

# **Project Name: Alleston Solar Farm, Pembrokeshire**

## **Report Title: Environmental Statement Non-Technical Summary**

**Reference Number: 4.3**

**October 2024**





# Alleston Solar Farm, Pembrokeshire

## Environmental Impact Assessment Non-Technical Summary

On behalf of **Alleston Clean Energy Limited**

Project Ref: 333100998 | Rev: 01 | Date: October 2024

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## Document Control Sheet

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<b>For and on behalf of Stantec UK Limited</b>					

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# 1 Introduction

## 1.1 Overview

- 1.1.1 This Environmental Statement (ES) has been prepared on behalf of Alleston Clean Energy Limited (the Applicant) to accompany a Development of National Significance (DNS)<sup>1</sup> application for a ground mounted photovoltaic (PV) solar farm together with associated equipment, infrastructure and ancillary works (the Development) on Land at Alleston Farm, Lower Lamphey Road, Lamphey, Pembrokeshire (the Site, see Figure 1.1).
- 1.1.2 The Site extends to approximately 96 hectares (ha) and is located within the administrative boundary of Pembrokeshire County Council (PCC).

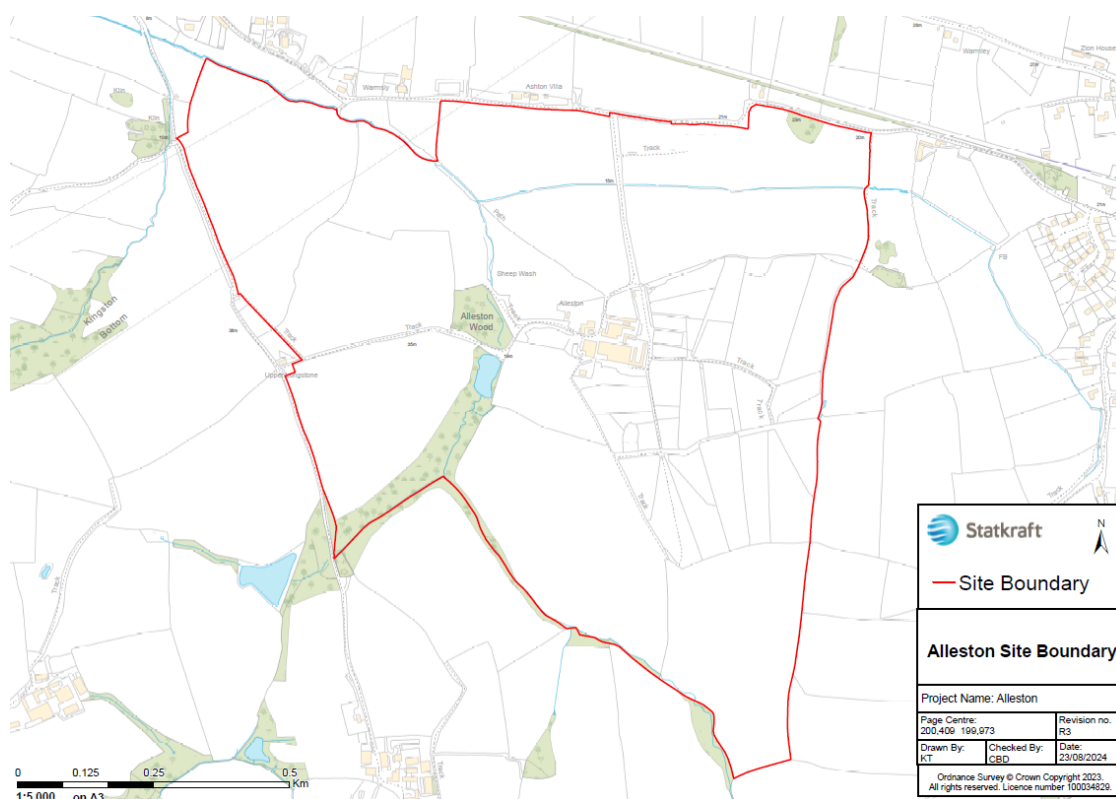


Figure 1.1 Extract of the Site Boundary Plan (in full at the end of this NTS)

## 1.2 Environmental Statement Availability

- 1.2.1 The planning application can be viewed, and comments made, via Planning and Environment Decision Wales (PEDW) website:

<https://planningcasework.service.gov.wales/dnsapplications>

- 1.2.2 Comments can also be forwarded to the following address:

<sup>1</sup> A DNS is a type of planning application for a large infrastructure project in Wales.

Planning and Environment Decisions Wales  
Crown Buildings  
Cathays Park  
Cardiff, CF10 3NQ

Tel: 0300 0604400

- 1.2.3 Copies of the Environmental Statement (ES) can be purchased from the Environmental Planning Team at Stantec:

Environmental Planning Team  
1<sup>st</sup> Floor  
Vision Court  
Caxton Place  
Pentwyn  
Cardiff  
CF23 8HA

Tel: 029 20 765649

Email: [IEPenquiries@stantec.com](mailto:IEPenquiries@stantec.com)

- 1.2.4 The ES may be purchased as a whole document or in separate volumes, the costs for which are as follows:

- NTS - £15
- Volume 1: ES Main Text and Figures - £250
- Volume 2: ES Appendices - £450; and
- Full copy (Volumes 1 and 2 with NTS) of the ES on a data stick - £15

## 2 Environmental Impact Assessment Methodology

### 2.1 Overview

- 2.1.1 Environmental Impact Assessment (EIA) is a procedure used to identify and assess the likely significant effects of a proposed development on the environment. The results are written into an ES which is submitted with a planning application. The ES provides the local planning authority (in this case Pembrokeshire County Council) with sufficient information about the potential beneficial and adverse environmental effects of the Development before a decision is made about the planning application. Effects may arise during the construction, operational or decommissioning phases of the Development.
- 2.1.2 The ES has been prepared in accordance with national legislation (the EIA Regulations) and reference has also been made to currently available good practice guidance on EIA.

### 2.2 Scoping

- 2.2.1 Scoping involves focusing the content of an ES on issues of significance. It is an important tool for identifying the likely significant effects of a proposed development and ensures that appropriate mitigation is considered where necessary. An EIA Scoping Report and request for a Scoping Opinion was submitted to PEDW on 8<sup>th</sup> November 2023.
- 2.2.2 PEDW provided its opinion on the content and methodology for the ES in a Scoping Direction published on 13<sup>th</sup> March 2024. In addition to agreement to the overall approach, PEDW requested that Human Health, Climate Change and External Lighting be scoped into the ES but not as standalone technical chapters. As such, technical note on human health and a carbon assessment have been produced and appended to the ES, and lighting is addressed in Chapter 9 Biodiversity of the ES. In response to PEDW's comments an outline Construction Environmental Management Plan (oCEMP) and outline Decommissioning Environmental Management Plan (oDEMP) form technical appendices to the ES. The remaining comments from PEDW have been addressed throughout the ES.

### 2.3 EIA Methodology

- 2.3.1 The EIA Regulations state that an ES should identify, describe and assess the likely significant effects of a development on the environment. The significance of each environmental effect identified is generally determined by two factors:
- The sensitivity, importance or value of the environment (such as people or wildlife); and
  - The actual change taking place to the environment (i.e., the size or severity of change taking place).
- 2.3.2 Most environmental disciplines classify effects as negligible, adverse, or beneficial where effects are minor, moderate or major. Some disciplines use bespoke criteria based on published guidance. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within the each of the respective ES chapters. The majority of assessments involved consultations with statutory and non-statutory bodies, desk-based research, site inspections and surveys, impact prediction and mitigation.
- 2.3.3 Environmental effects have been evaluated with reference to definitive standards and legislation, where available. Where it has not been possible to quantify effects, a qualitative



assessment has been carried out, based on available knowledge and professional judgement. Where uncertainty exists, this has been noted and considered in the applicable chapter.

- 2.3.4 The ES includes a description of the current environmental conditions known as the baseline conditions, against which the likely significant environmental effects of the Development have been assessed. The ES also looks at the future baseline and how, in the absence of the Development, the Site may change.

## 2.4 Cumulative Effects

- 2.4.1 An EIA must assess the potentially significant effects that may arise cumulatively (when the Development is combined with) other nearby permitted development. The EIA Regulations state that ‘*existing and/or approved*’ developments should be considered. The schemes identified in Table 2.1 have been identified that could have the potential to lead to likely significant cumulative effects on the environment. The locations of the schemes are shown on Figure 2.1.

**Table 2.1: Existing or Approved Cumulative Schemes**

Planning application Reference	Description	Status	Distance
Land East of Mylett's Hill, Golden Hill, Pembroke, Pembrokeshire Application  Reference: 14/0129/PA	New solar park and associated works	Operational	1.6km north
Land at West Farm, Coheston, Pembroke Dock, Pembrokeshire  Reference: 12/0050/PA	Construction of a solar photovoltaic park with attendant infrastructure	Operational	3.5km north

## 3 Site and Development Description

### 3.1 Site Context

- 3.1.1 The Site is located on land at Alleston Farm, Lower Lamphey Road, Lamphey, Pembrokeshire (see Figure 1.1) and is bound to the north by Lower Lamphey Road and agricultural fields, and to the east by further fields. Watery Lane forms the western and south-western boundaries of the Site. The southern boundary follows an existing area of woodland in a south-easterly direction, through which a watercourse runs. In addition, there are a small number of residential properties located adjacent to the north and west of the Site boundary.
- 3.1.2 Residential dwellings within Pembroke town lie 190m north-west of the Site whilst the village of Lamphey is located 370m to the north-east of the Site.
- 3.1.3 Land use in the surrounding area of the Site is predominantly agricultural, with scattered farmhouses as well as residential developments associated with Pembroke and Lamphey. The West Wales Line railway line, which connects Pembroke and Lamphey, runs approximately 40m north of the Site. Pembroke train station is 680m north-west of the Site and Lamphey train station is located 415m east of the Site. Lower Lamphey Road also provides connections between Pembroke and Lamphey, with onward vehicular access to the A477 beyond Lamphey via The Ridgeway and Stephens Green Way.

### 3.2 Site Description

- 3.2.1 The Site encompasses approximately 96 hectares (ha) and comprises of several agricultural fields separated by rows of mature hedgerows. A Field Numbering Plan (Figure 3.1) identifies the 14 fields within the Site. Alleston Farmhouse, a Grade II Listed building, together with its associated buildings is located within the centre of the Site and is accessed from the north along Lower Lamphey Road and the west along Watery Lane, both unnamed tracks. Within the eastern region of the Site are a collection of fields used for equestrian activities. Whilst an area of mature trees and vegetation is located within the south-western region of the Site and run into the central region of the Site, this collection of trees is known as Alleston Wood and is classified as Ancient Woodland.
- 3.2.2 In terms of topography, the Site slopes downwards from highpoints in south and west (approximately 55m Above Ordnance Datum) towards the north and east. There are two unnamed watercourses located in the north of the Site, as well as a watercourse running alongside the southwestern boundary.
- 3.2.3 There are two Public Right of Ways (PRoW) which cross and meet in the centre of the Site. The first PRoW (SP32/52) runs to the western boundary of the Site and is accessible via Watery Lane. This PRoW connects to a bridleway (SP32/68) which borders the west of the Site and runs in a north-south direction, on Watery Lane. The second PRoW (SP32/51) runs in a north-south direction across the northern and southern area of the Site. This PRoW is proposed to be diverted to the southwestern edge of the farm's boundary via a Secondary Consent submitted alongside the main application.

### 3.3 The Development

- 3.3.1 A Development of National Significance (DNS) application is proposed for the construction, temporary operation, and decommissioning of approximately 30MW solar farm and associated

equipment such as inverters, transformer stations, substation, fencing, CCTV, weather monitoring stations and cabling. The solar farm will connect to the grid via a 132kV overhead wooden pole, located within the site. The Development will have an operational lifespan of 40 years from the date of first export of electricity, after which it will be decommissioned.

3.3.2 In summary, planning consent is being sought for the following description of Development:

“Ground mounted photovoltaic solar farm together with associated equipment, infrastructure and ancillary works.”

3.3.3 The Site Layout Plan is shown at Figure 3.3 below.

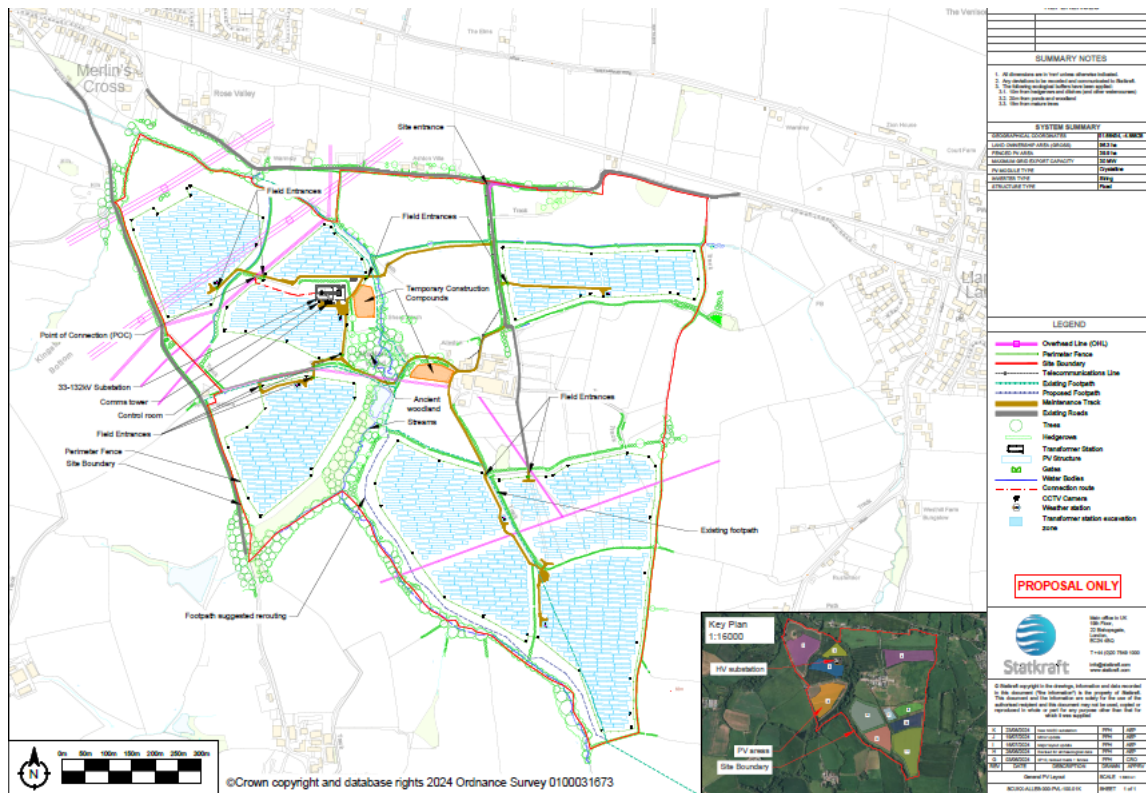


Figure 3.3 Site Layout Plan (in full at the end of this NTS)

## 4 Alternatives

### 4.1 Overview

4.1.1 Under the EIA Regulations, an ES is required to provide a description of the reasonable alternatives studied by the Applicant and the reasons for the choices made including a comparison of environmental effects. The main alternatives to a development typically comprise:

- The 'Do Nothing' alternative, where the Development is not progressed;
- Consideration of Alternative Locations or Uses; and
- Consideration of Alternative Designs.

### 4.2 The 'Do Nothing' Alternative and Alternative Uses

4.2.1 The 'Do Nothing' alternative means leaving the Site in its current use as agricultural land. The generation of solar energy is one of the key elements towards Wales and PCC achieving their respective 'net zero' goals. If the Development were not to come forward and the Site were to remain in its current agricultural use, the opportunity to provide renewable energy infrastructure with a potential generating capacity of 30 MWac would not be recognised. The Applicant's aim is to create a Development which contributes to the national and local shift towards renewable energy and therefore, the 'do nothing' alternative was not considered by the Applicant.

### 4.3 Consideration of Alternative Locations

4.3.1 The Development must be located near to an existing grid connection to ensure that the electricity generated can be exported to the grid. The Applicant has an agreement with National Grid to connect into the existing 132 kV network. Owing to the Applicant having a viable point of connection which can facilitate the Development and enable the project to energise in July 2027, no other uses were considered for the Development.

4.3.2 An Alternative Site Assessment has been undertaken and submitted in support of the planning application which assesses alternative locations studied by the Applicant and how the Site was selected with regard to a number of different planning policy, environmental and technical criteria including:

- The availability of utilities and viability of a grid connection;
- Proximity to local population;
- Topography;
- Field size;
- Access to Site for Construction;
- Lower grade agricultural land;
- Flood Risk; and
- Commercial Agreement with the Landowner.

## 4.4 Environmental Considerations

4.4.1 The main reasons and environmental considerations for the Site being selected compared to the alternatives include:

- The Site is suitable distanced from the villages of Pemroke and Lamphey, meaning no noise or glint and glare impacts are anticipated;
- There is no visual impact anticipated to the Pembrokeshire Coast National Park;
- The Site has adequate access, minimising transport and biodiversity impacts. There will be no removal of trees and hedgerows which will limit effects to species and habitats; and
- There is low flood risk on Site, ensuring impacts to flood risk and water quality are reduced.

## 4.5 Design Evolution

4.5.1 The design of the Development has been shaped through consultation with statutory bodies as well as through the EIA Scoping process and public consultation. Environmental considerations during the design evolution include amendments to:

- Minimise use of BMV land;
- Introduce buffers to mitigate noise and visual impacts to properties;
- Re-routing of a PRoW, providing enhancements to the PRoW and allowing the public to avoid walking through the Development;
- Repositioning of fence lines to reduce the disturbance of hedgerows and trees while maximising the renewable energy generation from the Development.
- Removal of panels near to the Grade II listed Alleston and provision of orchard planting to enhance the setting of the heritage asset and benefit biodiversity; and
- Re-positioning of panels, roads and cables to avoid disruption to archaeological features, hedgerows and trees.

## 5 Construction Methodology and Phasing

### 5.1 Overview

- 5.1.1 Planning for construction is broad at this stage and may be subject to modification.
- 5.1.2 The assessment of construction phase environmental effects is based on reasonable assumptions and experience and allows assessment of realistic “worst case” construction phase effects.
- 5.1.3 A detailed Construction Environmental Management Plan (CEMP)<sup>2</sup> and Decommissioning Environmental Management Plan (DEMP)<sup>3</sup> will be secured and implemented before construction works begin. An outline (oCEMP) and outline DEMP (oDEMP) have been prepared and submitted as part of this planning application.

### 5.2 Anticipated Programme

- 5.2.1 The construction phase is anticipated to commence in 2027, based on anticipated timescales for a planning decision being made. The construction phase is anticipated to take approximately 9 months. The operational period is anticipated to be 40 years.

### 5.3 Construction Methodology

- 5.3.1 Construction will comprise five key stages:
- Site preparation;
  - Construction of the substation;
  - Solar array installation;
  - Associated infrastructure installation; and
  - Completion works.

### 5.4 Construction Phase Vehicle Movements

- 5.4.1 Construction vehicle movements will be managed to minimise the impact on the local road network. The construction of the Development will generate approximately 98 vehicle movements per day at the peak of construction, 48 of which are two-way HGV movements. The vehicle movements during the decommissioning phase are expected to be similar to the construction phase.
- 5.4.2 Construction activities and deliveries will be carried out within the standards hours of work (see below). Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).

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<sup>2</sup> A Construction Environmental Management Plan (CEMP) outlines how a construction project will avoid, minimise or mitigate effects on the environment and the surrounding area.

<sup>3</sup> A Decommissioning Environmental Management Plan (DEMP) describes how the decommissioning phase of the project will avoid, minimise or mitigate effects on the environment and the surrounding area.

## 5.5 Environmental Management

- 5.5.1 The construction phase will be carried out in accordance with a detailed CEMP, which will be agreed with PCC and relevant statutory bodies and secured by an appropriately worded planning condition.
- 5.5.2 Working hours on the Site will be agreed with PCC through the CEMP, however, it is likely that the standard hours of work will be adhered to. These are:
- Monday to Friday, 7am to 7pm with noisy activities limited to 8am to 6pm;
  - Saturday, 8am to 1pm; and
  - Sunday and Bank Holidays, no noisy activities on-Site.

## 5.6 Decommissioning methodology

- 5.6.1 A DEMP will be secured with PCC and implemented to ensure that decommissioning is undertaken in line with prevailing good practice at the time. This will include similar issues to the CEMP and cover issues such as transportation methods, pollution prevention and noise management.

## 6 Historic Environment

### 6.1 Overview

6.1.1 The ES has assessed the likely significant effects of the Development with respect to archaeological remains, built heritage and historic landscape.

### 6.2 Baseline

6.2.1 There are no world heritage sites, registered battlefields or protected wreck sites within the 3km study area and therefore they have been scoped out of the assessment.

6.2.2 Those heritage assets which were found to be potentially susceptible to harm as a result of changes to their setting from the Development comprise:

- Alleston, Grade II listed building within the Site, and its associated farmstead complex;
- Kingston Farm and the associated scheduled Medieval Building at Kingston Farm and Grade II\* listed Outbuilding Range at Kingston Farm to SE of Old Farmhouse, circa 560m south-west of the Site;
- Lamphey Conservation Area (including eight Grade II listed buildings), immediately west and north of the Site;
- The Grade I listed and scheduled Bishop's Palace, Lamphey circa 580m north of the Site;
- The Grade II\* listed Lamphey Court, circa 820m north of the Site; and
- The Grade II\* Lamphey Bishop's Palace and Lamphey Court registered historic park and garden circa 200m north of the Site.

6.2.3 Of the above, only Alleston Farm and its surrounding assets have been identified as susceptible to effects as a result of the Development and assessed within the ES chapter.

6.2.4 Additionally, the Site includes hedgerows of late medieval / post-medieval origin, identified from historic mapping. Given that these boundaries are more than 30 years old and mark a boundary that existed before 1850 they are likely to be considered 'important' under the Hedgerow Regulations (1997)<sup>i</sup>.

6.2.5 As part of the assessment, a geophysical survey<sup>4</sup> was carried out across the Site and detected a range of anomalies of archaeological and possible archaeological origin, some of which were then subject to archaeological fieldwork (investigation through trenching).

### 6.3 Construction Effects

6.3.1 The assessment finds that much of the below ground potential archaeological interest has been disturbed by ploughing and is not of national significance. The construction phase of the Development may cause further disturbance to the potential archaeological remains, however any effects will be mitigated through avoidance of intrusive works in the areas of highest

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<sup>4</sup> A Geophysical Survey is a method of investigating below the ground.



archaeological interest and the construction methodology is minimally intrusive. As such, the residual construction phase effect on archaeology is slight adverse which is not significant.

- 6.3.2 There may be construction phase effects on the setting of the Grade II listed 'Alleston' associated with increased noise and movement of construction vehicles. This is assessed to have a residual slight adverse effect which is not significant.
- 6.3.3 The chapter also identifies slight adverse effects following the removal of parts of historic hedgerows to facilitate access to and across the Site. This effect is not considered significant.

## **6.4 Operational Effects**

- 6.4.1 No further impacts are anticipated in relation to archaeology during the operation phase of the Development given that any intrusive works will take place during the construction phase and maintenance vehicles will utilise those access tracks established during construction, which are sited away from key areas of known and potential archaeology. In summary, the significance of effect for archaeology during the operational phase will be neutral.
- 6.4.2 Effects associated with changes to the setting of the Grade II listed Alleston house and its associated ancillary buildings and structures associated with the insertion of solar panels within the Site are assessed to be neutral. There may be some minor adverse effects for the duration of the Development, however these are balanced out by minor beneficial effects through the includes enhancement of the setting of the Grade II listed Alleston by design through orchard planting.
- 6.4.3 There will be no changes to the historic hedgerow during operation as such there are no changes to impacts upon the historic landscape during the occupational phase of the Development. The field enclosure pattern will remain largely preserved and legible, and the former arable use of the Site will also remain legible. The agricultural character of the Site can be fully restored following the removal of the panels. As such, the significance of effect will be neutral.

## **6.5 Decommissioning Effects**

- 6.5.1 On the basis that the area affected by decommissioning works is the same as construction, there are no significant effects anticipated on archaeology and heritage.

## **6.6 Cumulative Effects**

- 6.6.1 No cumulative effects have been identified in relation to heritage assets.

## 7 Landscape and Visual Effects

### 7.1 Overview

7.1.1 The ES has assessed the likely significant effects of the Development with respect to Landscape and Visual Effects. In Environmental Impact Assessment the term landscape applies to an area of land judged as an environmental asset. Effects on views are considered to be distinct from landscape effects and are reported separately in an ES.

### 7.2 Baseline

7.2.1 The Site contains 14 agricultural fields with a mix of grassland and arable land. Within the eastern portion of the Site is a collection of fields dedicated to equestrian activities. The fields are separated by hedgerows which are a part of an extensive network of hedgerows and woodland blocks. A wider network of woodland extends to the southwest of the site and connects to the ancient woodland<sup>5</sup> Alleston Wood within the centre of the Site. There are a number of unnamed streams which cross the Site and align with Alleston Wood and the boundary of hedgerows.

7.2.2 The Site has two hills separated by a shallow valley with streams and Alleston Wood. The Site has long views across the landscape to the north from the more elevated parts of the Site. Land is flatter to the north of the Site.

7.2.3 There are multiple landscape designations within proximity to the Site including Pembrokeshire Coast National Park 300m to the east and Lamphey Conservation Area 500m to the east.

7.2.4 Multiple PRow cross the Site including one that runs in a north-south direction through the northern area of the Site (SP32/51/1). This connects to a footpath (SP32/52/1) that runs to the western boundary of the Site. This PRow connects to a bridleway (SP32/68) that borders the west of the Site and runs in a north south direction. An additional PRow (SP32/51/2) is located within the southern extent of the Site and connects Alleston Farm within the centre of the Site.

7.2.5 Visual receptors include users of the PRow and residential properties on Upper Longstone and Lower Lamphey Road.

### 7.3 Construction Effects

7.3.1 As a result of the construction activities associated with the Development there will be a direct change in land use of the Site, although the general the existing grassland and vegetation will remain. Construction activities will introduce movement and activities associated with vehicles, machinery and stockpiling of materials as construction activity progresses across the Site over the construction period of approximately 9 months.

7.3.2 Mitigation to reduce the adverse effects of construction will be included in a CEMP, including the controlling of lighting, location of compounds and stockpiles away from higher sensitivity receptors, and limiting movement of material between stockpiles.

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<sup>5</sup> Ancient woodlands area areas of woodland which have existed since 1600 AD. These areas are views as necessary and irreplaceable due to the value of the ecosystem ancient woodland's hold.

- 7.3.3 A residual moderate adverse effect is predicted for the Site Character and Immediate Context and Fields, which are considered significant effects.
- 7.3.4 Of the 26 representative viewpoints that have been assessed, significant visual effects are anticipated for the following visual receptors:
- Users of PRow 32/51/1, PRow 32/51/2 and PRow 32/52 are likely to experience a Moderate Adverse significance of effect; and
  - Residents of Lower Lamphey Road and Residents of Upper Longstone are likely to experience a Moderate Adverse significance of effect.
- 7.3.5 The significant visual effects identified during construction are unlikely to change as a result of mitigation measures.

## 7.4 Operational Effects

- 7.4.1 The completion of the Development will result in a change in land use within eight of the Site's fourteen fields (approximately 40ha of the 96ha). At first, this will have a moderate adverse effect. However, the Development is considered to be temporary and reversible due to the lifespan of the Development (40 years). A Landscape Strategy has been prepared that incorporates landscape and ecological mitigation and enhancement measures into the Development. This includes planting of 25,000 sqm of new woodland and 1.44km of hedgerow and will lead to Moderate Beneficial residual effects on the Site Character over time.
- 7.4.2 Additionally, as the planting becomes established and is maintained the following significant residual landscape and visual residual effects are likely to occur:
- A Moderate Adverse residual effect on Fields;
  - A Moderate Beneficial residual effect on Trees and Woodland; and
  - A Moderate Beneficial residual effect on Hedgerows;
- 7.4.3 Any likely significant visual effects on users of PRowWs are reduced to non-significant levels following the implementation of mitigation described above.
- 7.4.4 The operational phase has the potential to cause a moderate adverse effect on the Site and immediate context due to the introduction of temporary structures changing the land use of the fields. A Landscape Strategy will be implemented that incorporates measures to retain, reinforce, and replace landscape features. Measures such as improving grassland will lead to a residual minor adverse on the Site and its immediate context, which is an insignificant effect.
- 7.4.5 There will be a residual effect of moderate adverse on fields, which is significant. This will occur as the fields will experience a change in land use.
- 7.4.6 There will be a moderate beneficial significant effect on trees and woodland. Approximately 2.5ha of native woodland planting is proposed which will enhance landscape character and provide visual screening. There will be approximately an additional 725sqm of orchard planting which will further contribute to the beneficial significant effect by providing biodiversity benefits. Similarly, there will be a residual effect of moderate beneficial on hedgerows, which is significant. The existing hedgerows on Site will be retained and enhanced, as well as the planting of approximately 1.44km of hedgerow to ensure the field boundaries within the Site are strong.

7.4.7 Although there will be an increase of planting to screen views of the Development, there will still be a residual effect of moderate adverse on users of PRow 32/51/1, 32/51/2 and 32/52/1. These PRow run within the Site and therefore will be significantly affected as the landscape the footpaths crossed is changing from arable land and grassland to the Development.

## **7.5 Decommissioning Effects**

7.5.1 Overall, decommissioning landscape effects are likely to be the same or less than the construction effects. Mitigation measures for decommissioning will include the protection of existing vegetation and the use of existing entrances, tracks and access points for access wherever practicable.

## **7.6 Cumulative Effects**

7.6.1 No likely significant cumulative effects on the landscape and views have been identified.

## 8 Agricultural Land

### 8.1 Overview

8.1.1 The impacts of the Development on the agricultural land on Site has been assessed in the ES.

### 8.2 Baseline

8.2.1 An assessment of agricultural land quality, involving a desktop study and a detailed Agricultural Land Classification<sup>6</sup> (ALC) survey, has been undertaken to determine the quality of agricultural land at the Site.

8.2.2 The ALC survey completed in April 2023 and January 2024 found that the total 96ha Site contains 7.4ha of Grade 2, 35.3ha of Grade 3a, 46.8ha of Grade 3b and 6.5ha of non-agricultural land. Therefore, the Site contains 42.2ha of the best and most versatile (BMV)<sup>7</sup> agricultural land.

8.2.3 In regard to farm businesses on Site, areas are let to various farmers. The land is mostly used for arable farming, specifically maize for dairy farm operations and potatoes. In addition, the farmers produce hay and haylage to support the equine enterprise in the eastern portion of the Site.

### 8.3 Construction Effects

8.3.1 An outline Soil Resource Management Plan (oSRMP) has been prepared for the Development to guide construction activities in reducing the impact on soil quality. Such guidance includes avoiding construction during periods of extreme wetness as this has the potential to damage the structure of soil. A detailed SRMP will be secured by a planning condition, which will further ensure the quality of agricultural land is protected on Site during construction.

8.3.2 With effective implementation of appropriate mitigation/best practice measures to safeguard the soil resources on the Site during the construction phase, it is predicted that the significance of the effect of the Development on agricultural land will be minor adverse, which is not significant. Although the Site has been assessed to contain 42.2 ha of BMV land, only approximately 8ha of BMV will be affected by solar PV arrays and associated infrastructure. The construction of tracks, containers, substation and soil storage areas will affect approximately of 2.1 ha of land, of which 1.3 ha is BMV agricultural land. The assessment is as follows:

- agricultural land: minor adverse effect;
- soils: minor adverse effects; and
- farm businesses: negligible effect.

<sup>6</sup> The Agricultural Land Classification system divides agricultural land quality into five grades (from Grade 1 'Excellent' to Grade 5 'Very Poor', with Grade 3 subdivided into Subgrade 3a 'Good' and Subgrade 3b 'Moderate').

<sup>7</sup> Best and most versatile (BMV) agricultural land is classified as Grades 1, 2 or 3a.

## 8.4 Operational Effects

8.4.1 There will be no further effect on soils or land quality during the operational phase. The affected farm business will experience slight to moderate changes in its day-to-day operations, but these will result in minor adverse impacts. There will, conversely, be economic benefits and overall, the effects are considered negligible, which is not significant. The assessment is as follows:

- agricultural land: no effect;
- soils: no effect; and
- farm businesses: minor adverse effects together with minor benefits, overall a negligible effect.

## 8.5 Decommissioning Effects

8.5.1 Decommissioning will restore the land affected temporarily by tracks and other infrastructure to the original ALC land grade. Overall, the decommissioning phase is anticipated to result in a negligible impact on soils and agricultural land quality, subject to compliance with appropriate / best practice.

## 8.6 Cumulative Effects

8.6.1 No cumulative effects are anticipated.

## 9 Biodiversity

### 9.1 Overview

9.1.1 The ES has assessed the likely significant effects of the Development with respect to on ecological features during its construction and operational phases. Ecological features that form the basis of the assessment include statutory and non-statutory sites designated for nature conservation at international, national and local levels; Habitats and species of 'principal importance for the conservation of biodiversity'; and other legally protected, red-listed or notable species of conservation interest.

### 9.2 Baseline

9.2.1 A comprehensive suite of ecological surveys has been undertaken within the defined survey area. Specific surveys for priority habitats, bats, breeding and wintering birds, otter, water vole and badgers have been carried out. Habitats have been assessed for other notable species groups including reptiles and amphibians, invertebrates and other mammals. Furthermore, a desk study to examine the presence of third-party records or the presence of protected species and the whereabouts of local and statutory sites designated for nature conservation has been undertaken.

9.2.2 The Site occupies agricultural land, comprising arable and non-arable cropland and livery (i.e. horse-grazed pasture) on undulating ground characterised by large fields bound by a mature network of hedgerows and streams functioning as drainage features. Uncultivated field margins were generally very narrow, with the exception of a large, steep bank managed for silage in the south of the Site. A remnant ancient woodland parcel and large standing waterbody lay adjacent to the site boundary, between to the northern and southern parcels.

### 9.3 Construction Effects

9.3.1 There are no likely significant adverse effects for designated sites, woodland and scrub habitats, watercourses and ditches, breeding birds, badgers, reptiles and amphibians and invasive non-native species.

9.3.2 Prior to mitigation, there is potential for likely significant adverse effects in construction relating to hedgerows and trees, bats, overwintering birds, dormouse, otter and water vole, other mammals.

9.3.3 Following the implementation of mitigation measures including the planning of approximately 1.44km of new hedgerows and ongoing maintenance secured through the LEMP, investigation of trees for bats prior to any needed removal (no mature or semi-mature trees will be lost but this is in the case that tree removal is later found to be unavoidable), checks for overwintering birds, precautionary methods of working in relation to habitats suitable for dormouse, monitoring of works around burrows, sensitive timings of works and phased habitat removal, the above effects will be reduced to neutral levels, leaving no residual adverse construction phase effects. Following the above planting which will happen in the construction phase, residual significant beneficial effects are anticipated for woodland and scrub, and hedgerow and trees as a result of the construction phase.

## 9.4 Operational Effects

- 9.4.1 There are no likely significant adverse effects for designated sites, woodland and scrub, hedgerow and trees, watercourses and ditches, otter and water vole and other mammals.
- 9.4.2 There are likely significant beneficial effects for woodland and scrub, trees and hedgerow, watercourses and ditches at the Local level as a result of 1.77ha of new woodland planting and approximately an additional 0.08ha of orchard planting contributing to green infrastructure and connectivity of habitats cross the site, as well as the anticipated improvement in water quality without agricultural activities and the use of fertilisers and herbicides. Additionally, a beneficial effect significant at the Site level is likely for bats, badgers, reptiles and amphibians given the habitat creation.
- 9.4.3 Prior to mitigation, there is potential for likely significant adverse effects in operation relating to breeding birds, overwintering birds and invasive non-native species.
- 9.4.4 Following the implementation of mitigation measures including habitat planting and buffers from field boundaries, and the monitoring and eradication of invasive non-native species,, the residual effect on breeding birds is reduced to no significant effects, effects on overwintering birds remain significant at the Site level and the residual effects on invasive non-native species is reduced to neutral non-significant effects.

## 9.5 Decommissioning Effects

- 9.5.1 Activities relating to the removal of modules, mounting structures, cabling, inverters and transformers would be expected to have similar (or no worse) direct effects as those described in the construction phase impacts for each receptor. Comparable levels of disturbance from movement of vehicles and personnel would be expected.

## 9.6 Cumulative Effects

- 9.6.1 No adverse cumulative effects have been identified for biodiversity. A beneficial effect at the Local level is anticipated for habitats following construction, and for badgers, bats, reptiles and amphibians during operation.



## 10 Summary and Residual Effects

### 10.1 Introduction

10.1.1 An ES including this Non-Technical Summary has been prepared to support a planning application for the construction of a ground mounted photovoltaic solar farm together with associated equipment, infrastructure and ancillary works on land at Land at Alleston Farm, Lower Lamphey Road, Lamphey, Pembrokeshire

### 10.2 Mitigation

10.2.1 Mitigation measures have been incorporated into the construction, operational and decommissioning phases of Development in order to avoid, reduce or offset significant environmental effects. Appropriate mitigation during the construction phase has been identified in the ES as necessary, such as best practice measures to reduce or eliminate potential adverse environmental effects of construction as far as possible. Furthermore, the Construction Methodology Chapter (Chapter 5) proposes a programme and approach to works which will ensure that the Development would be implemented in the most efficient and least intrusive manner. This includes measures set out and secured through the implementation of the CEMP for the Development. Relevant legislative requirements would also be adhered to.

### 10.3 Summary

10.3.1 The Development will result in the following significant residual effects only:

■ **Construction:**

- The Site and its immediate context will experience a moderate adverse effect as a result of construction activities and compounds being introduced to the arable/pasture fields;
- The landscape feature, Fields, will be subject to a Moderate Adverse Effect as a result of the construction plant, machinery and activity introducing uncharacteristic components to the fields;
- The users of PRow 32/51/1 will experience a Moderate Adverse effect as a result of construction activities dominating a large part of the footpath's view;
- The users of PRow 32/51/2 will experience a Moderate Adverse effect as a result of construction activities dominating a large part of the footpath's view;
- The users of PRow 32/52 will experience a Moderate Adverse effect as a result of construction activities dominating a large part of the footpath's view;
- Residents of Lower Lamphey Road will be subject to a moderate adverse effect due to the visibility of construction activities and incoming and outgoing vehicle traffic;
- Residents of Upper Longstone will experience a moderate adverse effect due to the visibility of construction activities;
- Beneficial effects, significant at the Local Level for Woodland and Scrub; and

- Beneficial effects, significant at the Local Level for Hedgerow and Trees.

**Operation:**

- The landscape feature, Fields will be subject to a Moderate Adverse effect as a result of the change in land use;
- The landscape feature, Trees and Woodland will be subject to a Moderate Beneficial effect as a result of 2.5ha of native woodland planting to increase woodland and tree groups;
- The landscape feature Hedgerows will be subject to a Moderate Beneficial effect because existing hedgerows will be retained and enhanced;
- The users of PRow 32/51/1 will experience a Moderate Adverse effect as a result of the landscape in which the footpath crosses changing from open grassland to the Development;
- The users of PRow 32/51/2 will experience a Moderate Adverse effect as a result of the landscape in which the footpath crosses changing from open grassland to the Development;
- The users of PRow 32/52 will experience a Moderate Adverse effect as a result of the landscape in which the footpath crosses changing from open grassland to the Development;
- Adverse effects at the Site level for overwintering birds;
- Beneficial effects at the Site Level for bats;
- Beneficial effects at the Local Level for Woodland and Scrub;
- Beneficial effects at the Local Level for Trees and Hedgerow;
- Beneficial effects at the Local Level for Watercourses and Ditches;
- Beneficial effect at the Site Level for badgers; and
- Beneficial effect at the Site Level for reptiles and amphibians.

**Interactive Effects**

10.3.2 The ES considers the interrelationship between the significant effects outlined above. During the construction and operational phases of the Development, it is considered that interactions could potentially occur between landscape and views, biodiversity and built heritage. Given that these interactive effects have been inherently considered within the technical assessments no further consideration of interactive effects is required.

**Cumulative Effects**

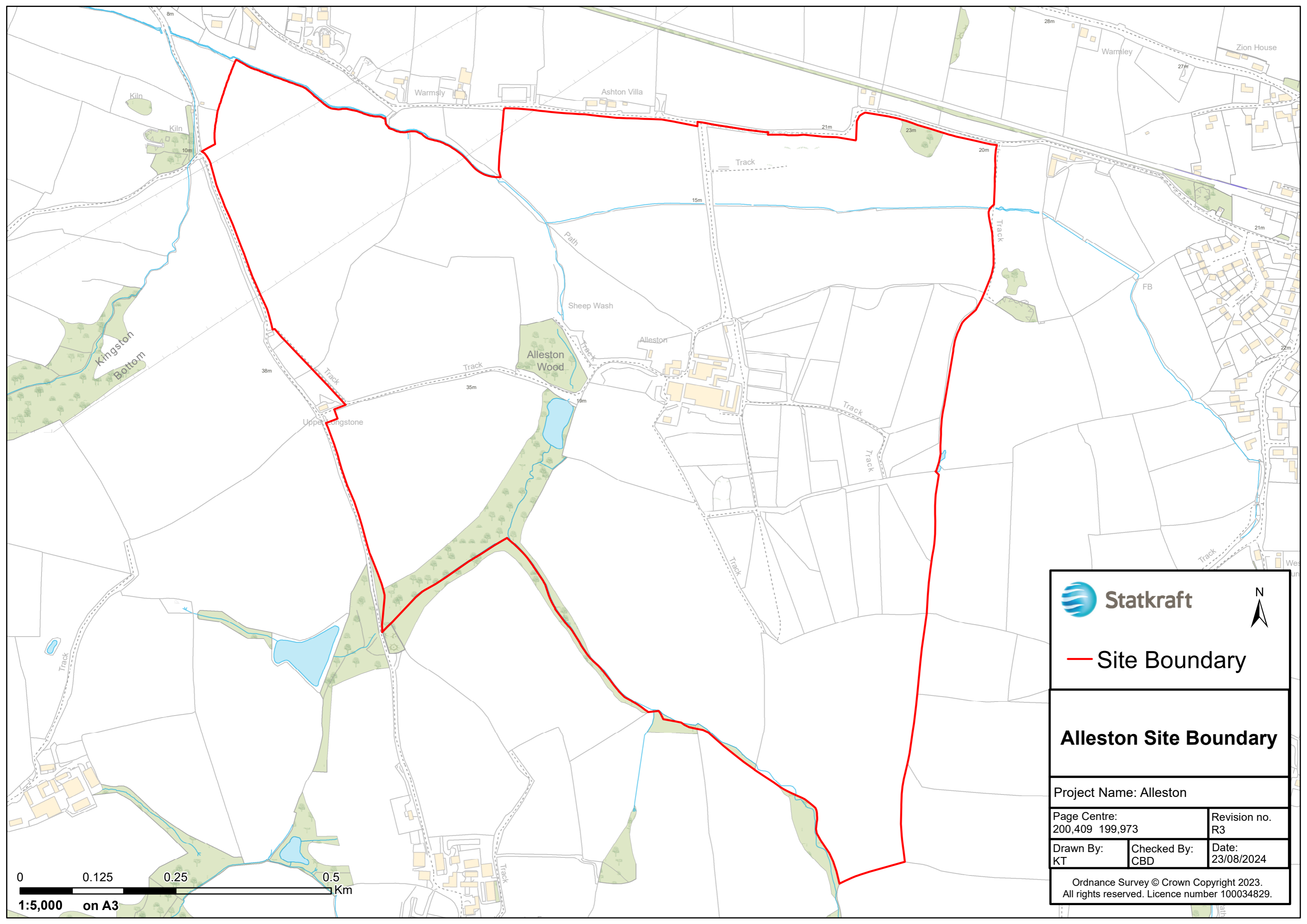
10.3.3 Each of the technical chapters have considered the likely significant cumulative effects of the Development with the cumulative schemes set out in Chapter 2. Significant beneficial



cumulative effects have been identified for habitats following construction, and for badgers, bats, reptiles and amphibians during operation.


### **Decommissioning Effects**

10.3.4 As set out in Chapter 3 of the ES, following the operational period of 40 years, the Development will be decommissioned, and the Site could be returned to its current agricultural use. All solar array infrastructure including modules, mounting structures, cabling, inverters and transformers would be removed and recycled or disposed of in accordance with good practice available at the time. Additional measures of the decommissioning phases have been recommended and detailed within Chapter 5 and the oDEMP (Appendix 5.2 of the ES). The technical chapters 6-9 have found that the effects of decommissioning are likely to be very similar to those during construction.

**Figure 1.1      Site Boundary Plan**



 **Statkraft** 

 **Site Boundary**

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**Alleston Site Boundary**

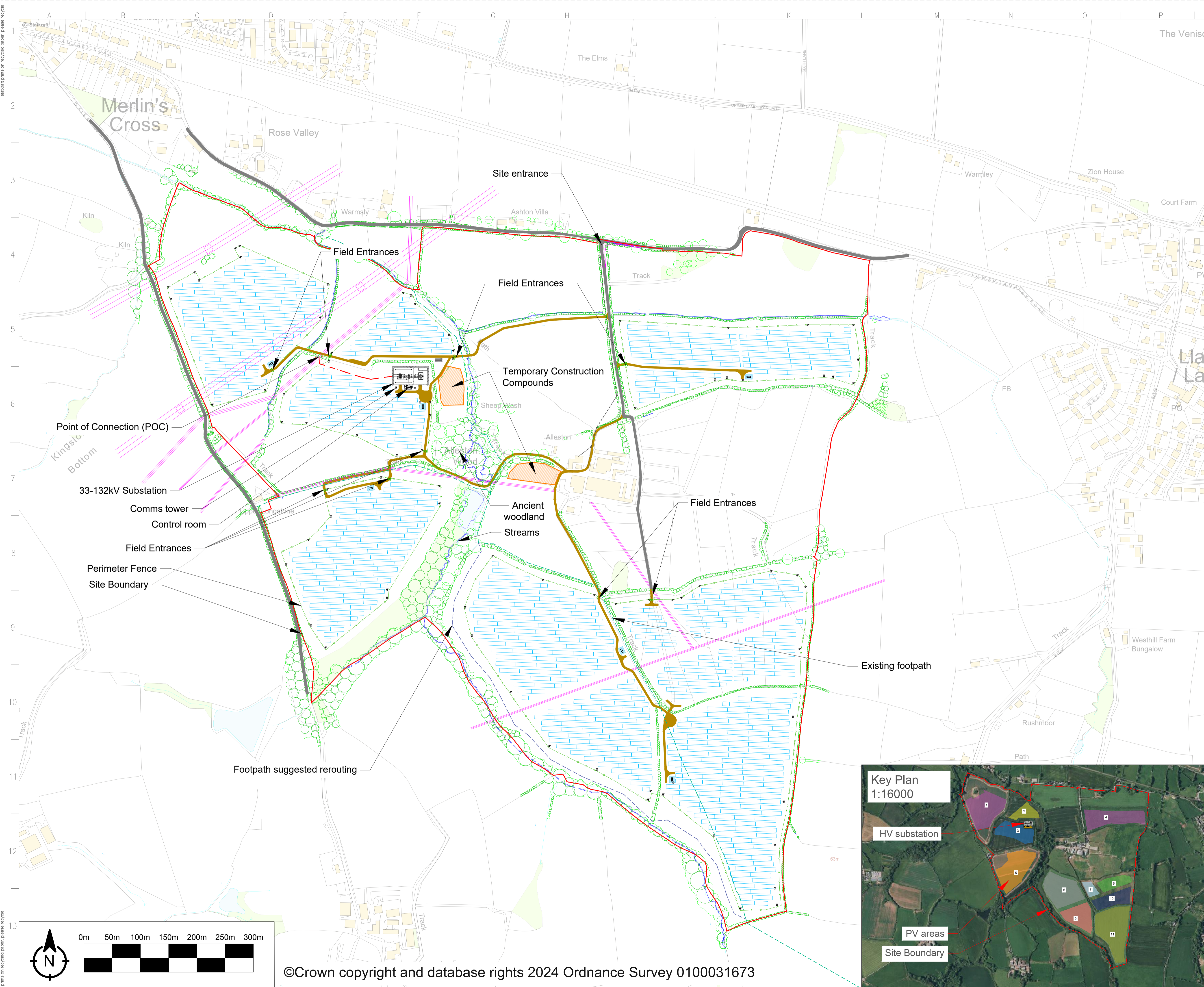
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Project Name: Alleston

Page Centre: 200,409 199,973	Revision no. R3	
Drawn By: KT	Checked By: CBD	Date: 23/08/2024

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**Figure 3.3      Site Layout Plan**



REFERENCES	
SUMMARY NOTES	
1.	All dimensions are in 'mm' unless otherwise indicated.
2.	Any deviations to be recorded and communicated to Statkraft.
3.	The following ecological buffers have been applied:
3.1.	10m from hedgerows and ditches (and other watercourses)
3.2.	20m from ponds and woodland
3.3.	15m from mature trees

SYSTEM SUMMARY	
GEOGRAPHICAL COORDINATES	51.66454, -4.88828
LAND OWNERSHIP AREA (GROSS)	96.3 ha
FENCED PV AREA	39.9 ha
MAXIMUM GRID EXPORT CAPACITY	30 MW
PV MODULE TYPE	Crystalline
INVERTER TYPE	String
STRUCTURE TYPE	Fixed

LEGEND	
	Overhead Line (OHL)
	Perimeter Fence
	Site Boundary
	Telecommunications Line
	Existing Footpath
	Proposed Footpath
	Maintenance Track
	Existing Roads
	Trees
	Hedgerows
	Transformer Station
	PV Structure
	Gates
	Water Bodies
	Connection route
	CCTV Camera
	Weather station
	Transformer station excavation zone

LEGEND	
	Overhead Line (OHL)
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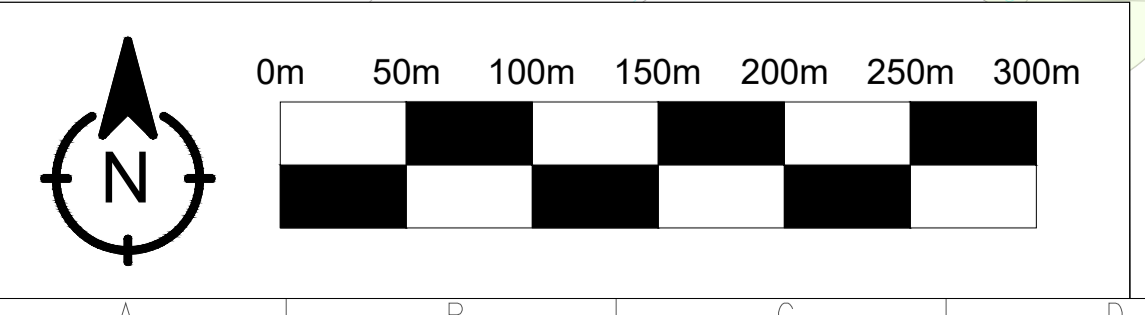
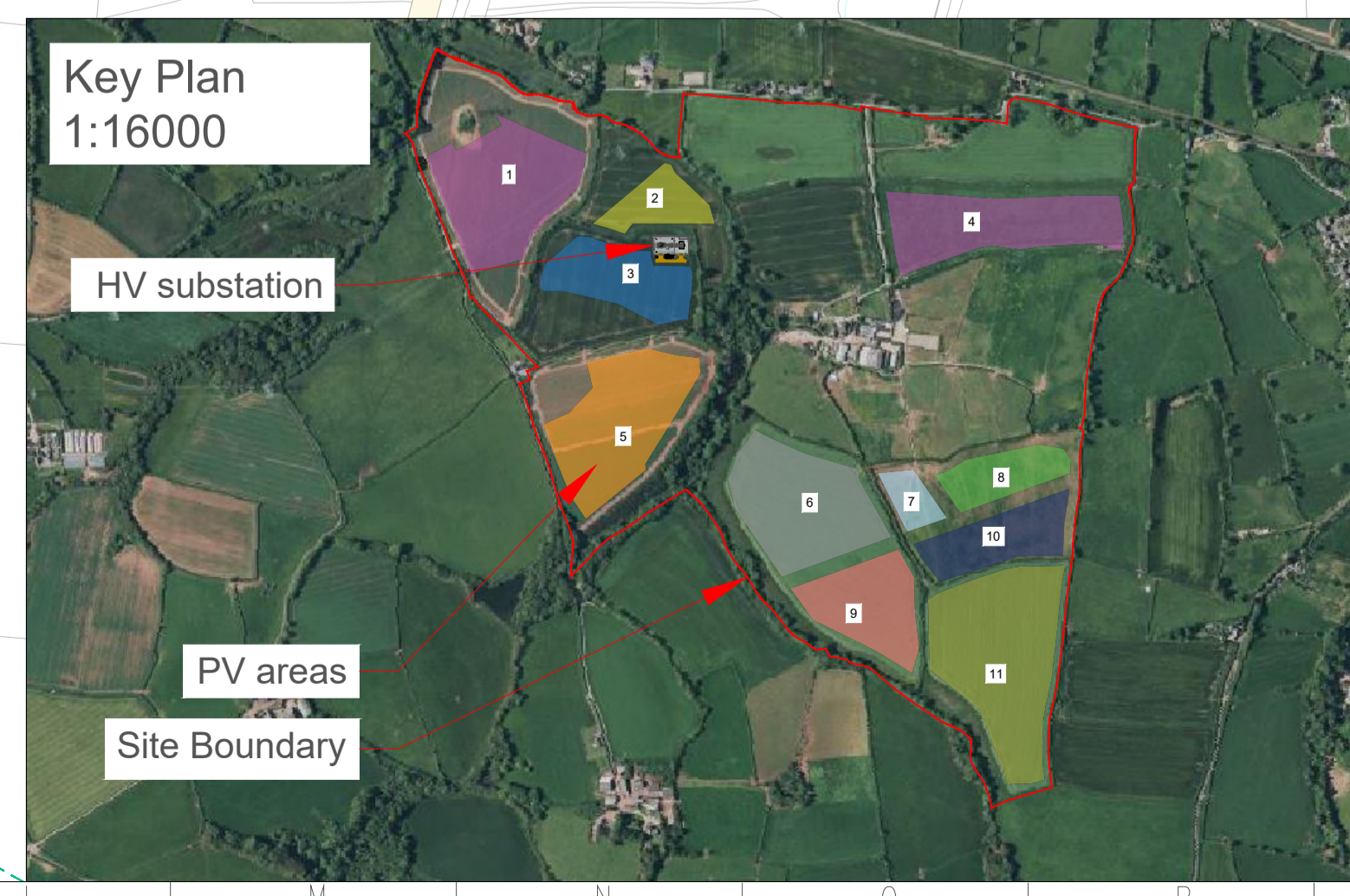
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REV	DATE	DESCRIPTION	DRAWN	APPRV
K	23/08/2024	New NGED substation	PPH	AEP
J	19/07/2024	Minor update	PPH	AEP
I	16/07/2024	Major layout update	PPH	AEP
H	28/06/2024	Revised for archaeological data	PPH	AEP
G	03/06/2024	3P10, revised roads + fences	PPH	CRO

General PV Layout SCALE 1:3000 A1  
SCUKX-ALLES-000-PVL-100.01K SHEET 1 of 1



## REFERENCES

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<sup>i</sup> <https://www.legislation.gov.uk/ukSI/1997/1160/contents>