint Local Plan following the adoption of the Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030 which will form parts 1 and 2.

4.19. The policies and allocated Sites set out in MSGP will support the implementation of strategic priorities set out in the Core Strategy and Urban Core Plan. MSGP supersedes the remaining saved policies from the Unitary Development Plan.

Table 4.1 Policies contained within the Making Spaces for Growing Places (MSGP) of relevance to the Proposed Development

Policy Reference
Policy MSGP17 – Residential Amenity
Policy MSGP18 - Noise
Policy MSGP22 – Aircraft Safety
Policy MSGP23 – Areas of Special Character
Policy MSGP24 – Design Quality
Policy MSGP25 – Conservation and Enhancement of Heritage Assets
Policy MSGP26 – Heritage at Risk

[11] Newcastle Gateshead Local Plan - Version 2 - Newcastle Gateshead Local Plan
[12] Making Spaces for Growing Places - Gateshead Council

Policy MSGP27 – Archaeology
Policy MSGP28 – Renewable and Low Carbon Energy
Policy MSGP29 – Flood Risk Management
Policy MSGP30 – Water Quality and River Environment
Policy MSGP31 – Green Infrastructure and Flood Management Schemes
Policy MSGP32 – Maintaining, Protecting and Enhancing Green Infrastructure
Policy MSGP33 – Countryside and Landscape Protection
Policy MSGP34 – Development in Settlements within the Green Belt
Policy MSGP36 – Woodland, Trees and Hedgerows
Policy MSGP37 – Biodiversity and Geodiversity
Policy MSGP44 – Environmental Impacts – Minerals and Waste

The Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030

4.20. Table 4.2 identifies policies from the Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030 which are relevant to the Site and Proposed Development.

Table 4.2: Policies contained within the Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010 of relevance to the Proposed Development

Policy Reference
Policy CS1 – Spatial Strategy for Sustainable Growth
Policy CS4 – Spatial Strategy for Rural and Village Area
Policy CS5 – Employment and Economic Growth Priorities
Policy CS14 – Wellbeing and Health
Policy CS15 – Place-making
Policy CS16 – Climate Change
Policy CS17 – Flood Risk and Water Management
Policy CS18 – Green Infrastructure and the Natural Environment
Policy CS19 – Green Belt
Policy CS20 – Minerals
Policy GV5 – Kibblesworth
Policy DEL1 – Infrastructure and Developer Contributions

PART TWO – PROPOSED CONTENT OF ENVIRONMENTAL STATEMENT

5. INTRODUCTION

5.1. This section of the Scoping Report sets out the proposed content of the Environmental Statement (ES). It includes details of each of the individual Chapters which are to be included in the ES, and confirms the legislative requirements which the ES is required to fulfil.

Legislative Requirements

5.2. Schedule 4 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[13] *'Information for inclusion in environmental statements'* requires that an Environmental Statement should include at least the following information:

Part 1:

- ***'A description of the development'*** *- including information on the location of the development Site, the physical characteristics of the development, the main characteristics of the operational phase of the development (in particular any production process) and an estimate, by type and quantity, of expected residues and emissions*

Part 2:

- ***'A description of the reasonable alternatives studied by the developer'*** *– for example with regard to development design, technology, location, size and scale*

Part 3:

- ***'A description of the relevant aspects of the current state of the environment (baseline scenario)'****- including how the baseline might evolve if the development was not to proceed*

Part 4:

- ***'A description of the factors specified in regulation 4(2) likely to be significantly affected by the development'*** *– including with regard to population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape*

Part 5:

[13] https://www.legislation.gov.uk/uksi/2017/571/schedule/4/made

- ***'A description of the likely significant effects of the development on the environment'*** *- including with regard to: construction and/or demolition works, the use of natural resources, emission of pollutants and the disposal of waste, the potential for accidents, cumulative effects with other developments, vulnerability with respect to climate change and the technologies and materials to be used.*
- *The description of the likely significant effects should cover* ***'direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development'***

Part 6:

- ***'A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment'*** *- including with regard to: technical deficiencies or lack of knowledge encountered compiling the required information and the main uncertainties involved.*

Part 7:

- ***'A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment'*** *- including where appropriate with regard to: any proposed monitoring arrangements (for example the preparation of a post-project analysis).*
- *The description should explain the '****extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset'****, and should cover both the construction and operational phases.*

Part 8:

- ***'A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned'****. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.*

Part 9:

- ***'A non-technical summary of the information provided under paragraphs 1 to 8'.***

Part 10:

- ***'A reference list detailing the sources used for the descriptions and assessments included in the environmental statement'.***

<u>Proposed Structure of the Environmental Statement</u>

5.3. The ES will report the findings of the EIA and will address the requirements of Schedule 4 of the EIA Regulations. The ES is anticipated to include 3 volumes:

- Volume 1: Environmental Statement Main Text: sets out the findings to each of the environmental disciplines, including accompanying Figures (i.e. plans/drawings)
- Volume 2: Technical Appendices: supports the main assessments within Volume 1
- Volume 3: Non-Technical Summary (NTS): a simple summary of the key information presented in the Environmental Statement in a non-technical manner

5.4. It is proposed that the ES will be structured to include a number of introductory chapters followed by a series of technical assessment chapters with regard to the following topics, as follows in Table 5.1:

Table 5.1: Proposed ES Chapters

ES Chapter	Title
1	Introduction
2	Environmental Impact Assessment Scope and Methodology
3	Application Site and Planning Policy Context
4	Proposed Development and Consideration of Alternatives
5	Landscape & Visual Effects
6	Archaeology & Cultural Heritage
7	Ecology & Biodiversity
8	Summary
9	References
10	Glossary

5.5. Each of these proposed chapters is discussed in more detail in turn in subsequent sections of the Scoping Report.

6. INTRODUCTORY ES CHAPTERS

Introduction Chapter

6.1. This Chapter will provide an introduction to the ES. It will set out a brief overview of the Site, the Proposed Development and the environmental topics which have been considered as part of the EIA and which are reported in the ES. It will summarise the consultant team responsible for its production and explain how consultees and members of the public can comment on the document or obtain additional copies of the ES.

EIA Scope and Methodology

6.2. This chapter provides a summary of the agreed scope of assessments to be considered within the ES, with reference to consultation responses and explains the methodology used to prepare the technical chapters, including reference to the general approach in determining significance. Information in relation to cumulative impacts is also set out within this chapter, along with any limitations or assumptions used throughout the ES.

Application Site and Planning Policy Context

6.3. This chapter will describe the Site's location, context, existing use and features. This chapter shall also identify all the relevant planning policy against which the various environmental topics addressed in the ES will be considered. Policy will be identified at the national, regional and local level as appropriate.

Proposed Development and Alternatives

6.4. This chapter will provide a comprehensive description of the Proposed Development, including the construction process, and any relevant details on assumed timescales and phasing.

6.5. The EIA will be based upon a set of defined parameters, which will refer to the submitted elevation plans for the equipment.

6.6. These parameters and controls define those aspects of the Proposed Development capable of having significant effects, as defined in the EIA Regulations. This ensures that key elements are assessed accordingly, however allows some flexibility for detail post submission.

6.7. The chapter will also provide a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant, and an indication of the main reasons for selecting the chosen option.

7. LANDSCAPE AND VISUAL EFFECTS

Introduction

7.1. A landscape and visual impact assessment of the Proposed Development will be undertaken following the 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) (3rd Edition) published by the Landscape Institute and the Institute of Environmental Management and Assessment in 2013.

7.2. This document does not provide a prescriptive method for the assessment but identifies the general principles and good practice approaches. The assessment will enable the likely significant landscape and visual effects to be determined and a landscape design and mitigation strategy to be put forward as part of the overall development proposals.

Relevant Policy and Guidance

Planning Policy

7.3. The 'EIA Regulations' control the need and procedure for the EIA process, which is addressed and explained through an ES. One of the environmental factors specified in the 'EIA Regulations' that is likely to be significantly affected by development is "landscape", and this factor has been scoped into the ES.

7.4. The applicable planning policy of relevance to landscape and visual matters includes:

- National Planning Policy Framework (NPPF) (December 2024);
- Planning Practice Guidance (PPG) (November 2023);
- The Core Strategy and Urban Core Plan (CSUCP) (adopted 2015);

Guidance

7.5. The applicable guidance is summarised as follows:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, Landscape Institute and Institute of Environmental Management and Assessment, 2013
- Assessing landscape value outside national designations Technical Guidance Note 02/21, Landscape Institute, 2021
- Visual Representation of Development Proposals Technical Guidance Note 06/19, Landscape Institute, 2019
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3) Technical Guidance Note LITGN-2024-01, Landscape Institute, 2024
- An Approach to Landscape Character Assessment (Natural England, 2014)
- National Character Area Profiles: (NCA 14: Tyne and Wear Lowlands; and NCA 16 Durham Coalfield Pennine Fringe)

- Gateshead Landscape Character Assessment (2007)

Preliminary Baseline Conditions

Site Description and Context

7.6. The Site comprises primarily of agricultural land, generally medium to large scale, irregular shaped arable fields, with dividing hedgerows and individual trees. The landscape generally slopes eastwards from a height of around 159m AOD (the area known as Whinnel Hill) and down to around 22m (at the eastern extent of the area identified for the substation).

7.7. Local Plan Policy MSGP33 'Countryside and Landscape Protection' sets out that the entire Site is identified as 'medium' landscape sensitivity, and not within one of the areas noted to be of 'high/very high' sensitivity.

7.8. A Screened Zone of Theoretical Visibility (SZTV) plan has been prepared for the Proposed Development (**Figure 7.1**) that illustrates the theoretical extent of where the Proposed Development may be visible from, assuming 100% atmospheric visibility, and includes the screening effect from woodland and buildings.

7.9. There are five main PRoW networks within the Site area. PRoW footpath LA/33/2 on the eastern section of the Site, while Bridleway Lamesley No.72 runs along the northern boundary. Footpaths LA/31/1, LA/29/1, and LA/28/1 also border the Site. These are described further at **Paragraph 3.20** and illustrated in **Plate 3.2.**

Designations

7.10. There are no designations of landscape value that are applicable to the Site or its immediate context, such as National Parks, National Landscapes (formerly known as Areas of Outstanding Natural Beauty (AONBs)) or Special Landscape Areas (SLAs).

7.11. The Site sits within the Green Belt. Green Belt is a planning designation not a landscape designation. The necessary very special circumstances assessment will be undertaken and presented within the Planning Statement.

Landscape Character

7.12. Published landscape character assessments have been prepared at national, county and district / borough wide scales covering the Site and its context. The Site lies within the following Landscape Character Areas or Types based upon the hierarchy of published Landscape Character Assessment studies:

- National Character Area Profiles: (NCA 14: Tyne and Wear Lowlands; and NCA 16 Durham Coalfield Pennine Fringe)
- Gateshead Landscape Character Assessment (2007): Team Valley Character Area

7.13. The assessment will consider all of the relevant published landscape character assessment studies.

Potential Effects (including identification of specific receptors)

7.14. There will be a number of landscape and visual receptors that could be potentially affected by the Proposed Development on the Site. Those identified to date are highlighted below. Further receptors may be identified as part of the ongoing assessment work.

Landscape

- The character of the landscape – on both a Site wide and broader contextual basis;
- Landscape features of the Site, including [but not limited to]:
    - Physical influences – Geology, soils, landform, drainage and water bodies;
    - Land cover, including different types of vegetation and patters and types of tree cover; and

Visual

- Residents – including principally those in properties surrounding the Site;
- People, whether residents or visitors, who are engaged in outdoor recreation, including users of Public Rights of Way (PRoWs) within and surrounding the Site; and
- Users of existing roads within wider Site context.

7.15. All of these receptors and any other subsequently identified will be assessed by the environmental impact assessment process in accordance with the proposed methodology detailed below.

<u>Scope and Methodology of Assessment (including significance criteria)</u>

7.16. The 'Guidelines for Landscape and Visual Impact Assessment, 3rd Edition' (GLVIA3) states that:

"Landscape and Visual Impact Assessment (LVIA), is a tool used to identify and assess the significance of and the effects of change resulting from development on both landscape as an environmental resource in its own right and on people's views and visual amenity"

7.17. There are two components of LVIA:

- Assessment of landscape effects; assessing effects on the landscape as a resource in its own right; and
- Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people.

7.18. The components of the assessment will include baseline studies; description and details of the landscape proposals and mitigation measures to be adopted as part of the proposal; identification and description of likely effects arising from the Proposed Development; and an assessment of the significance of these effects.

7.19. In terms of baseline studies, the assessment will provide an understanding of the landscape in the area to be affected, its constituent elements / features, character, condition, and value.

For the visual baseline it will include an understanding of the area within which the development may be visible, the people who may experience views, and the nature of views.

Assessment of Landscape Effects

7.20. GLVIA3 states that *"An assessment of landscape effects deals with the effects of change and development on landscape as a resource"*. The baseline landscape will be described by reference to existing landscape character assessments and by a description of the Site and its context.

7.21. A range of landscape effects can arise through development. These can include [inter alia]:

- Change or loss of elements, features, aesthetic or perceptual aspects that contribute to the character and distinctiveness of the landscape;
- Addition of new elements that influence character and distinctiveness of the landscape; and
- Combined effects of these changes.

7.22. The characteristics of the existing landscape resource will be considered in respect of the susceptibility of the landscape resource to the change arising from this development. The value of the existing landscape also is considered. Landscape receptors will be assessed in terms of their sensitivity, by combining judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape.

7.23. The magnitude of each effect on landscape receptors is assessed in terms of size or scale, geographical extent of the area influenced and its duration and reversibility. In terms of size or scale, the judgement will take account of the extent of the existing landscape elements that will be lost or changed, and the degree to which the aesthetic or perceptual aspects or key characteristics of the landscape will be altered by removal or addition of new elements.

7.24. The overall landscape effect is determined by considering the sensitivity of the landscape receptor(s) and the magnitude of impact on the landscape receptor(s). Final conclusions on the overall landscape effects are drawn from the assessment components described.

Assessment of Visual Effects

7.25. An assessment of visual effects deals with the effects of change and development on the views available to people and their visual amenity. As with landscape effects, this requires methodical consideration of each effect identified and, for each one, assessment of the nature of the visual receptors and the nature of the effect on views and visual amenity (Paragraph 6.30, GLVIA3).

7.26. The first stage in the assessment is to map approximate visibility of the Proposed Development. This will be modelled as a computer-based Zone of Theoretical Visibility (ZTV). Subsequently this will be refined by field evaluation to take account of physical features (e.g., buildings and woodlands) that are not included as part of the computer model. Please see **Figure 7.1** in **Appendix 1** for a copy of the Screened Zone of Theoretical Visibility (SZTV).

7.27. A series of representative photo viewpoints will be included in the assessment that are representative of views towards the Site and the Proposed Development from surrounding

visual receptors. Other photographs of the Site may also be included where they support the description and understanding of the Site's landscape and visual characteristics. The viewpoints will also typically represent what can be seen from a variety of distances towards the Site. The location of the proposed viewpoints are set out below, and illustrated in **Figure 7.1**, which are indicative and maybe relocated to suit patterns of vegetation or respond to feedback at scoping:

1. Kibblesworth Park: 424447, 556463
2. Birkland Lane: 422535, 556538
3. Kibblesworth Bank/Bowes Railway Path: 423646, 556411
4. Kibblesworth Bank/Birkland Lane: 422953, 555649
5. Longshank Lane: 426550, 556894
6. Moormill Lane: 425063, 556760
7. Kibblesworth Bank near benches: 424776, 557442
8. Kibblesworth Bank: 424694, 557266
9. Haggs Lane: 423521, 557670
10. Birkheads Lane: 422428, 557438
11. Kibblesworth Bank/Riding Lane: 423288, 556199
12. Tyne and Wear Heritage Trail/Bowes Railway Path: 424953, 556522
13. Bowes Valley Nature Reserve: 425430, 556537
14. Lamesley Road, Lamesley: 425170, 558043
15. Baytree Terrace, Urpeth/public right of way: 425129, 555018

7.28. In addition to the photo viewpoints, a series of photomontage visualisations will be prepared from agreed locations. It is currently proposed that photomontage visualisations are prepared for Viewpoints 1, 10 and 11.

7.29. The photomontages will aim to simulate the likely visual changes that will result from the Proposed Development. The photo viewpoints and photomontages will be prepared in accordance with guidance, as set out in The Landscape Institute Technical Guidance Note on `Visual Representation of Development Proposals' (TGN 06/19).

7.30. The photo viewpoints' will be 'Type 1 Visualisations' or 'Annotated Viewpoint Photographs', as referred to in TGN 06/19 and the photomontages will be prepared as 'Type 3 Visualisations' in TGN 06/19.

7.31. The assessment will consider both the susceptibility to change in receptors views and the value attached to views for the identified receptors. Visual receptors most susceptible to change generally include:

- People engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape or particular views;
- Visitors to heritage assets or other attractions, where views of surroundings are an important contributor to the experience;
- Nearby residents at home;
- Communities where views contribute to the landscape setting enjoyed by residents in the area; and
- Travellers on road, rail or other transport routes tend to fall into an intermediate category of susceptibility to change. Where travel involves recognised scenic routes, awareness of views is likely to be particularly high.

7.32. Visual receptors less sensitive to change include:

- People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and
- People at their place of work whose attention may be focused on their work or activity, not on their surroundings.

7.33. Each of the visual effects will be evaluated in terms of its size or scale, the geographical extent of the area influenced and its duration or reversibility.

7.34. In terms of size or scale, the magnitude of the visual impact will take account of:

- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including proportion of the view occupied by the Proposed Development;
- The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line height, colour, and texture; and
- The nature of the view of the Proposed Development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses.

7.35. The geographical extent of the visual effect in each viewpoint is likely to reflect:

- The angle of view in relation to the main activity of the receptor;
- The distance of the viewpoint from the Proposed Development; and
- The extent of the area over which the changes would be visible.

7.36. As with landscape effects, the duration of the effect could be short to long term or permanent and the same definitions will apply, as in para 7.23.

Overall Landscape and Visual Effects

7.37. The final conclusions on effects, whether adverse or beneficial, are drawn from the separate judgements on the sensitivity of the receptors and the magnitude of the effects. This overall judgement involves a reasoned professional overview of the individual judgements against the criteria to make the final overall judgement.

7.38. GLVIA3 notes, at paragraphs 5.56 and 6.44, that there are no hard and fast rules with regard to the level of effects. The following descriptive thresholds will be used for the LVIA:

- Major;
- Moderate;
- Minor; and
- Negligible

7.39. Where it is determined that the assessment falls between or encompasses two of the defined criteria terms, then the judgement may be described as, for example, Major / Moderate or Moderate / Minor. This indicates that the effect is assessed to lie between the respective definitions or to encompass aspects of both. Where such a judgement has been reached, there is no intended difference to be derived from which judgment comes first – so medium-high is the same as high-medium or moderate-major is the same as major-moderate.

Significance Criteria

7.40. A judgement is reached, based on the assessment, as to whether an effect is significant or not. Those degrees of effects that are considered to be significant by the assessor for this LVIA are judged to be effects that are either Major or Major / Moderate. The following descriptive thresholds have been used for this LVIA in terms of levels of significance:

- Major: A Major landscape or visual effect based on an evaluation of the susceptibility and value of the receptor, combined with the magnitude of change;
- Moderate: A Moderate landscape or visual effect based on an evaluation of the susceptibility and value of the receptor, combined with the magnitude of change;
- Minor: A Minor landscape or visual effect based on an evaluation of the susceptibility and value of the receptor, combined with the magnitude of change; and
- Negligible: A Negligible landscape or visual effect based on an evaluation of the susceptibility and value of the receptor, combined with the magnitude of change.

Judging Overall Significance

7.41. GLVIA3 Statement of Clarification 1/13 (2013) notes that:

"Concerning 'significance', it is for the assessor to define what the assessor considers significant…Depending on the means of judgment and terminology (which should be explicitly set out), effects of varying degrees of change (or levels of change), may be derived. The assessor should then establish (and it is for the assessor to decide and explain) the degree or level of change that is considered to be significant." (GLVIA3 Statement of Clarification, § 3.)

7.42. The assessment of the significance of the Proposed Development's landscape effects has been informed by GLVIA3, which states at paragraph 5.56 that:

7.43. *"There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and context and with the type of proposal. At opposite ends of the spectrum, it is reasonable to say that:*

- *Major loss or irreversible negative effects, over an extensive area, on elements and / or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;*
- *Reversible negative effects of short duration, over a restricted area, on elements and / or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant; and*
- *Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached"* (GLVIA3 paragraph 5.56.)

7.44. The assessment of the significance of the Proposed Development's visual effects has been informed by GLVIA3, which states at paragraph 5.56 that:

7.45. "T*here are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and context and with the type of proposal. In making a judgement about the significance of visual effects the following points should be noted:*

7.46. *Effects on people who are particularly sensitive to changes in views and visual amenity are more likely to be significant;*

7.47. *Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant;*

7.48. *Large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view.*" (GLVIA3 paragraph 6.44.)

<u>Preliminary Discussions of Potential Mitigation and Enhancement Measures</u>

7.49. Having assessed the magnitude of impacts against the identified receptors, the LVIA will consider whether any mitigation measures are necessary.

7.50. Where possible, mitigation measures will be embedded into the design to reduce the landscape and visual effects to an acceptable level. However, where this is not sufficient, further mitigation will be specified to reduce, remove, or compensate for any significant adverse effects identified.

7.51. The likely residual effects of the Proposed Development taking account of embedded and additional mitigation will be identified in the ES Chapter.

Cumulative Landscape and Visual Effects

7.52. Where applicable, the LVIA will have due regard to the potential for cumulative landscape and visual effects in line with the 'Information for inclusion in environmental statements' set out in Schedule 4 of the EIA Regulations.

7.53. For the cumulative assessment will consider any operational, consented or application stage schemes within 3 km of the Site. Ongoing cumulative research will be undertaken and a 'cumulative cut-off date' agreed prior to submission of the application to ensure the most up-to-date information available is included.

7.54. We welcome comments from the Council on any other cumulative schemes that they consider would be relevant for the cumulative assessment.

8. ARCHAEOLOGY AND CULTURAL HERITAGE CHAPTER

Introduction

8.1. This Scoping Chapter outlines the approach to be taken to the assessment of potentially significant effects to cultural heritage assets arising from the Proposed Development.

8.2. The Cultural Heritage chapter in the ES will consider built heritage and the archaeological resource, both designated and non-designated. The ES chapter will identify heritage assets with the potential to experience effects from the Proposed Development and will assess their heritage significance (including their sensitivity to change), the magnitude of the impact and conclude with the resultant residual effect. Mitigation will also be proposed where appropriate.

Relevant Policy and Guidance

8.3. Legislation relevant to the Cultural Heritage assessment for the Proposed Development is primarily the Planning (Listed Buildings and Conservation Areas) Act 1990.

8.4. Relevant heritage planning policies are as follows:

- NPPF (December 2024) – Section 16;
- NPS (2025) EN-1 – Section 5.9; and
- Planning for the Future: Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030 - Policy UC14: Heritage and CS15: Place-Making

8.5. Although the scheme is not a Nationally Significant Infrastructure Project the planning policies within the following documents are still relevant to Cultural Heritage:

- NPS (2025) EN-3; and
- NPS (2025) EN-5.

8.6. Guidance documents to be utilised for this assessment will be:

- Planning practice guidance – Historic environment. July 2019 (and later amends);
- Historic England, 2019., Historic England Advice Note 12: Statements of Heritage Significance: Analysis Significance in Heritage Assets;
- Historic England, 2017., Historic England Good Practice Advice in Planning - 3: The Setting of Heritage Assets 2nd Ed;
- Historic England, 2021., Historic England Advice Note - 15: Commercial Renewable Energy Development and the Historic Environment.
- Historic England, 2015., Historic England Good Practice Advice in Planning – 2: Managing Significance in Decision-Taking in the Historic Environment;

- DCCAS. 2023. Standards for Archaeological Work in County Durham and Darlington, June 2023;
- DCCAAS. 2022. Desk-based Assessment advice Note, March 2022;
- ClfA, 2020., Standard and guidance for historic environment desk-based assessment: and
- ClfA, 2025., Code of Conduct: professional ethics in archaeology.

Preliminary Assessment of Baseline Conditions

8.7. A brief review of the baseline heritage position of the Site and immediate surroundings is provided here. Best practice guidance does not suggest a specific radius for assessing the effects resulting from a Proposed Development on the historic environment, and therefore professional judgement has been used. For designated heritage assets (e.g. scheduled monuments, listed buildings, conservation areas, registered parks and gardens, registered battlefields and World Heritage Sites), a study area of 2km from the Site will be used. The SZTV will be utilised to identify assets beyond this boundary, which may be sensitive to change in their setting, to ensure there are no assets beyond this where views towards the Site contribute to their significance – thus a change would potentially cause an adverse effect.

8.8. For non-designated heritage assets (e.g. archaeological Sites and findspots, locally listed buildings, locally important parks and gardens or other historic landscapes), a study area of 1km from the Site boundary will also be used. It is considered, based on professional judgement, that this is an appropriate and proportionate scale of study area to establish the below-ground archaeological context of the Site in its surroundings

8.9. There are no designated assets within the Site boundary.

8.10. The following designated heritage assets are located within 2km of the Site:

- three Grade II* Listed Buildings (with two entries relating to the same Ravensworth Castle);
- 20 Grade II Listed Buildings;
- three Conservation Areas; and
- three Scheduled Monument.

Table 8.1 – Listed Buildings within the 2km study area.

List Entry	Name	Grade	Distance from Site
1025151 1025190	Ravensworth Castle	II*	*c.* 1.98km to the north of the substation development

1159269	Pele Tower on east return of Pockerley Farmhouse	II*	*c.* 1.95km to the south-west of the solar development
1260862	Beamish Hall	II*	*c.* 1.98km to the south-west of the solar development
1025150	Arch, Walls and Towers to west of Ravensworth Castle	II	*c.* 2km to the north of the substation development
1025188	South Lodge	II	*c.* 1.61km to the north of the substation development
1025189	Arch and Walls adjoining South Lodge	II	*c.* 1.61km to the north of the substation development
1025191	Well In Stable Yard of Ravensworth Castle	II	*c.* 1.98km to the north of the substation development
1185160	Stable Block and Gatehouses to East of Ravensworth Castle	II	*c.* 1.99km to the north of the substation development
1025152	East Farmhouse	II	*c.* 384m to the north of the solar development and *c.* 500m to the south of the substation development
1025153	Temple Meads	II	*c.* 724m to the north-east of the substation development
1025154	Church of St Andrew	II	*c.* 712m to the north-east of the solar development
1025155	Upper Forge Bridge	II	*c.* 1.51km to the south of the solar development
1120965	Winding Engine House and Boiler House at The Colliery	II	*c.* 1.95km to the south-west of the solar development
1120966	Pockerley Farmhouse	II	*c.* 1.62km to the south-west of the solar development
1120967	Ice-House, East of Eastwood (Part of Urpeth Hall)	II	*c.* 1.74km to the south of the solar development

1159287	Urpeth Hall, Eastwood and Westacre	II	*c.* 1.79km to the south of the solar development
1185135	Ravensworth Park Farmhouse	II	*c.* 1.15km to the north of the substation development
1240740	Sundial on lawn to East of Beamish Hall	II	*c.* 1.91km to the south-west of the solar development
1240808	Starling Bridge over Beamish Burn	II	*c.* 1.81km to the south-west of the solar development
1240810	Pillar Box approx. 87 metres east-south-east of Bandstand	II	*c.* 1.46km to the south-west of the solar development
1260855	Stables North of Beamish Hall	II	*c.* 1.95km to the south-west of the solar development
1311110	Bandstand in Town Area, opposite Ravensworth Terrace	II	*c.* 1.48km to the south-west of the solar development
1355108	"Kenmore The Old Vicarage"	II	*c.* 465m to the north-east of the substation development
1355109	Tomb of Robert Moscrop About 4 Metres South and 5 Metres East of West End of Church of St Andrew	II	*c.* 694m to the north-east of the substation development

Table 8.2 – Conservation Areas within the 2km study area.

Ref	Name	Status	Distance from Site
CA6	Ravensworth	Conservation Area	*c.* 925m to the north of the substation development
CA4	Lamesley	Conservation Area	*c.* 320m to the east of the substation development and *c.* 998m to the northeast of the solar development
3724	Beamish Burn	Conservation Area	*c.* 1.67km to the south-east of the solar development

Table 8.3 – Scheduled Monuments within the 2km study area.

List Entry	Name	Status	Distance from Site
1003723	Bowes Railway	Scheduled Monument	*c.* 1.1km to the north-east of the Site
1016975	Ravensworth Quadrangular Castle	Scheduled Monument	*c.* 1.97km to the north of the substation development
1015922	Site of Ravensworth Coalmill, 600m North East of Ravensworth Castle	Scheduled Monument	*c.* 1.96km to the north of the substation development

8.11. There are no Registered Park and Gardens or World Heritage Sites located within the 2km study area.

8.12. A preliminary assessment utilising the SZTV determined that only six designated receptors were located within theoretical visibility with the Proposed Development. The following designated heritage assets are located within 2km of the Site and SZTV for the Proposed Development:

Table 8.4 – Designated heritage assets within the 2km study area and SZTV.

List Entry / Ref	Name	Status
1003723	Bowes Railway	Scheduled Monument
CA4	Lamesley	Conservation Area
3724	Beamish Burn	Conservation Area
CA6	Ravensworth	Conservation Area
1355109	Tomb of Robert Moscrop about 4 metres South and 5 metres east of west end of Church of St Andrew	Grade II Listed Building

1120967	Ice-House, east of Eastwood (part of Urpeth Hall)	Grade II Listed Building

8.13. In terms of non-designated heritage assets and records, the Tyne and Wear Historic Environment Record (HER) was consulted on the 02/12/2024, and there are four records in the HER within the Site. These comprise a cropmark of a possible prehistoric enclosure (PRN 4844), and three extant 18th century boundary stones that demarcated different areas (PRN 5294), including Kibblesworth Common and Beamish East Moor. The two remaining records consist of documentary evidence for Kibblesworth Colliery opened in 1717 (PRN 3770), but the colliery depicted on the first edition OS map dates to 1842, while a former wagonway was also depicted first depicted on the first edition OS map but was no longer extant by 1898(PRN 3749).

Table 8.5 – HER records located within the Site.

PRN	Name	Significance
4844	Kibblesworth, cropmark	Low
3770	Kibblesworth Colliery	Low
3749	Team Way, Former Wagonway and Coal Pits in Robin's Wood	Low
5294	Kibblesworth Common, boundary stones	Low

8.14. In the 1km study area, 60 further records within the Tyne and Wear HER have been identified.

8.15. As stated above, one record in the HER within the Site consists of a cropmark of a possible enclosure that could date to the Iron Age / Late prehistoric period within the Site (PRN 4844). This is in west of the Site, while further cropmarks of possible enclosures have been identified on an aerial photograph, c. 47m to the northwest of the Site and c. 20m to the east of the Site (PRN 4615 and 4844). No further records have been identified within 1km study area that date to the prehistoric period, however as cropmarks of possible prehistoric activity have been identified within the Site. It is considered that there is a moderate potential for small scale settlement and / or agricultural activity within the Site.

8.16. There are no records in the HER within the Site or 1km study area that explicitly date to the Romano-British and Early medieval periods. Therefore, although this is not an indication of an absence of evidence, it is deemed that there is a low potential for Romano-British and Early medieval activity within the Site.

8.17. The origins of Kibblesworth village, c. 280m to the north of the solar development, lie within the medieval period (PRN 648). To the north of the medieval core of Kibblesworth, ridge and furrow cultivation has been recorded in the HER on an aerial photography from 1974 (PRN

4611), while documentary evidence indicate the present for a 14th century mill referred to as "Moore Milne", c. 900m northeast of the Site (PRN 666), which likely milled agricultural produce.

8.18. The remaining HER records within the 1 km study area comprise evidence for the medieval origins of the villages of Old Ravensworth village (PRN 171), c. 610m to the north-west of the Site, and Hedley village (PRN 142), c. 830m to the west of the Site. Similarly, around these former settlements evidence for medieval agricultural activity has been identified that comprise possible strip fields and open field system (PRN 643).

8.19. To the south-west and south further evidence for medieval agricultural activity has been recorded in the HER. These comprise common land at the Site Blackburn Fell, common land (PRN 977), c. 315m to the south-west of the Site.

8.20. The origins of Ravensworth Park (PRN 646), which is now a designated Conservation Area (Ref. 70), are similarly in the medieval period with a license to enclose granted in 1391 by Richard II to Sir Henry Fitzhugh. The current boundaries of the park estate are modern features but within its medieval extent it would have been composed of demesne parkland, meadows and pasture of the manor of Raueneshelme.

8.21. The Grade II Listed Pele Tower is believed to date to the 15th century (NHLE 1159269). The tower is a rare though altered example of a pele-tower in County Durham and appears to retain a largely original roof structure. The tower would have been built for a defensive function and consists of a two-storey pele-tower now on the eastern return of the later mid-18th Pockerley Farmhouse (NHLE 1120966). It could have been in a prominent position over Beamish Burn, but later 18th or 19th century agricultural outbuildings are located to its immediate north-east.

8.22. Due to the amount of agricultural activity recorded surrounding the Site, it is likely that it formed part of the agricultural hinterland to the surrounding medieval settlements. Therefore, it is considered that there is a low to moderate potential for medieval agricultural activity to be present within the Site, likely relating to medieval open field systems.

8.23. The non-designated Lamesley to Burnopfield section of Bowes Railways was constructed in 1842 to extend the line to Kibblesworth Colliery ran between the northern and southern portions of the Site (PRN 1008), with the Scheduled section of the railway recorded c. 1.1km to the north-east of the Site (NHLE 1003723). Further transport infrastructure is recorded by the HER, with a section of a former 'wagonway' annotated as 'old' on the first edition recorded running through the northern portion of the Site (PRN 3749). The first edition OS map depicts two former structures, annotated as 'Leaden Field', in this area of the Site with trackways leading to and from it. The wagonway may relate to these trackways, while the structures were no longer extant by 1898. Two further former wagonways are recorded in the 1km study with a section located c. 500m to the south-west of the Site (PRN 5949), and c. 980m west of the Site (PRN 5051)

8.24. The amount of transport infrastructure is indicative of the logistic requirements of six areas of mineral extraction and industry activity in the 1km study area, with Kibblesworth Colliery recorded by the HER within the centre-north of the Site (PRN 3770). A colliery opened in 1717, but the colliery depicted on the first edition OS map opened in 1842 and was in use until 1974. Beamish Hall and its associated colliery infrastructure (NHLE 1260862, 1120965, 1260855, and Ref. 3724), c. 1.7km south-west of the Site, are a well-preserved example of colliery activity from the region and is a Conservation Area.

8.25. The technological and agricultural innovations from the Post-medieval period onwards led to a population increase and the records in the HER within the 1km study area reflect these changes, with churches such as the Church of St Andrew being rebuilt (NHLE 1025154), while further churches, chapels and residential dwelling are attested in the surrounding settlements.

8.26. The largest number of records from the Post-medieval period consist of 11 extant and former farmsteads recorded in the HER within the 1km study area, while three Grade II Listed Farmhouses have been identified within the 2km study area. This indicates that although the surrounding landscape had been industrialised during the Post-medieval period onwards, agriculture was still an important part of the local economy, with historic maps demonstrating that Site largely remained agricultural apart for Kibblesworth Colliery (PRN 3770). There are three boundary stones recorded in the HER within the Site that demarcated common land before the land was enclosed in the 19th century (PRN 5294). Three managed woodlands are recorded to the south of Site that follow the course of Beamish Burn and its tributaries that also likely delineated and enclosed Kibblesworth Common.

8.27. The industrial character of the surrounding landscape continued into the Modern period, with continued activity at Beamish from the 20th century, with coal drift (PRN 5053) and tramway (5052) recorded in the HER, while a brick works at Kibblesworth is recorded in the HER immediately to the east of the Site (PRN 8594).

8.28. The remaining records from the Modern period consist of a rifle range depicted on the 1915 third edition OS map (PRN 5295), c. 490m to the south of the Site, and a bombing decoy (PRN 5517), c. 516m to the south-west of the Site.

8.29. There three records within the HER that are of an uncertain origin a series of earthworks were identified at Old Ravensworth (PRN 641) and Hedley Hall (PRN 642) that are likely relate to medieval or Post-medieval agricultural activity, while a mound at Hedley Hall is now consisted to be a natural feature but could be upcast (PRN 647).

Potential Effects (including identification of specific receptors)

8.30. It is considered that there would be no direct, physical effects upon any designated heritage asset arising from the proposed Scheme.

8.31. At this stage, it is considered that the Proposed Development has the potential to cause a significant effect in EIA terms upon Scheduled Monuments, Listed Buildings and Conservation Areas that have the potential to experience effects from the proposed Scheme due to changes within their setting:

8.32. The Site does not contain any Listed Buildings and is not located within a Conservation Area. Within a 2km study area of the Site, there are two Grade II* Listed Buildings, 15 Grade II Listed Buildings and three Conservation Areas. A preliminary assessment utilising the SZTV determined that only six designated receptors were located within theoretical visibility with the Proposed Development. These comprised the Scheduled Bowes Railway (NHLE 1003723), Lamesley Conservation Area (Ref. CA4), Beamish Burn Conservation Area (Ref. 3724), Ravensworth Conservation Area (Ref. CA6), the Grade II Listed Tomb of Robert Moscrop about 4 metres South and 5 metres east of west end of Church of St Andrew (NHLE 1355109), and Grade II Listed Ice-House, east of Eastwood (part of Urpeth Hall) (NHLE 1120967). It was considered that the effects on Beamish Burn and Ravensworth Conservation Areas would not be significant as only very small areas of much larger Conservation Area extents are located

within the SZTV. This indicates that only glimpses of the Proposed Development may be possible from these locations. Similarly, effects on the two Grade II Listed Building would not be significant as the Site does not contribute to their heritage significance through setting. Therefore, these designated heritage receptors will not be considered as part of the ES. However, although the point record for the Grade II Listed Church of St Andrew (NHLE 1025154) is no located within the SZTV, the SZTV does surround the church meaning that it may have the potential be sensitive to the proposals through change to their setting.

8.33. The Scheduled Bowes Railway recorded c. 1.1km to the north-east of the Site. The entire length of the Bowes Railway is not designated, with the non-designated Lamesley to Burnopfield section (PRN 1008) bisecting between the north corridor connection and southern solar development portions of the Site. This section is not scheduled and is not considered to be demonstrably of equivalent significance to the Scheduled Monument. Given this is part of the same feature, it is considered that it forms part of the setting of the Scheduled Monument which contributes to its heritage significance. As such, the change, the nature and extent of the change to the significance of the Scheduled Bowes Railway will be considered further as part of the ES Chapter.

8.34. The Grade II Listed East Farmhouse is located within Kibblesworth (NHLE 1025152), c. 384m to the north of the solar development and c. 500m to the south of the substation development. It is located within the SZTV for both development types visible, however satellite imagery suggest that the Listed Buildings is surrounded by woodland to the north and east, and residential developments to the south and west, meaning that the setting of the Grade II listed farmhouse has already be altered. Research has suggested that there appears to have been an historic association between the farmhouse and the Site, with them sharing the same previous owner. Therefore, the Grade II Listed East Farmhouse will be considered further as part of the ES Chapter – it is noted that any effect arising from this is unlikely to be significant in EIA terms.

8.35. Lamesley Conservation Area is located c. 320m to the east of the substation development and c. 998m to the northeast of the solar development (Ref. CA4). There are four Grade II Listed Buildings located within the Conservation Area. These consist of Temple Meads (NHLE 1025153), Church of St Andrew (NHLE 1025154), "Kenmore" / "The Old Vicarage" (NHLE 1355108), and Tomb of Robert Moscrop About 4 Metres South and 5 Metres East of West End of Church of St Andrew (NHLE 1355109). The Conservation Area focuses on hamlet of Lamesley that has an agricultural character. It lies on the flood plain of the River Team, with a section of the wide flat valley floor that is devoted to pasture located within the Conservation Area. Two areas of ridge and furrow cultivation are recorded in the centre-south of the Conservation Area and between the Conservation Area and the Site that represent a single HER record (HER 4929). Although, the substation development is not located within the Conservation Area the proposed field where it is located may contribute to the agricultural character surrounding the Conservation Area, with the Conservation Area and the Listed Buildings within its extent located within the SZTV for either the substation development or both developments visible. Therefore, Lamesley Conservation Area and the Grade II Listed Church of St Andrew within its extent will be considered further as part of the ES.

Table 8.6 – Designated heritage assets to be Scoped In for Assessment within the ES Chapter

List Entry	Name	Status
1003723	Bowes Railway	Scheduled Monument
1025152	East Farmhouse	Grade II Listed Building
1025154	Church of St Andrew	Grade II Listed Building
CA4	Lamesley	Conservation Area

8.36. Possible Iron Age Enclosure on Mitcheson's Gill is record online as being Locally Listed (PRN 17853) but is not present with the data provided by TWHER. However, possible earthwork features are visible on LIDAR located immediately north of the substation development and therefore it currently has the potential to be indirectly impacted by the Proposed Development through change in setting. The northernmost well-preserved earthwork of a partial rectangular enclosure located overlooking Mitchenson's Gill is within a dense woodland, while a second less defined earthwork similarly of part rectangular enclosure is located mid-slope with a treeline between the possible enclosure and the Site. The function of these enclosures is not fully understood but due to their location above Mitchenson Gill and mid-slope, visibility may contribute to their heritage significance. Both have theoretical visibility with the substation development and Possible Iron Age Enclosure on Mitcheson's Gill will be considered further as part of the ES.

Table 8.7 – Locally Listed assets to be considered further as part of the ES Chapter

Entry	Name	Status
17853	Possible Iron Age Enclosure on Mitcheson's Gill	Locally Listed

8.37. With regards to the other designated heritage assets within the 2km study area, the Site does not form any part of the setting that positively contributes to their heritage significance due to the nature of the assets and a lack of visual connections, spatial relationships and historic connections. Accordingly, the Proposed Development is not anticipated to result in a change that would impact upon the overall heritage significance of these assets. Therefore, these have not been identified as sensitive to the Proposed Development and will not be taken forward for any further assessment within the ES Chapter.

8.38. The Bowes Railway, Lamesley to Burnopfield section (PRN 1008) bisects between the north corridor connection and southern solar development portions of the Site. The entire length of the Bowes Railway is not designated, with the section to the north of the solar development recorded by the HER. This section is not scheduled and is not considered to be demonstrably of equivalent significance to the Scheduled Monument. As stated above given this is part of the same feature, it is considered that it forms part of the setting of the Scheduled Monument which contributes to its heritage significance. As such, the non-designated section of Bowes

Railway will be considered further as part of the changes to the nature and extent to the significance of the Scheduled Bowes Railway as part of the ES.

Table 8.8 – HER records to be considered further as part of the ES Chapter

HER Entry	Name	Status
1008	Bowes Railway, Lamesley to Burpoefield	HER record

8.39. There is potential for direct physical effects upon below-ground archaeological deposits. There are four records in the HER within the Site. These comprise a cropmark of a possible prehistoric enclosure (PRN 4844), and three extant 18th century boundary stones that demarcated Kibblesworth Common (PRN 5294). The two remaining records consist of documentary evidence for Kibblesworth Colliery opened in 1717 (PRN 3770), but the colliery depicted on the first edition OS map dates to 1842, while a former wagonway was also depicted first depicted on the first edition OS map but was no longer extant by 1898(PRN 3749). Therefore, the following HER records will be considered further as part of the ES Chapter.

Table 8.9 – HER records to be considered further as part of the ES Chapter.

PRN	Name	Significance
4844	Kibblesworth, cropmark	Low
3770	Kibblesworth Colliery	Low
3749	Team Way, Former Wagonway and Coal Pits in Robin's Wood	Low
5294	Kibblesworth Common, boundary stones	Low

8.40. The initial assessment considers that there is a moderate potential for unknown prehistoric, medieval, and Post medieval period archaeological remains to be located within the Site. Therefore, currently unknown, below ground prehistoric small-scale settlement / agricultural activity, medieval agricultural activity, and Post medieval agricultural and extraction activity will be further assessed as part of the ES Chapter.

- Unknown archaeological remains of prehistoric small-scale settlement / agricultural activity;
- Unknown archaeological remains of medieval agricultural activity; and
- Unknown archaeological remains of Post medieval agricultural and extraction activity.

Scope and Methodology of Assessment (including significance criteria)

Scope

8.41. Best practice guidance does not suggest a specific radius for assessing the effects resulting from a Proposed Development on the historic environment, and therefore professional judgement has been used. For designated heritage assets (e.g. scheduled monuments, listed buildings, conservation areas, registered parks and gardens, registered battlefields and World Heritage Sites), a study area of 2km from the Site will be used. The SZTV will be utilised to identify assets beyond this boundary, which may be sensitive to change in their setting, to ensure there are no assets beyond this where views towards the Site contribute to their significance – thus a change would potentially cause an adverse effect.

8.42. For non-designated heritage assets (e.g. archaeological sites and findspots, locally listed buildings, locally important parks and gardens or other historic landscapes), a study area of 1km from the Site boundary will also be used. It is considered, based on professional judgement, that this is an appropriate and proportionate scale of study area to establish the below-ground archaeological context of the Site in its surroundings.

Methodology

8.43. There is no specific heritage guidance or proscribed heritage methodology for undertaking a heritage assessment within an ES. Therefore, the proposed methodology has been developed using Historic England guidance and advice notes (listed above) and professional experience.

8.44. A baseline will be prepared which will identify the heritage resource within the study area identified above. Data will be gathered from a number of sources. The sources of data include:

- National Heritage List for England;
- Tyne and Wear Historic Environmental Records (HER);
- National Mapping Programme Data;
- Tyne and Wear Archives for documentary and cartographic resources;
- Historic England Archive, Swindon for aerial photographs;
- LiDAR; and
- Other sources identified during the preparation of the baseline assessment.

8.45. The baseline will consider the built heritage and historic landscape resource within the relevant study area. The baseline will identify and describe assets and their significance, including the contribution to significance made by their setting. This will help to identify which assets have the potential to experience likely significant effects resulting from the Proposed Development. There will be heritage assets which will clearly not experience any effect from the Proposed Development, either due to their function or location in an area with no visibility of the Site and with no historic association. These assets will be discussed in broader terms, grouped where appropriate and dismissed from further assessment within the baseline.

8.46. The baseline will be supplemented by an Site and study area walkover. The walkover will focus on visiting surrounding heritage assets identified in the initial baseline to assess their setting and relationships with surrounding assets.

8.47. A geophysical survey has been commissioned and is currently being undertaken to assess the below ground archaeological resource.

8.48. The following viewpoints will be included in the assessment that are representative of views towards the Site and the Proposed Development from surrounding visual receptors. Please see **Figure 7.1** in **Appendix 1** for a copy of the Screened Zone of Theoretical Visibility (SZTV).

3. Kibblesworth Bank/Bowes Railway Path: 423646, 556411

12. Tyne and Wear Heritage Trail/Bowes Railway Path: 424953, 556522

14. Lamesley Road, Lamesley: 425170, 558043

8.49. Throughout the preparation of the baseline, consultation will be undertaken with relevant stakeholders including Historic England, the Gateshead LPA Archaeology Officer, and the relevant Conservation Officer.

8.50. The ES chapter will assess the potential for the Proposed Development to cause significant effects upon the significance of the heritage resource, taking into account embedded mitigation. Should potentially significant adverse effects be identified, additional mitigation will be proposed seeking to reduce the significance of identified adverse effects.

8.51. When discussing heritage assets, the term 'significance' is used in the NPPF to describe the sum of the heritage interests that a heritage asset holds also adding that significance derives not only from a heritage asset's physical presence, but also from its setting) and that some assets have a level of significance that justifies official designation. The term 'significance' has a specific meaning within EIA and therefore to avoid confusion, when discussing heritage significance, this will be made clear and distinct from discussion of significance in EIA terms.

Value/Sensitivity of Receptor

8.52. The value / sensitivity of a heritage asset for the purposes of Environmental Impact Assessments is determined by professional judgement guided by statutory and non-statutory designations, national and local policies.

Table 8.10 – Criteria for Establishing Value/Sensitivity (Pegasus Group)

Value/sensitivity	Criteria
High	Remains of inscribed international importance, such as World Heritage Sites Grade I and II* Listed Buildings Grade I and II* Registered Parks and Gardens Scheduled Monuments Registered Battlefields

Value/sensitivity	Criteria
	Non-designated archaeological assets of demonstrable equivalence of scheduled monuments Non-designated buildings, monuments, Sites or landscape that can be shown to have a very important quality in their fabric or historical association
Moderate	Grade II Listed Buildings Conservation Areas Grade II Registered Parks and Gardens Assets of high archaeological resource value identified through consultation
Low	Non-designated buildings, monuments or Sites or landscapes of local importance and of modest quality Locally important historic or archaeological assets, assets with a local value for education or cultural appreciation and of medium archaeological value Locally Listed buildings identified on a local list Non-designated buildings, monuments, Sites or landscape that can be shown to have important qualities in their fabric or historical association Historic townscapes with historic integrity Parks and gardens of local interest
Not Significant	Assets identified as being of no historic, artistic, archaeological or architectural value Assets that are so badly damaged that too little remains to justify inclusion into a higher Grade Assets whose values are compromised by poor preservation or survival to justify inclusion in a higher category

Magnitude of Impact

8.53. Once a level of value / sensitivity has been assigned, the magnitude of impact as a result of the Proposed Development is assessed. Potential impacts are defined as a change resulting from the Proposed Development which affects the significance of a heritage asset. These impacts are considered in terms of being either direct, indirect or cumulative, from construction or operation and temporary, long-term or permanent. The assessment will include consideration of an asset's setting in terms of its contribution to the assets' significance.

8.54. The magnitude of an impact can be judged in a five-point scale. The impact score is arrived at without reference to the value / sensitivity of the asset and the impact is assessed without taking into account any subsequent mitigation proposals but does take into account embedded mitigation derived throughout the design process.

Table 8.11 – Criteria for Establishing Level of Impact (Pegasus Group)

Level of Impact	Description of Impact
High	Change such that the significance of the asset is totally altered or destroyed. Comprehensive change to setting affecting significance, resulting in substantial changes in our ability to understand and appreciate the resource and its historical setting
Medium	Change such that the significance of the asset is affected. Changes such that the setting is noticeable different, affecting significance resulting in moderate changes to significance and in our ability to understand and appreciate the resource
Low	Change such that the significance of the asset is slightly affected. Changes to the setting that have a slight impact on significance resulting in changes in our ability to understand and appreciate the resource
Minimal	Changes to the asset that hardly affect significance. Changes to the setting of an asset that have little effect on significance and no real change in our ability to understand and appreciate the resource
No change	The development results in no change or such a negligible level of change that it does not affect the significance of the asset. Changes to the setting do not affect the significance of the asset or our appreciation of it.

Residual Effect

The assessment of effects will be undertaken in two stages. The magnitude of impact is cross-referenced with the value of the asset to categorise the effect that is likely to result from the Proposed Development prior to additional mitigation measures but taking into account embedded mitigation. Significance of effect will be based on a combination of importance (in other disciplines sometimes referred to as sensitivity of the receptor) and magnitude of impact (incorporating contribution from setting where relevant) to establish the likely significance of effect. The significance of effect matrix is presented in **Table 8.12**.

8.55. Following this stage, further consideration of additional mitigation is carried out, and the mitigation is assessed as to whether this would reduce the significance of the effect. Once additional mitigation is applied, the asset is re-assessed, allowing the residual significance of effect to be determined.

Table 8.12 – Levels of Effect (Pegasus Group)

Value/sensitivity of asset	Magnitude of Impact				
	No Change	Minimal	Low	Medium	High
High	Neutral	Minor	Moderate	Major	Major
Moderate	Neutral	Minor	Minor to Moderate*	Moderate	Major
Low	Neutral	Neutral	Minor	Minor to Moderate*	Moderate
Not significant	Neutral	Neutral	Neutral	Neutral	Neutral

**professional judgement to be applied when assigning a level of effect.*

8.56. A level of professional judgement will be used throughout the EIA process to ensure that where a matrix-based system is employed, this accounts for professional judgement to ensure that a robust assessment of the level of effect to the significance (in EIA terms) of the heritage asset is reported within the ES chapter. In addition, a narrative conclusion will be set out which will discuss the level of harm (if any) the Proposed Development will have upon the significance of the heritage assets. The Proposed Development will be judged against the policies contained within the NPPF and relevant Local Plan policies and this requires an assessment of harm and a judgement of whether the Proposed Development results in no harm, less than substantial harm (and where within that scale of Less Than Significant Harm (LTSH) the harm would be), or substantial harm. For non-designated heritage assets, a level of harm will be given as appropriate to the assessment. Therefore, along with the EIA conclusions of level of residual effect, the level of harm, if any, will also be set out.

Preliminary Discussions of Potential Mitigation and Enhancement Measures

8.57. It is likely that additional mitigation measures may be required that may include a staged archaeological fieldwork approach post-determination to record archaeological deposits within the Site that could be affected by fixed infrastructure as part of the proposed Scheme. Archaeological mitigation will be put forward as appropriate to ensure that the archaeological resource within the Site is properly considered. The exact nature and scope of this will be determined in consultation with the LPA.

Cumulative Cultural Heritage Effects

8.58. Where applicable, Cultural Heritage assessment will have due regard to the potential for cumulative Cultural Heritage effects in line with the 'Information for inclusion in environmental statements' set out in Schedule 4 of the EIA Regulations.

8.59. The cumulative assessment will consider any consented or application stage solar schemes within 2 km of the Site. Ongoing cumulative research will be undertaken and a 'cumulative cut-off date' agreed prior to submission of the application to ensure the most up-to-date information available is included. We welcome comments from the Council on any other cumulative solar schemes that they consider would be relevant for the cumulative assessment

9. ECOLOGY & BIODIVERSITY CHAPTER

Introduction

9.1. The Ecology and Biodiversity chapter of the Environmental Statement (ES) will be prepared by BSG Ecology, and will consider the likely effects of the Proposed Development on relevant ecology features during construction and operational phases of the scheme. The ecological features considered include:

- Statutory and non-statutory Sites designated for biological / nature conservation interest at local, national and international levels;
- Habitats and species of principal importance; and
- Protected species.

9.2. This chapter will present the results of the desk-based and field surveys, confirm features to be scoped in or out of the assessment, evaluate ecological features and assess likely effects upon these features. It will also set out proportionate avoidance, mitigation, compensation and enhancement measures with reference to relevant nature conservation legislation and planning policies.

9.3. Baseline surveys were completed onsite throughout 2024 and 2025. Summary results are presented in this document and detailed fully in relevant species-specific reports at **Appendix 2.**

9.4. This chapter also presents reasoning for the proposed scoping out of any biodiversity receptors detailed in the ES chapter required for this development.

Relevant Legislation, Policy and Guidance

Relevant Legislation

9.5. Relevant legislation relating to habitats and species which has been considered in identifying potential ecological features for further consideration includes:

- National Planning Policy Framework 2024 (updated February 2025)[14]
- Environment Act 2021[15];
- Natural Environment and Rural Communities (NERC) Act 2006;

[14] Ministry of Housing Communities & Local Government (2024) National Planning Policy Framework. December 2024 (updated February 2025).Available online: https://www.gov.uk/government/publications/national-planning-policy-framework--2 (Accessed February 2026)

[15] Environment Act (2021) available online: https://www.legislation.gov.uk/ukpga/2021/30/contents (accessed February 2026.)

- The Conservation of Habitats and Species Regulations 2017 (as amended)[16];
- Wildlife and Countryside Act 1981 (as amended)[17];
- Protection of Badgers Act 1992 (as amended)[18]; and
- The Hedgerow Regulations 1997[19].

9.6. Additional detail regarding relevant legislation is provided in **Appendix 3**.

9.7. Relevant Local Plan Policy - Gateshead Council and Newcastle City Council Core Strategy and Urban Core Plan for Gateshead and Newcastle upon Tyne 2010-2030

9.8. CS18 Green Infrastructure and the Natural Environment

> *"A high quality and comprehensive framework of interconnected green infrastructure that offers ease of movement and an appealing natural environment for people and wildlife will be achieved by:*
>
> *1. Maintaining, protecting and enhancing the integrity, connectivity, multifunctionality and accessibility of the Strategic Green Infrastructure Network.*
>
> *2. Protection, enhancement and management of green infrastructure assets which include:*
>
> *i. Biodiversity and geodiversity assets, including designated Sites, designated wildlife corridors and priority habitats and species,*
>
> *ii. Distinctive landscape character, recognising the particular importance of our rivers and topography, and*
>
> *iii. Trees, woodland and hedgerows.*
>
> *3. Addressing gaps in the network and making improvements in Opportunity Areas.*
>
> *4. Improving and extending linkages to and within the Strategic Green Infrastructure Network.*
>
> *5. Protecting and enhancing open spaces, sport and recreational facilities in accordance with agreed standards in line with National Policy.*

[16] Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance (England). Available online: https://www.legislation.gov.uk/ukpga/2006/16/section/41 (accessed February 2026).
[17] Wildlife and Countryside Act 1981 (as amended). Available at https://www.legislation.gov.uk/ukpga/1981/69 (accessed February 2026).
[18] Protection of Badgers Act 1992. Available at https://www.legislation.gov.uk/ukpga/1992/51/contents (accessed February 2026).
[19] The Hedgerow Regulations 1997. Available at https://www.legislation.gov.uk/uksi/1997/1160/contents/made (accessed February 2026).

6. Improving access to, along and onto the River Tyne and tributaries, without adversely impacting on the local ecology or damaging the river banks."

9.9. MSGP37 Biodiversity and Geodiversity

"Where appropriate development proposals must demonstrate how they will:

i. avoid/minimise adverse impacts on biodiversity and geodiversity in accordance with the mitigation hierarchy; and

ii. provide net gains in biodiversity.

Where development which is likely to adversely affect biodiversity and/or geodiversity is to be approved, the Council will require planning conditions and/or obligations to secure the provision, maintenance and monitoring of appropriate mitigation, compensation and/or enhancement measures.

Proposals for development or land use that would adversely affect a Site of Special Scientific Interest, as shown on the Policies Map, either directly or indirectly, will only be permitted where the reasons for the development, including the lack of an alternative solution, clearly outweigh the nature conservation value of the Site and the national policy to safeguard the national network of such Sites.

Proposals for development or land use that would adversely affect a Local Wildlife Site or Local Geological Site, as shown on the Policies Map, either directly or indirectly, will only be permitted where:

i. the developer can demonstrate that there are no reasonable alternatives; and ii. the case for development clearly outweighs the need to safeguard the intrinsic value of the Site.

Proposals for development or land use that would adversely affect the ecological, recreational and/or educational value of a Local Nature Reserve will only be permitted where:

i. the developer can demonstrate that there are no reasonable alternatives; and ii. the case for development clearly outweighs the need to safeguard the ecological, recreational and/or educational value of the Site.

Development proposals that would have a significant adverse impact on the value and integrity of a Wildlife Corridor, as shown on the Policies Map, will only be permitted where suitable replacement land, or other mitigation, is provided to retain, and where possible enhance, the value and integrity of the corridor."

<u>Preliminary Baseline Conditions</u>

9.10. The Site covers an area of approximately 93 hectares (ha) of predominately arable land, located directly south, west and north of the village of Kibblesworth, Gateshead, approximately 1.3 km west of the A1 corridor.

9.11. Habitats within the Site comprise arable land with associated margins and boundary hedgerows, scrub and trees, with pockets of modified grassland dense scrub and woodland.

Notably Coltspool Burn flows in an easterly direction, dissecting the Site in two places in the northern half of the Site. Strandy Burn is located off Site, more than 10 m north of the northern boundary. Both Coltspool Burn and Strandy Burn are tributaries of the River Team (a statutory main river).

9.12. Habitats adjacent to the Site are dominated by arable and pastoral land, as well as pockets of woodland, semi-improved grassland and open mosaic habitat (OMH), and a network of hedgerows and riparian corridors.

9.13. The north and south-eastern extents of the Site are located within the designated Wildlife Corridor (Gateshead Local Policy 37). The Bowes Railway Line Local Wildlife Site (LWS) runs through the centre of the Site (Gateshead Local Plan 2010-2030)[20]. The Site is also located within the Impact Risk Zone (IRZ) for three Sites of Special Scientific Interest (SSSI) (MAGIC accessed June 2025).

Study Area

9.14. The extent of the ecological study area has been informed by published guidance, professional judgement and scoping responses regarding other solar projects.

9.15. A desk study was undertaken in 2025. Study areas and data sources used to inform this assessment are as follows:

- The Multi-Agency Geographic Information for the Countryside (MAGIC, Defra 2024) was consulted (last accessed 08 January 2026) for the presence of:
    - International statutory designated Sites within a 10 km search buffer of the Site;
    - National statutory designated Sites and their associated Impact Risk Zones (IRZ) within a 5 km search buffer of the Site; and
    - Priority habitats within a 2 km search buffer of the Site.
- Aerial photographs and the 1:25,000 OS map (Google Maps and OS Maps, last accessed 08 January 2026) of the Site and its surroundings were reviewed to assist in the characterisation of the habitats onsite.
- Environmental Information Records Centre North East (ERIC NE) was contacted in November 2024 to provide data to determine the presence of any protected plant species records and non-statutory Sites of conservation value (such as Local Wildlife Sites) within a 2 km search buffer of the Site. The data was provided by ERIC NE on 07 November 2024.

Statutory Designated Sites

9.16. Statutory designated Sites are mapped on **Figure 9.1**.

[20] Gateshead Council (2010) Core Strategy and Urban Core Plan for Gateshead and Newcastle 2010-2030. Available from: https://www.gateshead.gov.uk/article/3251/Core-Strategy-and-Urban-Core-Plan-for-Gateshead-and-Newcastle-2010-2030

9.17. No internationally designated Sites are present within 10 km of the Site.

9.18. Four nationally designated Sites were identified within 5 km of the Site, all of which are SSSIs of which the Site lies within their Impact Risk Zones (IRZ)[21]:

- Pockerly Farm Pond SSSI, approximately 0.8 km south-west of the Site;
- Ridley Gill SSSI, approximately 0.95 km east of the Site;
- Causey Bank Mires SSSI, approximately 1.8 km east of the Site; and
- Gibside SSSI, approximately 4 km north-west of the Site

9.19. Six locally designated (or equivalent) statutory Sites are present within 5 km of the Site.

- Tanfield Lea Marsh Local Nature Reserve (LNR), approximately 3.5 km south-west of the Site;
- Norwood Nature Park LNR, approximately 3.8 km north of the Site;
- Windy Nook Nature Park LNR, approximately 4.3 km north-east of the Site;
- South Stanley Woods LNR, approximately 4.4 km south-west of the Site;
- Harperley and Pea Woods LNR, approximately 4.6 km south-west of the Site; and
- Cong Burn Wood LNR, approximately 4.6 km of the Site.

Non-Statutory Designated Sites

9.20. 23 non-statutory designated Sites are located within 2 km of the Site. Of these 14 are primarily designated due to botanical interest, six for ornithological interest and three due to the presence of GCN. Non-statutory Sites are mapped on **Figure 9.2**.

9.21. One local wildlife Sites (LWS) is located partially onsite; Bowes Railway LWS. Three additional LWSs are located directly adjacent to the Site: Lamesley Meadows LWS, Bowes Valley Nature Reserve LWS and Hagg Wood/ Gill and Mitchesons's Gill LWS.

Wildlife Corridor

9.22. The Gateshead Wildlife Corridor intersects the north and the south-east of the Site (Gateshead Local Policy 37). The extent is mapped on **Figure 9.2**.

[21] Natural England (2019). 'Natural England's Impact Risk Zones for Sites of Special Scientific Interest. Version MAGIC v3.2'. Natural England. Accessed August 2025.

Habitats

9.23. A habitat report was produced for the Applicant by BSG (BSG 2025a)[22] (**Appendix 2**) and a summary of findings is provided below.

9.24. Habitats onsite, were categorised using UKhab classification (UKhab 2023) and comprise of:

- Native hedgerow;
- Native hedgerow with trees;
- Non-native and ornamental hedgerow;
- Cereal crops;
- Non-cereal crops;
- Arable, wild bird mix;
- Modified grassland;
- Other woodland, broadleaved;
- Individual trees;
- Bramble scrub;
- Mixed scrub;
- Bracken;
- Developed land; sealed surface;
- Ditches; and
- Other rivers and streams.

9.25. The habitats within the Site are primarily cropland bound by managed native species hedgerows or drainage ditches. The cropland comprises predominantly cereal crops with one non-cereal crop field. Several fields are sown annually with winter bird mix, as part of a Sustainable Farming Incentive (SFI) scheme, where margins are left fallow. The SFI scheme is a three-year agreement due to revert back to cereal farming in 2027 dependant on viability.

9.26. The Site contains a large network of native hedgerows, many of which contain semi-mature and mature trees. A total of nine additional scattered trees are present onsite and woodland pockets form the Bowes Railway Line LWS within the centre of the Site.

[22] BSG 2025a Coltsdene Solar, Habitat Report. July 2025.

9.27. There are areas of permanent grassland, typically forming arable field margins or road verges onsite, all of which are modified.

9.28. Coltspool Burn dissects the Site in two locations; at the north-eastern corner and the western extent. Whilst a ditch network is present throughout the Site, this was dry onsite on all visits (and is likely to be for the majority of the year).

9.29. Priority habitats onsite meeting definitions as listed on Section 41 of the NERC Act 2006 are limited to some hedgerows and arable field margins.

9.30. The type, extent and distribution of habitats within the Site were mapped during the habitat survey work and are shown in **Figure 9.3.**

Species of Principal Importance (SPI)

9.31. Desk study records have been received for protected and notable species. An initial review has been undertaken of this data to aid scoping. Full details will be provided within future application documents. Where applicable, ongoing survey results have also been utilised to aid scoping.

9.32. Badger

Badger walkovers of the Site were conducted in accordance with Harris et al,1989. The survey involved walking around the Site and, where possible, adjacent land within 30 m of the boundary searching for evidence of badgers (including setts, latrines, paths, snuffle holes, hairs and footprints).

Badger results are reported separately in a confidential report (BSG 2025b)[23]. In summary, no active setts are present onsite, although it does have suitability for foraging commuting and sett building.

9.33. Bats

There are records of various species of bat locally. The majority of the Site is open arable farmland and of limited value for bats. The woodlands, hedgerows, scrub and riparian corridors provide more suitable bat foraging and commuting habitat and there is habitat connectivity with suitable habitat within the surrounding landscape in all directions. It is likely that the Site is used by a range of common bat species for both foraging and commuting.

Bat activity surveys were undertaken with reference to industry bat survey guidance (Collins, 2023)[24] and based on a 'high' habitat suitability. It comprised of two survey methods:

[23] BSG 2025b Coltsdene Solar, Large Mammal Report. July 2025.

[24] Collins, J. (ed.) (2023) 'Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th Edition', Bat Conservation Trust, London

1. Night-time bat walkover surveys. One survey to be completed in spring (April / May), summer (June – August) and autumn (September / October) 2025 Three routes were sampled across representative habitats.

2. Remote bat detector surveys. Monthly surveys between April and October, deploying remote bat detectors for a period of at least five nights per month. Six recording locations were sampled across representative habitats.

A number of mature trees onsite and directly adjacent and the farm buildings offsite have potential to support roosting bats. No specific roost surveys are recommended currently as it is anticipated that none of the trees or buildings will be impacted by the development.

Full results are provided in the bat report (**Appendix 2**) (BSG 2025g)[25].

9.34. Breeding Birds

Six breeding bird surveys were undertaken during April, May, June and July 2025 respectively. The methodology used followed industry standard guidance available at the time (Bird Survey and Assessment Steering Group 2023)[26]. Breeding bird surveys were undertaken over a larger survey area than the Site itself to account for potential mitigation requirements.

A total of 52 species were recorded within the survey area, of which fourteen were Birds of Conservation Concern (BoCC) (Stanbury et al, 2021)[27] Red List species and sixteen were BoCC Amber List species. Of these, 31 species were considered to be confirmed breeding within the survey area (nine red-listed species and ten amber-listed species). Ground nesting birds confirmed to be breeding were limited to grey partridge *Perdix perdix*, lapwing *Vanellus vanellus* and skylark *Alauda arvensis*. Other species recorded as breeding were dependant on the network of hedgerows, mature trees, and areas of woodland on the peripheries of the survey area. Willow tit *Poecile palustris* was considered to have established a territory, a species of which is considered to be a scarce breeder in the Gateshead and regionally throughout Tyneside.

An incidental quail *Coturnix coturnix* observation was recorded on 13 June 2025. It was decided that dedicated surveys were required to establish whether this was a breeding attempt or a bird on passage. Industry standard guidance (Gilbert, et. al, 1998)[28] states that six surveys should be undertaken between mid-May and late July at roughly fortnightly intervals. As the quail was observed in June, the number of survey visits undertaken was reduced proportionate to the duration of the survey season remaining. During the additional survey effort, one quail was recorded singing offsite. Based on the

[25] BSG 2025g Coltsdene Solar, Bat Report, November 2025.

[26] Bird Survey & Assessment Steering Group. (2023). 'Bird Survey Guidelines for assessing ecological impacts, v.1.1.1'. Available at https://birdsurveyguidelines.org Accessed August 2025.

[27] Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.

[28] Gilbert, G., Gibbons, D.W., & Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England. Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). Raptors: a field guide to survey and monitoring (3rd Edition)

irregularity of the records in both timings and location it is considered that the individual recorded was either on passage through the area or had failed to find a suitable breeding Site and attract mates.

Full results are provided in the breeding bird report (**Appendix 2**) (BSG 2025c)[29].

9.35. Wintering Birds

Wintering bird survey methodology followed current industry standard guidance (Bird Survey & Assessment Steering Group, 2025)[30] which effectively combines the 'Common Bird Census' (CBC) and 'Winter Farmland Bird Survey' as devised by the BTO in reference to Bibby, *et.al.,* (2000)[31]. During the four survey visits, the 'look-see' methodology (Gilbert, *et.al.,* 1998)[Error! Bookmark not defined.] was undertaken, observing habitats along a pre-determined survey transect route and stopping at intervals, scanning the area for birds using close-focusing binoculars. Wintering bird surveys were undertaken over a larger survey area than the Site itself to account for potential mitigation requirements.

An overwintering assemblage of bird species typical for a large arable Site was recorded. A total of 39 bird species were recorded within the survey area; 24 of which (61%) are birds of moderate or of high conservation concern. Most species were dependent upon the hedgerows, scrub and pockets of woodland across the survey area with resident, red-listed birds present such as tree sparrow was present. Traditional farmland species such as grey partridge and skylark were observed foraging in winter stubble, but mostly in smaller flocks.

Full results are provided in the wintering bird report (**Appendix 2**) (BSG 2025d)[32].

9.36. Owls

Records of owl species returned included: short-eared owl *Asio flammeus*, long-eared owl *Asio otus*, barn owl *Tyoto alba*, little owl *Athene noctua* and tawny owl *Strix aluco*. Of these, only barn owl is listed as schedule 1 species in England. The Site presents suitable commuting and foraging opportunities for a variety of owl species.

In May-July 2025 surveys were undertaken to identify suitable owl nesting opportunities (with specific focus on barn owl) within trees onsite as well as trees and buildings directly adjacent. No onsite trees had suitability for nesting owls, however a farm building offsite was identified with potential and later in the season breeding barn owl were confirmed to be present. A long-eared owl nest was also identified 60 m off-Site.

Full results are provided in the breeding bird report (**Appendix 2**) (BSG 2025c)[Error! Bookmark not defined.].

[29] BSG 2025c Coltsdene Solar, Breeding Bird Report. July 2025.

[30] Bird Survey & Assessment Steering Group. (2023). 'Bird Survey Guidelines for assessing ecological impacts, v.1.1.1'. Available at https://birdsurveyguidelines.org Accessed August 2025.

[31] Bibby, C.J., Burgess, N.D., Hill, D.A. and Mustoe, S.H. (2000) Bird census techniques. Academic Press, London.

[32] BSG 2025d Coltsdene Solar, Wintering Bird Report. July 2025.

9.37. Great Crested Newt

The desk study returned records of great crested newt *Triturus cristatus* (GCN) within the search area. Although, none were located within 500 m of the Site.

A total of nine offsite ponds and one onsite ditch were assessed for their potential to support GCN. These were assessed and subject to the Habitat Suitability Assessment Index (HSI) scoring method (Oldham et al 2000)[33]. Environmental DNA (eDNA) surveys were completed in accordance with Natural England's approved method by a GCN licenced ecologist (Biggs et al 2014)[34].

No standing water suitable for GCN is present onsite. The watercourses are unsuitable for GCN due to factors including one or more of: the flow of the water, shallow water depth, limited presence of aquatic or marginal vegetation and presence of fish.

The onsite ditch (D1) and five of the offsite ponds (2, 3, 4, 7 and 8) were found to be dry prior to the completion of eDNA surveys. The remaining 3 ponds (1, 5 and 9) were subject to eDNA survey. Of these, two were located within 250 m of the Site (1 and 9), the third pond (5) was located outside 250 m but was included within the survey effort due to its proximity to other ponds and potential to form a meta-population. eDNA surveys were conducted in 2025, all ponds surveyed returned negative results. One suitable waterbody was not accessible for eDNA survey. All waterbodies are mapped in **Figure 9.4.**

Full results are provided in the GCN report (**Appendix 2**) (BSG 2025e)[35].

9.38. Water Vole

The desk study returned records of water vole *Arvicola amphibius* within the search area, although none were located within 1 km of the Site.

Water vole habitat suitability was assessed in accordance with Harris et al, (1989), with field surveys were undertaken in line with Dean et al (2021). Two water vole surveys have been undertaken of all waterbodies onsite and within 200 m. No signs of water vole have been recorded.

Full results are provided in the large mammal report (**Appendix 2**) (BSG 2025b)**Error! Bookmark not defined.**.

9.39. Otter

The desk study returned records of otter *Lutra lutra* within the search area, the closest of which was located 210 m north on Strandy Burn.

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[33] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10(4), 143-155.
[34] Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P., and Dunn F. (2014). 'Analytical and methodological development for improved surveillance of the Great Crested Newt'. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA. Freshwater Habitats Trust, Oxford.
[35] BSG 2025e Coltsdene Solar, GCN Report. June 2025.

The waterbodies onsite and directly adjacent, including Coltspool Burn and Strandy Burn have suitability for otter and are well connected to the wider landscape and River Teams. Suitable terrestrial otter habitat is also present onsite and directly adjacent, notably the woodland.

Two otter surveys have been undertaken of all waterbodies onsite and within 200 m. No signs of otter were recorded onsite, however, spraint was recorded approximately 100 m to the north-east within Lamesley Meadows LWS on Coltspool Burn. Full otter survey results, including habitat suitability, are detailed in the large mammal report (**Appendix 2**) (BSG 2025b)**Error! Bookmark not defined.**.

9.40. Reptiles

The desk study returned records of reptile species within the search area, notably that of grass snake *Natrix natrix* at Bowes Valley Nature Reserve LWS, 530 m east of the Site.

The arable fields onsite are of low suitability habitat for reptiles due to the limited vegetation cover and levels of disturbance from agricultural management. The field margins, ditches, hedgerows, riparian corridors, scrub and woodland edges are more suitable. These habitats have connectivity offsite, including to Bowes Valley Bature Reserve LWS to the east.

Reptile surveys were undertaken in 2025 in accordance with Sewell *et al* (2013)[36] and Gent and Gibson 2003)[37]. No reptiles were recorded onsite. Full details are provided in a standalone report (**Appendix 2**) (BSG 2025f)[38].

9.41. Other Species

Onsite habitats have some suitability for SPI such as brown hare *Lepus europaeus*, hedgehog *Erinaceus europaeus* and common toad *Bufo bufo*.

9.42. Survey Work

A summary of the survey effort is provided in **Table 9.1**.

[36] Sewell D., Griffiths R., Beebee T, Foster J and Wilkinson J. (2013). Survey protocols for the British herpetofauna.
[37] Gent T and Gibson S (2003). Herpetofauna Workers Manual. JNCC, Peterborough.
[38] BSG 2025f Coltsdene Solar, Reptile Report. June 2025.

Table 9.1: Summary of Ecological Surveys

Feature	Study Area	Methodology	Progress
Terrestrial habitats	The Site. Significant effects unlikely beyond this zone.	UK Habitat Classification Definitions (UKHab Ltd., 2023)[39]. Habitat types and conditions were recorded to enable completion of the Statutory Biodiversity Metric. Hedgerow Survey Handbook (Defra, 2007)[40] to assess hedgerow importance against the wildlife and landscape criteria as specified in The Hedgerows Regulations (1997)Error! Bookmark not defined.. An update habitat survey was undertaken in May 2025 to address the seasonal limitations of the habitat survey work completed January to March 2024. A search for invasive non-native species was also undertaken.	Complete
Aquatic habitats	The Site and watercourses with bank top within 10 m. Significant effects unlikely beyond this zone.	Condition assessments in line with the Statutory Biodiversity Metric User Guide (Defra, 2024a)[41] and its technical annex (Defra, 2024b)[42]. Watercourses that required 'river condition assessment' were subject to Modular River Physical (MoRPh) survey in accordance with Modular River Survey guidance (Modular River Survey, 2022)[43]. A search for invasive non-native species was also undertaken.	Complete
Breeding birds	The Site and 50 m buffer. Significant effects from construction phase disturbance are possible onsite and adjacent. Off-Site areas were surveyed from the Site boundary unless the land was within the same ownership as the on-Site areas.	A total of six survey visits were completed, one per month between March and July 2025, including at least one evening visit. Methods with reference to Gilbert *et al* (1998)Error! Bookmark not defined. and the Bird Survey & Assessment Steering Group (2023)Error! Bookmark not defined.. One passage survey utilising methodology described above was undertaken in March 2025.	Complete
Wintering birds	The Site and 50 m buffer. Significant effects from construction phase disturbance are possible onsite and adjacent. Off-Site areas were surveyed from the Site boundary unless the land was within the same ownership as the on-Site areas.	Four survey visits were undertaken following standard guidance (Bird Survey & Assessment Steering Group, 2023) Error! Bookmark not defined. which effectively combines the 'Common Bird Census' (CBC) and 'Winter Farmland Bird Survey' as devised by the BTO in reference to Bibby, et.al., (2000)Error! Bookmark not defined..	Complete

[39] UKhab (2023) UK Habitat Classification Version 2.0. Available online: https://www.ukhab.org. Accessed August 2025.
[40] Defra (2007). 'Hedgerow Survey Handbook. A standard procedure for local surveys in the UK'. Defra, London.
[41] Defra (2024a) 'Statutory Biodiversity Metric: User Guide'. Natural England.
[42] Defra (2024b) 'Statutory Biodiversity Metric- Technical Annex 1- Condition Assessment Sheets and Methodology'. Natural England.
[43] Modular River Survey (2022) 'The MoRPh Survey Technical reference Manual 2022 Version'. Updated by Angela Gurnell and Lucy Shuker.

Quail	The Site and immediate surrounding areas. Significant effects from construction phase disturbance is possible close to the Site. Off-Site areas were surveyed from the Site boundary unless the land was within the same ownership as the on-Site areas.	Two evening surveys were completed in July 2025. Supplemented with any additional records from other nocturnal surveys onsite. Methods with reference to Gilbert *et al* (1998) **Error! Bookmark not defined.**.	Complete
Barn owl	The Site and land within 50 m. Given the additional protection afforded to barn owl nest Sites, consideration of off-Site nesting locations would allow potential indirect impacts to be assessed / mitigated. Significant effects beyond this zone are unlikely.	Ground level inspection of all trees and buildings were undertaken within the proposed solar areas (i.e., areas impacted by the solar and associated infrastructure) for their suitability for nesting and roosting barn owl with reference to Shawyer (2012)[44]. Further surveys may be required in an offsite barn due to the confirmed presence of breeding barn owl.	Complete
Long-eared owl	The Site. Significant effects unlikely beyond this zone.	Due to the known presence of a long-eared owl nest offsite (60 m), onsite habitats were surveyed to ascertain their suitability for foraging and commuting long-eared owl. As the nest location was known, in line with Hardey et al (2013)[45], two surveys were considered sufficient, one in June and one in July (additional survey visits described in Hardey et al are required to locate the nest, as the location was already known the additional visits were not required).	Complete
Bat – activity	The Site. Significant effects unlikely beyond this zone.	Bat activity survey work was undertaken with reference to industry bat survey guidance (Collins, 2023)**Error! Bookmark not defined.** and based on a 'high' habitat suitability. It is comprised of two survey methods: 1) Night-time bat walkover survey. One survey to completed in spring (April / May), summer (June – August) and autumn (September / October) 2025. 2) Remote bat detector survey. Monthly surveys between April and October, deploying remote bat detectors for a period of at least five nights per month. Six recording locations were sampled across representative habitats.	Complete
Bats – roosts	The Site and immediately adjacent potential features. Consideration of off-Site roost locations would allow potential indirect impacts to be assessed / mitigated. Significant effects unlikely beyond this zone.	Ground level inspection of all trees and buildings within the Proposed Development areas (i.e., areas impacted by the solar and associated infrastructure) for their suitability for roosting bats. The survey work was undertaken with reference to industry bat survey guidance (Collins, 2023)**Error! Bookmark not defined.**. Dependant on the risk to the features as a result of the development, further surveys may be required to determine whether bat roosts are present or likely absent.	Complete
Great crested newt	The Site and up to 250 m off-Site (where access can be secured). Significant effects unlikely beyond this zone, as the majority of GCN	Waterbodies within the Site and up to 250 m off-Site were assessed for their suitability to support great crested newt using the Habitat Suitability Index (HSI) assessment (Oldham et al 2000)**Error! Bookmark not defined.**.	Complete

[44] Shawyer, C. R. (2011) 'Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting'. CIEEM, Winchester.

[45] Hardey, J., Crick, H.Q.P., Wernham, C.V., Riley, H., Etheridge, B. & Thompson, D.B.A. . 2013. Raptors: a field guide for surveys and monitoring [3rd Edition]. The Stationary Office, Edinburgh

	movements are within 250 m of a breeding ponds (Cresswell and Whitworth 2004).	Where suitable breeding waterbodies were identified during the HSI assessment, they were subject to an eDNA survey with reference to industry standard methodology (Biggs et al., 2014)[Error! Bookmark not defined.]. eDNA survey can be undertaken 15 April to 30 June.	
Badger	The Site and up to 30 m off-Site (where access can be secured). Significant effects unlikely beyond this zone.	A badger survey of the Site and a 30 m buffer was completed with reference to industry standard survey methodology such as Harris et al (1989)[46]. Badger survey can be undertaken throughout the year, although winter / early spring most effective to find sets when vegetation cover is lower. Badger field signs were collected during various other field surveys through 2025.	Complete
Water vole	The Site and up to 10 m off-Site (were considered to be appropriate and access can be secured).	Suitable habitat for water vole was surveyed for presence / likely absence of the species with reference to industry standard survey methodology such as Dean (2021)[47] and Strachan and Moorhouse (2006)[48]. Two separate survey visits were undertaken, one early season (May / June) and one later in the season (July / August / September); each survey visit was timed at least two months apart.	Complete
Otter	The Site and up to 200 m off-Site (were considered to be appropriate and access can be secured).	Suitable waterbodies and terrestrial habitat were surveyed with reference to industry standard survey methodology such as Chanin (2003)[49] and Natural England (2014). This work can be undertaken at any time of year.	Complete
Reptiles	The Site. Significant effects unlikely beyond this zone.	Where suitable habitat for reptiles could be impacted by the Proposed Development, presence / likely absence surveys were undertaken to inform mitigation. Surveys took place from April to October with reference to industry standard survey methodology such as Froglife (1999)[50]. April / May and September are typically optimal, although surveys can be undertaken between these periods during suitable weather conditions.	Complete

[46] Harris et al, (1989). 'Surveying Badgers'. The Mammal Society, London.
[47] Dean, M., (2021). 'Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys'. Pelagic Publishing.
[48] Strachan, R., and Moorhouse, T., (2006) 'Water vole conservation handbook 2nd Edition'. Wildlife Conservation Research Unit, Oxford.
[49] Chanin, P., (2003). 'Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No. 10', English Nature, Peterborough.
[50] Froglife, (1999). 'Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10'. Froglife, Halesworth

Potential Significant Effects

9.43. This section considers the potential effects of the Proposed Development on ecology and biodiversity features.

9.44. Ecological effects will be characterised with reference to CIEEM (2018)[51] guidelines.

Potential Impact Sources

9.45. The following types of impacts have been identified as potentially occurring during the various phases of the Proposed Development and which may result in significant effects.

- Construction
    - Habitat loss. Predominantly arable land which will be cleared for the footprint of the Proposed Development. Some minor loss of hedgerow and grassland field margins may occur.
    - Habitat gains. Conversion of areas of arable land underneath solar arrays to permanent grassland. Habitat creation or enhancement elsewhere such as woodland and hedgerows.
    - Temporary habitat loss. Arable farmland with crops to be cleared for construction processes (laydown areas and compounds) and hedgerow and field margins where underground cable routes cross.
    - Habitat damage / degradation. Direct and indirect damage to retained features such as trees, and hedgerows adjacent to works from soil compaction or damage from vehicles. In combination with habitat loss is likely to result in displacement of ground nesting farmland birds such as skylark.
    - Disturbance of species within the Site and in retained habitats adjacent to Site, from noise, light, vibration and the presence of vehicles and people.
    - Damage, destruction, killing or injuring of ecological features such as active bird nests.
    - Contamination / pollution. Potential ground, water and air pollution from spillages, dust and vehicles.
- Operational
    - Fragmentation of habitats and species populations. Indirect impacts of the Proposed Development causing barrier effects to certain species such as from security fencing or installation of built infrastructure.

[51] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 (September 2024). Chartered Institute of Ecology and Environmental Management, Winchester.

- Disturbance of species within the Site and in retained habitats adjacent to the Site, from noise, light and the presence of vehicles and people. This is likely to be infrequent and localised, and unlikely to be significant.

- Changes to foraging and commuting behaviours. Installation of solar arrays could result in avoidance / attraction to bats, birds, and invertebrate species.

- Beneficial effects from increased habitat diversity and reduction of pesticide application.

Consideration of Effects

9.46. The majority of the impacts will arise during the construction stage. During the operational phase limited impacts are envisaged, however these will be considered. Preliminary mitigation and enhancement measures are outlined at a later section of this chapter. All mitigation measures relevant to the construction period will be included in a Construction Environmental Management Plan (CEMP) or similar document, to be secured via a condition. Creation of new habitat areas and enhancement of retained areas will be included in a Habitat Management and Monitoring Plan (HMMP) or similar document, also to be secured via a condition.

9.47. Statutory Designated Sites

The Proposed Development is located within the IRZ of four SSSIs:

- Pockerly Farm Pond SSSI, located approximately 0.8 km south-west of the Site. Pockerly Farm Pond is designated due to its amphibian community, including GCN.

- Ridley Gill SSSI, approximately 0.95 km east of the Site. Designated for diverse ancient deciduous woodland stands and ground flora assemblages.

- Causey Bank Mires SSSI, approximately 1.8 km east of the Site. Designated due to the presence of rare plants in species-rich flushes of acidic and neutral grassland,

- Gibside SSSI, approximately 4 km north-west of the Site. Lowland mixed, broadleaved and yew woodland in an unfavourable recovering condition with GCN present.

The Proposed Development is identified as a classification which may cause risk:

- "All planning applications (except householder applications) where the Proposed Development is outside or extends outside existing settlements/urban areas and will increase lighting levels or affect trees/woodland, waterbodies, rural buildings/structures (manmade or natural) or linear landscape features such as hedgerows, streams and rivers through direct loss, fragmentation or change of use."

- "Infrastructure: Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads/car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals."

Due to the nature of the Proposed Development and the distance from suitable habitat within or adjacent to the Site, there is unlikely to be any direct or indirect impact to the SSSIs above. However, due to their location within the IRZ, the SSSIs are **scoped in** to this assessment

Other statutory designated Sites, including all LNRs, are sufficiently distant that no indirect impacts are anticipated. No internationally designated Sites are present within 10 km of the Site.

9.48. Non-Statutory Designated Sites

No direct impacts in terms of habitat loss are expected on any of the LWSs as these will be retained and buffered where these are located within, or adjacent to the development areas. Measures will be implemented during all development phases to prevent accidental damage such as by encroachment of vehicles, or accidental pollution from on Site works. LWSs will be identified and protected through semi-natural habitat buffers.

Long-term, it is likely that the changes in land management, and reduction of agricultural chemical use and run-off into watercourses and waterbodies will be of benefit to the LWSs. Enhancements to the non-statutory Sites within the Site will also be considered.

The four LWSs identified onsite and/or directly adjacent (Bowes Railway LWS, Lamesley Meadows LWS, Bowes Valley Nature Reserve LWS and Hagg Wood/ Gill and Mitchesons's Gill LWS) are **scoped in** to this assessment.

9.49. Wildlife Corridor

A wildlife corridor is present within the north and south-east of the Site (**Figure 9.2**).

A majority of the wildlife corridor will be retained and buffered where it is located within, or adjacent to the development areas. Measures will be implemented during all development phases to prevent accidental damage such as by encroachment of vehicles, or accidental pollution from on Site works. LWSs will be identified and protected through semi-natural habitat buffers.

The wildlife corridor will be directly impacted in the north of the Site, however, at this location, the corridor is composed of arable land. Mitigation through habitat creation is suggested to re-enforce the wildlife corridor surrounding the solar infrastructure, maintaining its integrity and creating landscape-scale improvements in habitat connectivity.

Long-term, it is likely that the changes in land management, and reduction of agricultural chemical use and run-off into watercourses and waterbodies will be of benefit to the wildlife corridor. Enhancement measures to the wildlife corridor within the Site will also be considered as part of the Proposed Development.

The wildlife corridor is **scoped in** to this assessment.

9.50. Habitats

Priority habitats onsite are limited to the hedgerows and specified arable field margins (defined in the habitat report BSG 2025a). The following protective buffers will be retained to priority habitats as well as woodland/ trees which do not fall under a priority habitat definition.

- 10 m hedgerow buffer.
- 15 m woodland buffer.
- 15 m tree buffer.
- 15 m river buffer (from bank top).

No hedgerow, tree or river losses are anticipated as part of the scheme. Access routes and cable corridors will utilise existing tracks and field access points. Where cabling is required to cross a watercourse, Horizontal Directional Drilling (HDD) will be utilised, maintaining the habitats protective buffer.

Habitat loss will be largely limited to arable fields which will be converted to grassland under the solar arrays. It is expected that there will be some permanent loss of arable and grassland habitat for the installation of solar array footings the substation and associated infrastructure. Arable and modified grassland pasture are of low intrinsic ecological value.

It is expected that improved management of retained habitats, such as hedgerows and woodland, can also be delivered and this would have biodiversity benefits. Opportunities for landscape-scale habitat connectivity improvements will be explored that could be delivered through structural habitat creation such as hedgerows, woodland and scrub.

Measures to enhance the overall biodiversity of the Site will be implemented. Biodiversity Net Gain will be addressed in a separate report.

Habitats are **scoped out** of this assessment as no losses of intrinsic biodiversity value or significant indirect impacts are anticipated.

9.51. Badger

The Proposed Development will retain the habitats of highest value as a foraging resource for badgers, such as woodland, field margins and hedgerows.

Suitable gaps to allow badgers to pass through security fencing will be incorporated. This will also benefit other mammal species such as brown hare. The habitat creation and enhancements will increase the amount of foraging habitat for badgers, including the extent of permanent grassland (a more favourable habitat for foraging than arable land).

Badger are **scoped out** of this assessment, however, due to the mobile nature of badger, measures will be included to protect individuals from harm.

9.52. Bats

No buildings with potential to support roosting bats are present onsite. All trees onsite, including those with potential to support roosting bats, will be retained and protected through semi-natural habitat buffers, a minimum of 10 m in size.

Habitats with suitability for foraging and commuting bats such as hedgerows, trees, woodland, watercourses and scrub will be retained to ensure continued habitat connectivity within the Proposed Development. Additional planting will also increase connectivity and strengthen existing ones.

The primary habitat change onsite will be the move from predominantly arable farmland to permanent grassland with less intensively managed hedgerows and more diverse margins, benefitting foraging bat species.

Where artificial lighting is required, further mitigation may be required such as the avoidance of light spill onto foraging / commuting habitats and potential roost locations.

Bats are **scoped in** to this assessment.

9.53. Breeding Birds

A large proportion of the breeding bird interest within the Proposed Development area at the Site is associated with hedgerow, scrub and woodland. These are to be retained, buffered and enhanced by providing higher value supporting habitat (such as grassland and scrub planting).

Ground nesting birds, notably skylark, are likely to be displaced from the proposed solar areas. Skylark are known to continue foraging in operational solar farms but is not considered to typically nest in the array areas (Fox 2022)[52]. Mitigation will be put in place to enhance the value of retained habitats or newly created habitats for the species; this maybe require the inclusion of an offsite mitigation area. Habitat creation to benefit nesting skylark may include tussocky grassland with a range of sward height and bare patches, and/or the introduction of more favourable agricultural land management to increase skylark nesting densities.

Further mitigation measures will be required to avoid impacts to active bird nests during construction if this occurs during the nesting bird season.

The magnitude of the effect upon displaced breeding ground nesting bird species will depend on the extent of the proposed solar areas within the Site resulting in the removal or change of use of suitable habitats; it is possible that adverse effects will not be fully mitigated, and an offsite mitigation area will be required.

Breeding birds are **scoped in** to this assessment.

9.54. Quail

[52] Fox (2022) Blithe Spirit: Are Skylarks Being Overlooked in Impact Assessment? CIEEM in practice, Issue 117, September 2022.

Based on the irregularity of the quail records, it is considered that the individuals recorded were either on passage through the area or had failed to find a suitable breeding Site and attract mates. Summer of 2025 was also unseasonably warm which may have impacted quail migratory patterns.

Quail are **scoped out** of this assessment.

9.55. Owls

The known barn owl nest location is offsite and will be retained. The habitat creation strategy onsite will increase grassland resources of benefit to foraging barn owls. Broader field margins and offset to solar panels will be prioritised in habitats connecting the known roost location. Barn owl are **scoped in** to this assessment.

The offsite long-eared owl nest will also be retained in line with the Proposed Development and a habitat buffer introduced between the woodland and the solar array. As long-eared owl was not recorded frequently utilising onsite habitat and foraging opportunities are likely to be enhanced, they are **scoped out** of this assessment.

9.56. Wintering Birds

The wintering bird species assemblage onsite is typical of the arable landscape in the region. Most species recorded are dependent on hedgerows, scrub and woodland throughout winter. These habitats will be retained and protected with habitat buffers throughout construction and operation of the Proposed Development.

Embedded mitigation measures will be of benefit to wintering birds (a majority of which are reliant on hedgerows which will not be directly impacted by the development). However, a shift from arable land to grassland is likely to alter the non-breeding bird assemblage onsite, as such wintering birds are **scoped in** to this assessment.

9.57. Great Crested Newt

Great crested newt was found to be absent from all surveyed waterbodies onsite and within 250 m. Although, pond 6, 240 m west of the Site, (identified in **Figure 9.4**) was not accessible for survey therefore presence cannot be confirmed at this location. Pond 6 is largely separated from the Site by arable and cow grazed fields, with limited connectivity provided by the Coltspool Burn riparian corridor. No European protected species licence applications or records of GCN were located within 500 m of the Site.

Arable fields form the majority of the Site; they are sub-optimal for great crested newt and other amphibian species. Suitable terrestrial habitats present at the Site include hedgerows, scrub, grassland (including arable field margins) and woodlands. Damage to small areas of suitable terrestrial habitat may occur during construction.

Aquatic habitat and adjacent terrestrial habitats onsite will be retained and incorporated into semi-natural habitat buffers that will protect them from direct or indirect impacts.

The habitat creation proposals for the Site will result in an overall increase in value of the terrestrial habitats for all amphibian species that may be present. Enhancement for amphibians such as log and brash piles and hibernacula will also be considered.

Great crested newt is **scoped out** of this assessment.

9.58. Water Vole

There is limited suitable water vole habitat present on Site and no water vole were recorded throughout the survey effort. Enhancement measures for other species along the riparian corridor and the cessation of arable land management and the leaching of fertilisers is likely to improve habitat suitability for water vole.

Water vole are **scoped out** of this assessment.

9.59. Otter

Whilst no signs of otter were recorded onsite, spraint was recorded 100 m upstream on Strandy Burn. It is therefore likely that otter infrequently utilise the watercourses onsite and directly adjacent and may, on occasion, commute over the Site. Suitable habitat for otter will be retained in line with the Proposed Development.

Suitable gaps to allow otter to pass through security fencing will be incorporated at locations connecting watercourses and suitable terrestrial habitat and overland travel routes.

Whilst the potential for habitat fragmentation should be avoided, otter are likely to benefit from the changes in land management, and reduction of agricultural chemical run-off into watercourses and waterbodies. Opportunities for further aquatic / wetland habitats suitable for riparian mammals will be considered as part of the overall Site design.

Otter is **scoped in** to this assessment.

9.60. Reptiles

No reptiles were recorded onsite, although suitable habitat is present. The majority of suitable reptile habitats will be retained, although damage to small areas of suitable habitat may occur during construction.

The proposed habitat enhancement and creation will benefit reptile species. Enhancement for reptiles, such as log and brash piles and hibernacula will also be considered.

Due to their likely absence and limited impacts to suitable habitats, reptiles are **scoped out** of this assessment.

9.61. Other SPI Species

SPI species considered in this chapter are limited to hedgehog, brown hare and common toad. Habitats likely to be of the highest value to SPI mammal species that may be present at the Site, such as hedgerows, grassland field margins, woodlands and scrub, will be retained and incorporated into semi-natural habitat buffers. Impacts to small areas of suitable habitat may occur during construction but are unlikely to lead to significant negative effects.

The creation of new grassland, hedgerows and other habitats would benefit a range of SPI species. Woody material felled during hedgerow section removal would be retained and used to create log / brash piles within habitat buffers; this will benefit to hedgehog and toad by providing further areas of shelter and potential use for hibernation.

Other SPI mammals are **scoped out** of this assessment.

9.62. **Table 9.2** summarises the features considered for further assessment within the ES.

Table 9.2: Summary of feature scoping

Feature	Scope In/ Out
National statutory designated Sites (SSSIs with IRZ onsite): Pockerly Farm Pond SSSI; Ridley Gill SSSI; Causey Bank Mires SSSI; and Gibside SSSI.	Scoped in (all other statutory designates Sites scoped out)
Non-statutory Sites onsite or adjacent:	Scoped in (all other non-statutory designates Sites scoped out)
Wildlife Corridor	Scoped in.
Habitats	Scoped out.
Badger	Scoped out.
Bats	Scoped in.
Breeding birds	Scoped in.
Wintering birds	Scoped in
Quail	Scoped out.
Barn owl	Scoped in.
Long-eared owl	Scoped out.
Great crested newt	Scoped out.
Water vole	Scope out.
Otter	Scoped in.
Reptiles	Scoped out.
Other SPI species	Scoped out.

9.63. Although a number of ecological features are scoped out for assessment, mitigation measures must be included within the Ecological Impact Assessment (EcIA)to ensure legislative compliance and adherence to best practice.

Scope and Methodology of Assessment

9.64. Evaluation and impact assessment will be undertaken with reference to relevant parts of the 2018 Guidelines for Ecological Impact Assessment in the United Kingdom developed by CIEEM (2018)[Error! Bookmark not defined.]. Although this is widely considered to represent the industry standard for ecological assessment, the guidance itself recognises that its approach to EcIA is not prescriptive; the aim of the document is therefore to "*…provide guidance to practitioners for refining their own methodologies*". The impact assessment will be supported by technical survey reports detailing the baseline survey work undertaken.

9.65. Cumulative assessment will consider guidance published by the Planning Inspectorate (Advice Note Seventeen: Cumulative effects assessment). Cumulative effects are most likely to occur to those receptors for which a significant residual effect is predicted, particularly if

the core range of these receptors includes other planned or consented development. The likelihood of this can be assessed through an analysis of the species assemblage that is present within the Site and by examining the likely range and territory size of those species. There is also potential for cumulative effects to occur if the conservation status of habitats is affected by the combined loss or harm to those habitats.

Preliminary Discussions of Potential Mitigation and Enhancement Measures.

9.66. Ecological input will be provided throughout the evolution of the Proposed Development by BSG Ecology. This input will be used to 'design-in' a range of primary ecological mitigation into the layout of the scheme.

9.67. This approach will look to avoid impacts wherever possible, or to mitigate impacts or finally to compensate for impacts that cannot be avoided or mitigated. This will demonstrate that the ecological mitigation hierarchy (CIEEM, 2018)Error! Bookmark not defined. has been employed in this scheme from inception. The biodiversity gain hierarchy and biodiversity net gain good practice principles (Baker et al, 2019)[53] will also be considered.

9.68. The following measures may be applicable during all development phases but are not limited to:

- Designed-in mitigation:
    - Retain and protect habitats and species that are of greater ecological value within appropriate buffers. The semi-natural buffers will ensure habitat connectivity is maintained throughout the Site and should avoid damage or disturbance to important ecological features. The width of the buffers would be informed by the final outcome of survey work and following consultation with stakeholders;
    - Installation of protective fencing around sensitive important ecological features;
    - Installation of mammal gaps in security fencing to allow access by badger, otter and other SPI mammals;
    - Standard measures for pollution prevention and dust management; and
    - Sensitive artificial lighting strategy in accordance with BCT guidance (BCT 2023)[54].
- Additional mitigation for residual effects, some of which would be informed by the outcome of survey work:
    - Appropriate timing of certain works to avoid impacts on features, for example avoiding vegetation clearance during the bird nesting period; and

[53] Baker, J., Hoskin, R., and Butterworth, T. (2019). 'Biodiversity net gain. Good practice principles for development.' CIRIA, London CIEEM (2024). Guidelines for ecological impact assessment in the UK and Ireland: terrestrial, freshwater and coastal.
[54] BCT (2023) GN08 Bats and Artificial Lighting. August 2023.

- Precautionary methods of working to avoid disturbance, damage, killing / injury, such as precautionary vegetation clearance methods.

- Enhancements measures:

  - Habitat creation that could include wildflower grassland, species-rich hedgerows, woodlands, trees, scrub and aquatic habitats;

  - Habitat improvements such as infilling existing gaps in hedgerows, removal of non-native invasive species, improvements to plant species diversity by additional planting / seeding in retained habitats;

  - Improved management of retained habitats, such as hedgerows, woodlands, aquatic habitats to improve their biodiversity value; and

  Installation of other wildlife features such as bat and bird boxes as well as hibernacula.

PART THREE – TOPICS TO BE 'SCOPED OUT'

10. TOPICS TO BE 'SCOPED-OUT' AND NOT INCLUDED WITHIN THE ENVIRONMENTAL STATEMENT

Introduction

10.1. This section of the Scoping Report sets out those environmental topics where it is considered that there would be no potential for significant effects to occur and where it is proposed that a Chapter will not be included within the Environmental Statement (ES).

10.2. It is important to note that not all environmental effects constitute a 'significant' effect, as defined by the EIA Regulations. The extent of the ES should be restricted to only those topics which are likely to result in such a significant effect.

10.3. In this case it is proposed to provide ES Chapters in relation to the following topics, each of which have been discussed in the preceding sections of this Report: Landscape and Visual; Cultural Heritage; and Ecology & Biodiversity. For all other environmental topics listed in Schedule 4 of the EIA Regulations, whilst it is acknowledged that some effects may occur, it is not considered that significant effects would arise.

10.4. **Table 10.1** lists the environmental topics specified within the EIA Regulations as to potentially be considered as part of the EIA process and confirms which topics are proposed to be scoped in and which are proposed to be scoped out.

Table 10.1 Environmental Topics as per EIA Regulations

EIA Topic	Scoped In / Out	Where Addressed within ES (if applicable)
Population	In	Within Landscape and Visual Chapter
Human Health	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects on human health. There are no emissions to air or contaminants to water from the operation of a solar energy development
Biodiversity (e.g. flora and fauna)	In	Within Ecology & Biodiversity Chapter
Land (e.g. land take)	Out	It is not considered that that the proposal would give rise to significant risk of ground contamination. A Phase 1 Geo-Environmental Assessment has been undertaken (**Appendix 4)** which has reviewed historical activities on the Site and undertaken a conceptual site model. This concludes that there are no high risk source-pathway-receptor linkages. Whilst it is recommended that intrusive ground investigation be undertaken to confirm any required mitigation, this is unlikely to require any complex and out of the ordinary measures given

		the Site's baseline. Furthermore, given the nature of the solar development, this is not considered to result in likely significant effects. The Site is located within a Minerals Safeguarding Area for Coal and parts of the Site fall into a Development High Risk Area as defined by the Coal Authority. A Coal Mining Risk Assessment (CMRA) has been produced for the wider area (**Appendix 5**), which has identified the coal mining legacy hazards within and close to the Site. These include mine entries, coal outcrops, probable/recorded past shallow coal mine workings, opencast activity and deep infilled ground across the majority of the Site, bar the area proposed for the siting of the substation. The majority of the development does not involve significant excavations, however the siting of other items of infrastructure (e.g. substation) has been considered to avoid any areas of higher risk. Given this, and the nature of the Proposed Development, it is not considered there is likely to be significant effects.
Soil	Out	According to Natural England's Agricultural Land Classification (ALC) mapping, the majority of the Site comprises Good to Moderate Grade 3 Agricultural Land Classification. Grade 3a land is considered to constitute best and most versatile (BMV) land and Grade 3b is not. Detailed mapping for the substation area and part of the connection corridor is available and indicates the majority of the area surveyed is made up of Grade 3b (moderate quality) agricultural land (see para 3.12). A detailed grading of the rest of the Site will be established through an ALC Report, submitted with the future planning application, to establish the grading of soils within the Site. It will also identify whether there are other grades outside of 3 are present on Site. The creation of hardstanding and foundations will be required for the installation of infrastructure such as the substation and internal accesses to the solar arrays. The intention is however to retain the vast majority of the solar array area for grazing, thereby keeping the land available for agricultural use. Any hardstanding required for the solar arrays and substation will be removed on decommissioning and reinstated to the original use. Laying of the underground cable will have short term temporary effects on use of agricultural land, however soils will be stored appropriately and reinstated during construction. Therefore there will be no operational effect on agricultural land in relation to the electricity cable, with the implementation of appropriate construction practices. Where loss of agricultural land is unavoidable, the ALC report will inform the design and positioning of areas of hardstanding and foundations to avoid, as far as possible, the siting of these on BMV land. Taking the above into account, the loss of the land associated with the Proposed Development is not considered to be a significant loss of good quality agricultural land, and it is considered that Agricultural Land can be scoped out of the ES.

		If deemed applicable, top soils can be preserved and re-used, and this will be outlined in a CEMP to be secured via a condition.
Water	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to the water environment. The development (when operational) would have no emissions to air or water, and there are no main watercourses within the Site. The Site is located entirely within Flood Zone 1; an area identified as being at lowest risk of flooding from rivers and the sea. Based on this it is not considered there would be any potential for significant effects to arise in relation to flood risk or drainage matters that would warrant the inclusion of an ES Chapter. Appropriate information regarding flood management would nonetheless be provided as part of the planning application submission, to include a Flood Risk Assessment and Surface Water Drainage Strategy. The Environment Agency Surface Water Map identifies some small areas at low, medium, and high risk of surface water flooding on the Site. Where possible, all infrastructure (substation and inverters) will be located outside of these areas.
Air	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to air quality. Solar energy schemes do not give rise to any emissions to the air in their operation, with any construction phase vehicular emissions able to be controlled through best practice construction methods.
Noise and Vibration	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to noise and vibration. Solar energy schemes do not generate appreciable noise in their operation, with any construction phase noise and vibration effects controlled through best practice construction methods. A noise assessment for both the construction and operational phases of the development will be produced and submitted alongside the ES as part of the Planning Application.
Climate	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to climate change. Collectively, solar energy schemes do contribute positively as a response to climate change, but a scheme of this size would not bring about a significant beneficial effect in its own right.
Material Assets	Out	Noting the existing agricultural use of the Site, it is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to material assets. A Construction Resource Management Plan (also known as a Site Waste Management Plan) will be produced as part of the CEMP, to be secured via a condition.

Cultural Heritage	In	Within Cultural Heritage Chapter
Landscape	In	Within Landscape and Visual Chapter
Interrelationship between above factors	In	Within each topic chapter, where applicable.
The vulnerability of the Proposed Development to major accidents or disasters	Out	It is not considered that a solar energy development of this nature would have the potential to bring about any significant effects in relation to the risk of major accidents or disasters. Schemes of this type and nature operate successfully throughout the UK with a long history of safe practice through their construction process and during operation.

10.5. Further discussion regarding why certain topics are proposed to be scoped out is set out below. These include matters relating to the following:

- *Transport & Access*
- *Glint and Glare*
- *Arboriculture*

Transport & Access

10.6. It is estimated that there will only be a minimal increase in vehicle movements on the local highway network during the construction period, and it is not anticipated that the increase will be classed as significant. Furthermore, any planning application would be supported by an outline Construction Traffic Management Plan (CTMP).

10.7. Traffic movements and transport implications arising from the operational phase of the development will be minimal.

10.8. The forecast construction and operation traffic associated with the Site will be obtained from the Applicant. This will include information on the construction programme, forecast traffic (deliveries and workforce trips) and vehicle mix (including whether there will be any Abnormal Indivisible Loads (AIL)). This information will then be provided in the Scoping Note and analysed in the forthcoming CTMP.

10.9. The transport team is in the process of producing a Transport Scoping Note, for submission to National Highways and Gateshead Council Highways Authority for their consideration. This will detail the proposed approach to the CTMP.

Vehicular Access Locations

10.10. Of the nine existing accesses under initial consideration, four have been selected as preferred at the following locations (illustrated in **Plate 10.1**):

- The Crescent;
- Kibblesworth Grange (two points of access, north and south); and
- Kibblesworth Bank (West).

10.11. These accesses will be utilised during the construction phase of the development. Following construction, access to the Solar Farm Site will be limited to infrequent operational and maintenance visits. The Site accesses used in the construction phase will be retained for the operational period. Small vans will typically make these trips.

10.12. A forthcoming CTMP will include preliminary design drawings at each of the preferred Site accesses which will include the geometry, visibility splays and a swept-path analysis drawing of the most onerous vehicle anticipated to use the access. Visibility splays will be informed by ATC surveys proposed near the Site accesses.

10.13. Construction traffic routeing will be detailed in the Traffic Scoping Note for the LPA's review and approval.

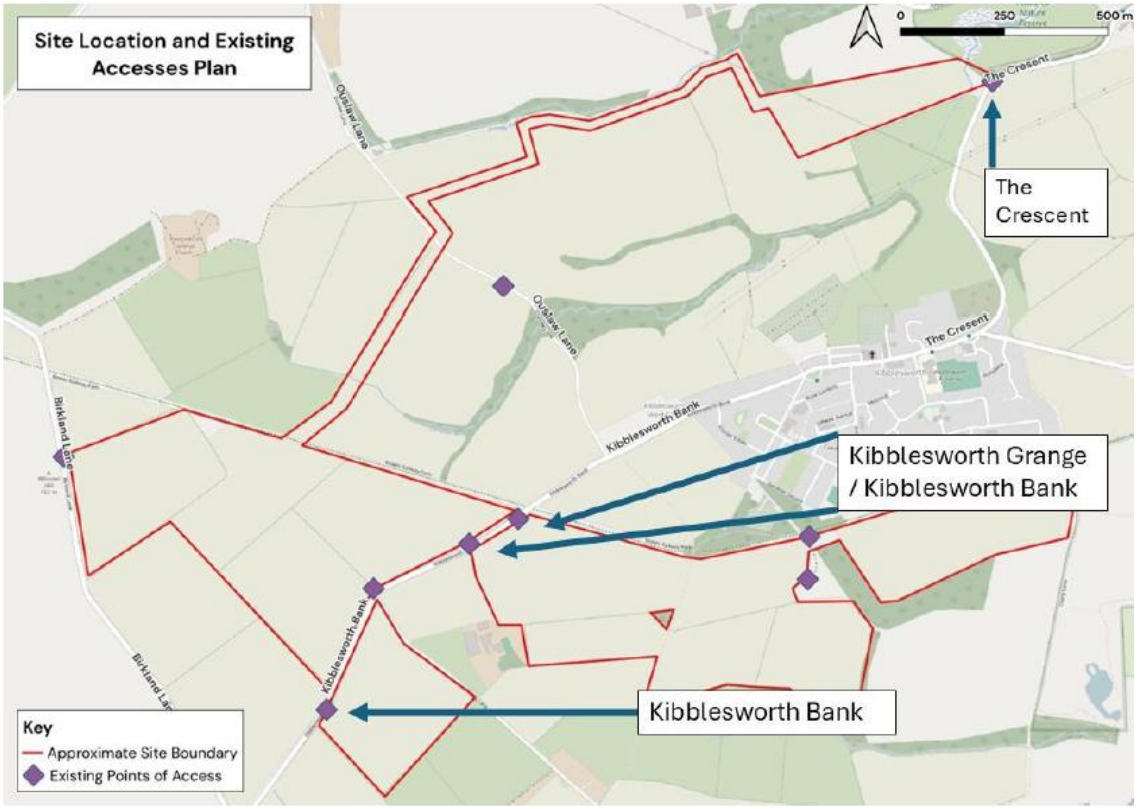

Plate 10.1: Locations of Preferred Access Options

Glint and Glare

10.14. The potential for effects from Glint and Glare will be considered as part of the application, with a Glint and Glare assessment included as part of the planning application submission. It is not however considered that there would be the potential for any significant effects to arise in relation to Glint and Glare matters that would warrant the inclusion of an ES Chapter.

Arboriculture

10.15. The potential for effects on trees will be considered as part of the application, with an arboricultural impact assessment report included as part of the planning application submission. It is not however considered that there would be the potential for any significant

effects to arise in relation to trees that would warrant the inclusion of an ES Chapter as the design process for the Site will seek to avoid the loss of any trees.

Appendices

Appendix 1 – Figures

Figure 1.1 – Site Location Plan

Figure 3.1 - Indicative Parameters Plan

Figure 7.1 – Screened Zone of Theoretical visibility and Proposed Assessment Viewpoints

Figure 8.1 – Designated Heritage Assets

Figure 9.1 – Statutory Sites within 5km

Figure 9.2 – Non-statutory Sites within 2km

Figure 9.3- Habitat Survey Results

Figure 9.4 – Offsite Ponds and eDNA results

Appendix 2 – Habitat and Species Reports

Appendix 3 – Summaries of Relevant National Policy, Legislation and Other Instruments in relation to Ecological assessment

Appendix 4 – Geo-Environmental Assessment

Appendix 5 – Coal Mining Risk Assessment

Town & Country Planning Act 1990 (as amended)
Planning and Compulsory Purchase Act 2004

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