

FLOOD RISK ASSESSMENT AND SURFACE WATER DRAINAGE STRATEGY

Stourhead Solar Farm

Land at Stourhead
Stourton
Warminster
Wiltshire
BA12 6QE

Prepared for:
Aardvark EM Limited

14th May 2026

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1 INTRODUCTION

Background

- 1.1 RMA Environmental Limited has been commissioned by Aardvark EM Limited on behalf of the National Trust to prepare a Flood Risk Assessment (FRA) and surface water Drainage Strategy to support an outline planning application for a proposed solar farm on land at Stourhead, Stourton, Warminster, Wiltshire, BA12 6QE.
- 1.2 This FRA has been prepared in accordance with the National Planning Policy Framework (NPPF), associated Planning Practice Guidance (PPG) and Environment Agency (EA) standing advice on flood risk for new development.

Site Location and Land Use

- 1.3 The site is currently classed as greenfield comprising of agricultural land and an existing access track. It extends to an area of 1.47 hectares (ha) and is located at National Grid Reference ST 77625 33640 (refer to Figure 1.1).
- 1.4 The site is bordered by the following land uses:
- agricultural land surrounds the majority of the site;
 - Stourhead House National Trust site is located to the north-east; and
 - Bells Lane is located to the east.
- 1.5 The site is currently accessed via a private road to the north, which connects to Bells Lane. Further details on site topography, geology and hydrology are set out in Section 2.

Proposed Development

- 1.6 The proposed development involves the construction of a solar farm with associated infrastructure, landscaping, biodiversity improvements and access (refer to Appendix A). The operational lifetime of the proposed development is 40 years.
- 1.7 The metal framework that supports the solar panels would be fixed into the ground by posts. Solar panels will be mounted on a framework fixed in a south-facing orientation.
- 1.8 The proposed development would be accessed via an access track connecting to the existing access track and Bells Lane to the north of the site. The access route would be used during the construction, operational and decommissioning phases.

Requirements for a Flood Risk Assessment

- 1.9 The requirements for FRA are provided in the NPPF¹ and associated PPG². Footnote 63 of Paragraph 181 of the NPPF (February 2025) requires that a site-specific FRA should be submitted with planning applications for:
- all sites greater than 1 ha in Flood Zone 1;
 - for sites of any size within Flood Zones 2 or 3;
 - in an area within Flood Zone 1 which has critical drainage problems;
 - in an area within Flood Zone 1 which is identified in a strategic flood risk assessment as being at increased flood risk in the future; and/or
 - an area within Flood Zone 1 that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.
- 1.10 The EA's Flood Zones are defined as follows:
- Flood Zone 1 is defined as land with little or no flood risk (an annual exceedance probability [AEP] of flooding of less than 0.1%);
 - Flood Zone 2 is defined as having a medium flood risk (an AEP of between 0.1% and 0.5% for tidal areas or 0.1% and 1.0% for rivers); and
 - Flood Zone 3 is defined as high risk (with an AEP of greater than 0.5% for tidal areas or greater than 1.0% for rivers).
- 1.11 The EA's Surface Water Risk and Risk of Flooding from Rivers and Sea Extents are defined as follows:
- Very low surface water flood risk is defined the area has less than 1 in 1000 (0.1%) chance of flooding in any given year;
 - Low surface water flood risk is defined where the area has less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) chance of flooding in any given year;
 - Medium surface water flood risk is defined where this area has less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) and 1 in 30 (3.3%) chance of flooding in any given year; and
 - High surface water flood risk is defined where this area has greater than or equal to 1 in 30 (3.3%) chance of flooding in any given year.

¹ Department for Levelling Up, Housing and Communities. (2024). National Planning Policy Framework.

² Department for Levelling Up, Housing and Communities. (2023). Planning Practice Guidance. Flood Risk and Coastal Change. (Online). Available at: <https://www.gov.uk/guidance/flood-risk-and-coastal-change>.

- 1.12 FRAs should describe and assess all flood risks (from rivers, the sea, surface water, sewers, reservoirs and groundwater) to and from the development and demonstrate how they will be managed, including an evaluation of climate change effects.

2 BASELINE ENVIRONMENTAL CONDITIONS

Topography

- 2.1 A topographical survey of the existing site was undertaken by Parish Land Surveys Ltd, in October 2025, which is provided in Appendix B of this report. This topographical survey shows that where the proposed solar panels will be located the site slopes downwards in a south-easterly direction with the highest point located in the north-western corner at approximately 183.56 metres Above Ordnance Datum (mAOD). The lowest point on site is approximately 179.66 mAOD and is located in the south-eastern corner.
- 2.2 Light Detection and Ranging (LiDAR) data and the topographical survey shows that the levels along the access track and cable route range between 184.7 mAOD in the area of the northern distribution board and 175.5 mAOD at the junction of the access road and Bells Lane.

Hydrology

- 2.3 There are no 'main rivers'³ or 'ordinary watercourse'⁴, within a 500 metre (m) radius of the site. The closest 'main river' is situated 1.2 (kilometre) km southwest and is a tributary of the River Stour. The River Stour rises at Stourhead in Wiltshire and flows south then southeast through Dorset for approximately 97.0 km before joining the River Avon at Christchurch, where it discharges into the English Channel. It is fed by several tributaries including the Cale, Lydden, and Allen. The catchment area of the River Stour is approximately 1,240 km².
- 2.4 There are two main water-bodies in close proximity to the site. The primary Stourhead lake lies about 250 m northwest of the site and New Lake is situated 550 m southwest of the site boundary. Several small feeder streams and springs run within 150 m west of the site and flow eastwards, forming the headwaters of the River Stour which continues southeast from the estate.
- 2.5 There are no other significant watercourses or water bodies within the surrounding area.

Geology and Hydrogeology

- 2.6 The British Geological Survey (BGS) online map viewer indicates that the site is not underlain by any superficial geology. However, the majority of the site is underlain by the bedrock geology of the Boyne Hollow Chert Member comprising sandstone.
- 2.7 The EA classify the Boyne Hollow Chert Member comprising sandstone as Principal Strata; these are defined as *"aquifers that provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes and wetlands."*

³ Main river is defined by the EA as any watercourse that contributes significantly to the hydrology of a catchment.

⁴ Ordinary watercourse is defined by the EA as any watercourse including every river, stream, ditch, drain, cut, dyke, sluice, sewer (other than a public sewer) and passage through which water flows and which does not form part of a main river.

2.8 The site is not recorded to be located within a groundwater Source Protection Zone (SPZ).

3 EXTERNAL FLOOD RISK

Flooding Mechanisms

- 3.1 Flooding can arise from a variety or combination of sources. These may be natural or artificial and may be affected by climate change. These are discussed in the following section and summarised in Table 3.1.

Table 3.1: Residual Flood Risk

Flood Source	Risk Level				Comment
	High	Medium	Low	Very Low	
Fluvial/Tidal				X	The EA's flood map for planning shows that the site is located within Flood Zone 1.
Groundwater				X	The Wiltshire Council Level 1 Strategic Flood Risk Assessment does not indicate that the site is at risk of groundwater flooding.
Surface Water			X	X	The EA's RoFSW maps show that the majority of the site has a very low surface water flood risk. However, a small area of site has a low surface water flood risk in the present day and climate change scenarios. The majority of the proposed development has been located outside of the surface water flood extents.
Canals				X	There are no canals in the vicinity of the site.
Reservoirs				X	The reservoir flood risk map places the site well outside a maximum extent of flooding.
Infrastructure Failure				X	The SFRA does not indicate that the site is at risk of sewer flooding.

Historic Flooding

- 3.2 The Wiltshire Council Level 1 SFRA (JBA Consulting, 2024) has been reviewed to identify any records of flooding at or in close proximity to the application site. The SFRA did not contain any historic flood records for the site or surrounding area.
- 3.3 The EA's historic flood map indicates that there are no historic flood records for the site or surrounding area.

Fluvial Flood Risk

- 3.4 The EA's flood map for planning (refer to Figure 3.1) indicates that the site is located entirely within Flood Zone 1. Land located within Flood Zones 2 and 3 is located approximately 210 m to the north-west of the site and is approximately 24 m lower in elevation when compared to the site. Additionally, the site slopes away from these flood zone extents. Therefore, with consideration of the predicted impacts of climate change on the Flood Zone 2 and 3 extents, it is concluded that the site will remain in Flood Zone 1 for its operational lifetime (assumed to be 40 years). On this basis, fluvial flood risk is no longer considered within this assessment.

Surface Water Flood Risk

- 3.5 The EA's surface water flood risk mapping (refer to Figure 3.2) shows that the majority of the site has a very low surface water flood risk. There is an area of localised ponding located in an area of site with a 'low' surface water flood risk which is located along the cable route. However, no above ground infrastructure is located within this area.

Surface Water Flood Risk with Climate Change

- 3.6 The central allowance for the 2050s epoch (the years 2040-2060) has been applied to the EA's surface water flood model. The climate change surface water flood extent is the same as the current surface water flood extents (refer to Figure 3.3).
- 3.7 Depth mapping for the surface water climate change scenario has been reviewed which does not show the flood extent is. Therefore,, it is assumed that this area of surface water flood risk would have a depth less than 0.2 m (refer to Figure 3.4).
- 3.8 The area of site that has a 'low' risk of surface flooding is located along the proposed cable route. As the cables will be installed underground, it is considered that the cables will not be at risk of flooding and will have no impact on flood risk.

Safe Access/Egress

- 3.9 Site access and egress is via an existing private road located in the central part of the site connecting on to Bells Lane.
- 3.10 The proposed access/egress route is located entirely within fluvial Flood Zone 1, however there is up to a low risk of surface water flooding to a depth of less than 0.2 m across Bells Lane which provides access into the development (refer to Figure 3.4). In accordance with FD2320/TR2⁵, the hazard rating for this area would be classified as a 'very low hazard'. A 'very low hazard' is defined as a caution for access/egress.
- 3.11 On this basis, it is concluded that future users of the development would be safe during the design flood event for the operational lifetime of the development.

⁵ Framework and Guidance for Assessing and Managing Flood Risk for New Development

Land Use Vulnerability

- 3.12 Annex 3 of the NPPF sets out a schedule of land uses based on their vulnerability or sensitivity to flooding. The proposed development is classified as ‘essential infrastructure’ to flooding. Referring to Table 2 of the NPPF PPG, all land uses are considered appropriate within Flood Zone 1.
- 3.13 Therefore, on the basis of land use vulnerability, the development should be deemed appropriate in planning policy terms in its proposed location.

The Sequential and Exception Test

- 3.14 In December 2024, the NPPF was updated with changes that require all plans to take into account all sources of flooding and apply a sequential, risk-based approach to the location of the development. This was specifically laid out in paragraphs 171 and 172, which stated that the aim should be to steer new development to areas with the lowest risk of flooding from any source and opportunities should be provided for new green and other infrastructure that can reduce the causes and impacts of flooding.
- 3.15 Paragraph 175 was added that states that development can be appropriate on sites with flood risk *“in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would not be at risk of flooding from any source, now and in the future”*. This essentially means that if a sequential approach is applied within the site boundary, and areas of flood risk now and in the future are avoided, that flood risk should not prevent the development coming forward and that the Sequential Test is not required.
- 3.16 In September 2025, the Planning Practice Guidance (PPG) for flood risk was updated stating that if it can be demonstrated through a site-specific FRA that the development would remain safe from current and future flood risk for the lifetime of the development, the Sequential Test need not be applied.
- 3.17 With specific regard to the proposed development, the site is located within Flood Zone 1 and the majority of the site has a very low surface water flood risk. A sequential approach has been taken with the layout whereby the majority of the development has been located in areas with a very low risk of surface water flooding. An underground cable is located within the minor area of low surface water flood risk, and this would not be adversely affected by surface water flooding.

4 DRAINAGE ASSESSMENT

Introduction

- 4.1 This Surface Water Drainage Strategy outlines how surface water flows are proposed to discharge from the site in accordance with the relevant statutory standards and guidance, including 'The SuDS Manual' (CIRIA Report C753, 2021).
- 4.2 Surface water arising from a developed site should, as far as is practicable, be managed to mimic the surface water flows arising from the site prior to the proposed development while reducing the flood risk to the site itself and elsewhere.
- 4.3 The development site lies within the Dorset Management Catchment. In this catchment, the central climate change allowance used for a solar farm with a 40 year lifespan for the 3.3% AEP and 1% AEP rainfall events are 20% and 25%, respectively. Therefore, the development can expect peak rainfall increases of this magnitude and should use these percentage increases in the assessment of future surface water flood risk.

Drainage Strategy for Solar Arrays

- 4.4 The surface water drainage strategy has been based on the research report "*Hydrologic Response of Solar Farms*" (Cook and McCuen, 2013) published in the Journal of Hydrologic Engineering. It should be noted that the report states "*this study, along with design recommendations, can be used as a guide for the future design of solar farms*". The report provides robust evidence that SuDS are not required to manage solar farm surface water runoff.
- 4.5 Cook and McCuen (2013) demonstrates that the solar panels and their metal framework do not have a significant effect on runoff volumes, peaks or time to peak if grass cover is located underneath panels and between rows. The study concludes that this is true for the 2 year, 25 year and 100 year events for a range of storm durations.
- 4.6 The report also notes that although the panels could concentrate runoff onto the ground, this only has the potential to cause erosion if it falls directly onto bare ground or a gravel surface.
- 4.7 On this basis, it is concluded that solar farms only significantly change the hydrologic response if gravel is placed under panels or if patchy or bare ground is created between rows. Therefore, the proposed planting framework discussed below will maintain the current hydrological response of the site and will not increase flood risk elsewhere.
- 4.8 The research report also investigated the effects of ground slope on the solar farm. It considers the differences in the hydrological response between a slope of 1% (i.e. 1 in 100) and 5% (i.e. 1 in 20). The report concluded that the '*greater ground slope did not significantly influence the response of the solar farm*'.

- 4.9 The PV detail plan included in Appendix A indicates that 20 mm gaps are located between solar panels which will act as a rainwater gap reducing the concentration of flows at the bottom of the panels.
- 4.10 Operational vehicle trips will include approximately two maintenance visits per month, typically with a transit style van and, therefore, the risk from erosion by vehicle traffic is low.

Proposed Planting Framework Mitigation

- 4.11 The proposed planting framework involves enhancement to the quality of grass cover. The site will be permanently vegetated with grassland located beneath the solar arrays and between rows. Longer grass should be grown along field boundaries, where practicable, to provide a further betterment in surface water runoff rates and erosion control. New planting will be introduced including a new hedgerow.
- 4.12 The proposed planting will reduce runoff, encourage interception, infiltration and evapotranspiration and provide water quality treatment before surface water leaves the site. The proposed planting will also provide sufficient mitigation against soil erosion.
- 4.13 Grass cover would be inspected and maintained at least twice a year or after periods of significant drought, which is considered an appropriate level of mitigation. It is recommended that, during maintenance, any patchy grass or bare ground is re-seeded.
- 4.14 The increased interception, evapotranspiration and infiltration due to the proposed planting scheme will provide a betterment on the existing runoff rates at the site and, therefore, will also provide a betterment in any future climate change scenarios.

Distribution Board

- 4.15 The distribution Board comprises a container with a 2.0 m² plan area sited on granular sub-bases with a plan area of 6.0 m² and a depth of 300 mm (refer to Figure 4.1). The sub-base will extend at least 500 mm from the footprint of the containers.
- 4.16 The permeable sub-base would receive surface water from the distribution board without significantly concentrating runoff. In the event that the capacity of the granular sub-base drain is exceeded, runoff would flow from the granular sub-base mimicking greenfield conditions as sheet runoff and would ensure that runoff rates are not increased post-development.
- 4.17 MicroDrainage estimations have not been used for the distribution board granular sub-base as the lowest total contribution area is 10 m² and the container plan area is 2 m².

Northern PV Distribution Board

- 4.18 A proposed distribution board in the northern part of the site is located adjacent to the existing car park and the runoff from this area will flow towards the existing car park. Due to the small size of the PV distribution board (approximately 2 m²) in comparison to the overflow car park (26,625 m²), it is considered that any runoff from this distribution board could be accommodated within the car park drainage. The car park drainage includes drainage blankets, soakaways and gravel surfaces.

Tracks and Roads

- 4.19 Internal tracks would be required to facilitate vehicle movement around the site for construction and maintenance purposes. The proposed development will utilise the existing access tracks where possible to minimise the extent of new tracks required.
- 4.20 The site access shown in Appendix A is an existing track and there will be no alterations to this section. The temporary construction access track shown in Appendix A is proposed to be constructed with temporary ground protection measures such as mud mats or similar.
- 4.21 For maintenance access, it is proposed that any maintenance vans would park at the end of the existing track and any further access into the site could be provided by mud mats.
- 4.22 This will mimic the existing greenfield runoff from these areas of the site and, as such, it is not considered necessary to provide further drainage mitigation for these surfaces.

Water Quality Treatment

- 4.23 Water quality treatment will be provided for surface water runoff from the distribution boards, and access tracks.
- 4.24 In this instance, mitigation with an index or combined indices of more than 0.2 for Total Suspended Solids (TSS), 0.2 for metals and 0.05 for hydrocarbons is acceptable for the solar arrays as the pollution hazard level would be very low. It is considered that the granular material in the sub-base and the permeable access tracks will provide a similar level of treatment to permeable paving. Therefore, the granular sub-base, permeable access tracks, swales and basin will meet the water quality requirements.
- 4.25 As discussed above, the proposed planting framework will increase the quality of surface water runoff.

Designing for Exceedance Events

- 4.26 If the proposed drainage system was to become blocked or an event above the design event occur, it is considered likely that some additional storage would be provided within the area of the panels. Any water leaving the site would be routed towards the southern boundary (refer to Figure 4.2). This would mimic what would occur naturally on the site in its existing condition and would ensure that the proposed development is safe during an exceedance event.

Long Term Maintenance of SuDS

- 4.27 It would be the responsibility of the developer to either maintain the SuDS features themselves or to negotiate with and secure the agreement of a third party to maintain the sustainable drainage system.
- 4.28 The maintenance requirements of the proposed SuDS features for use in the drainage strategy are detailed in the SuDS Manual and would be carried out accordingly (refer to Appendix E).

Construction

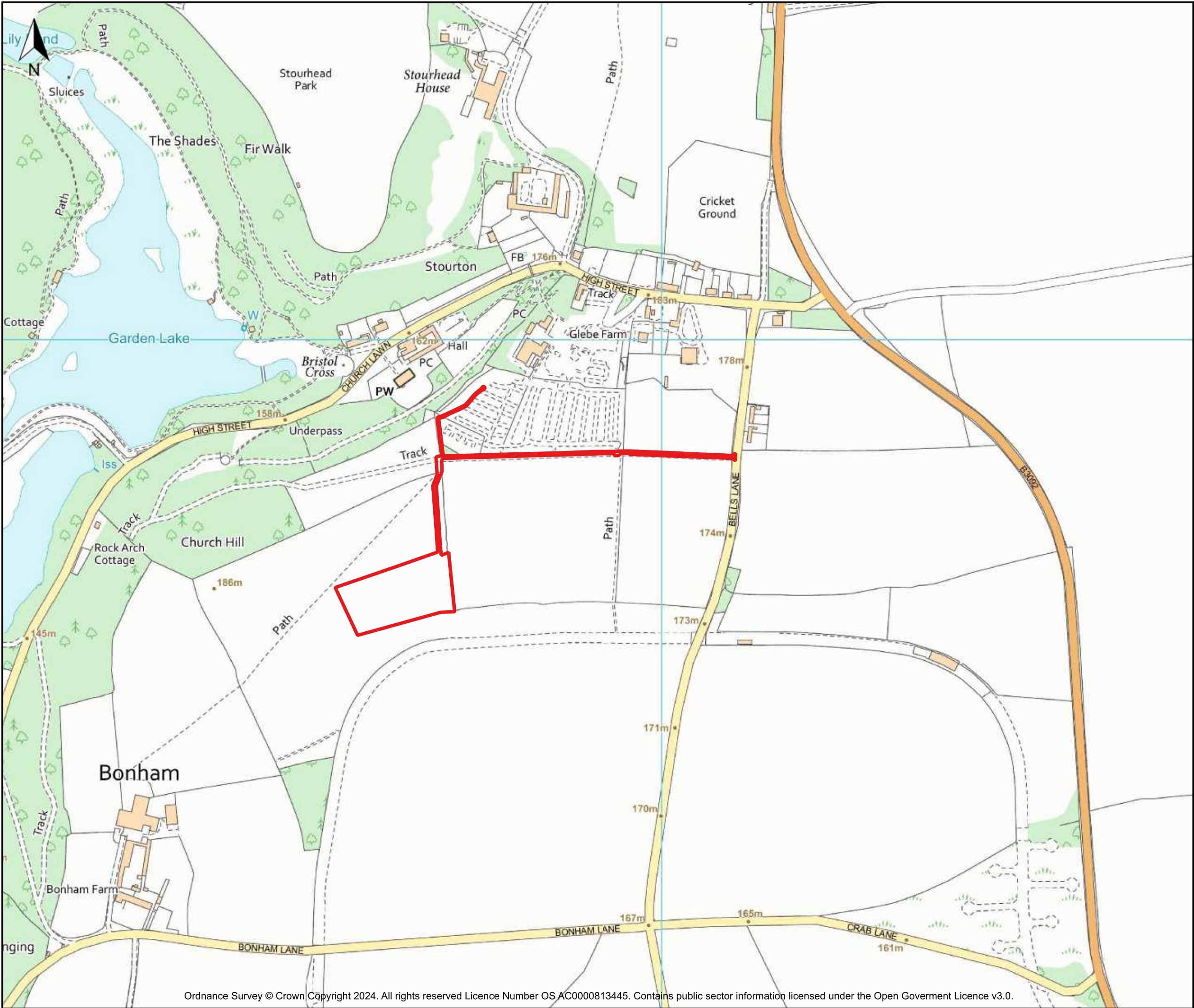
- 4.29 The internal access roads will be completed during the initial construction stage, so temporary haul routes are unnecessary.
- 4.30 The cable trenches will be backfilled with excavated material to maintain the former characteristics of the ground.
- 4.31 It is possible that construction could give rise to some ground compaction; however, it is considered that this would be no worse than other traditional farming practices which use heavier machinery.
- 4.32 During construction, it is recommended that vegetation disturbance should be minimised as much as possible and any bare ground resulting from construction should be re-seeded.

5 CONCLUSIONS

- 5.1 The requirements for Flood Risk Assessment are provided in the National Planning Policy Framework and its associated Planning Practice Guidance, together with the Environment Agency's Guidance Notes. This policy and associated guidance have been followed in the preparation of this FRA.
- 5.2 The EA's flood map for planning indicates that the site is located entirely within Flood Zone 1. Based on the distance between the site and the land located within Flood Zones 2 and 3 and that the site is elevated higher than these extents, the site will remain in Flood Zone 1 for its operational lifetime (assumed to be 40 years).
- 5.3 The EA's surface water flood risk map identifies that the majority of the site has a very low surface water flood risk however, a minor area along the cable route has a low surface water flood risk in the present day and climate change scenarios. As the cables will be installed underground, it is considered that the cables will not be at risk of flooding and will have no impact on flood risk.
- 5.4 Site access and egress is via an existing private road located in the central part of the site connecting on to Bells Lane. The proposed access/egress route is located entirely within fluvial Flood Zone 1 (low risk), however there is an area classed as 'low' risk of surface water flooding with a flood warning of very low hazard. On this basis, it is concluded that future users of the development would be safe during the design flood event for the operational lifetime of the development.
- 5.5 It is not considered necessary to provide SuDS for the proposed solar panel arrays. Cook and McCuen (2013) demonstrated that solar panels do not have a significant effect on runoff volumes, peaks or time to peak if grass cover is well maintained underneath panels and between rows. Therefore, it is proposed to implement a planting framework and maintain the grass cover to prevent areas of bare ground and erosion occurring.
- 5.6 The distribution board will be sited on granular sub-base with a depth of 300 mm. The sub-bases will extend at least 500 mm from the footprint of the container. The sub-base will allow runoff to infiltrate into the ground as far as practicable. Any excess runoff will overflow the perimeter of the sub-base at rates approximating greenfield rates.
- 5.7 A proposed distribution board in the northern part of the site is located adjacent to the existing car park and the runoff from this area will flow towards the existing car park. Due to the small size of the distribution board in comparison to the overflow car park, it is considered that any runoff from this distribution board could be accommodated within the car park drainage. The car park drainage includes drainage blankets, soakaways and gravel surfaces.
- 5.8 The existing access track will be utilised for this site alongside temporary roads for construction purposes.

- 5.9 In accordance with the NPPF, solar farms as classed as an 'essential infrastructure' land use and, as such, the proposed development is appropriately located within in Flood Zone 1 and areas at 'low' risk of surface water flooding.
- 5.10 This report demonstrates that the proposed development will not result in an increased risk of flooding on site or to neighbouring areas. Therefore, it can be concluded that the development fulfils the requirements of the PPG and the 2025 NPPF.

Figures



Key
 Red Line Boundary

Figure 1.1: **Site Location Plan**

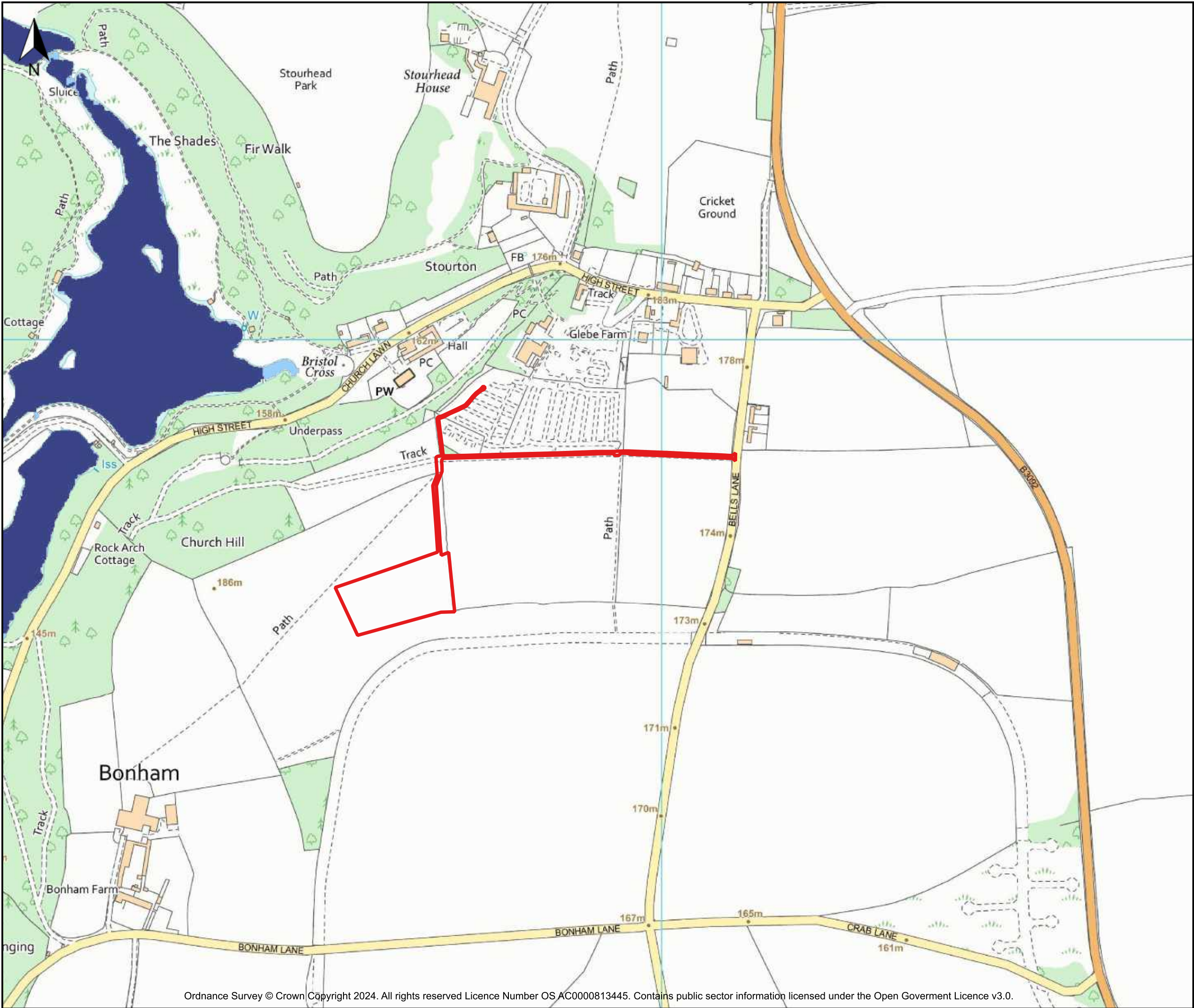
Client: **Aardvark EM Limited**

Project: **Stourhead Solar Farm**

Project No.: **C2899**



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- Key**
- Red Line Boundary
 - Flood Zone 2
 - Flood Zone 3

Figure 3.1: EA's Flood Map for Planning

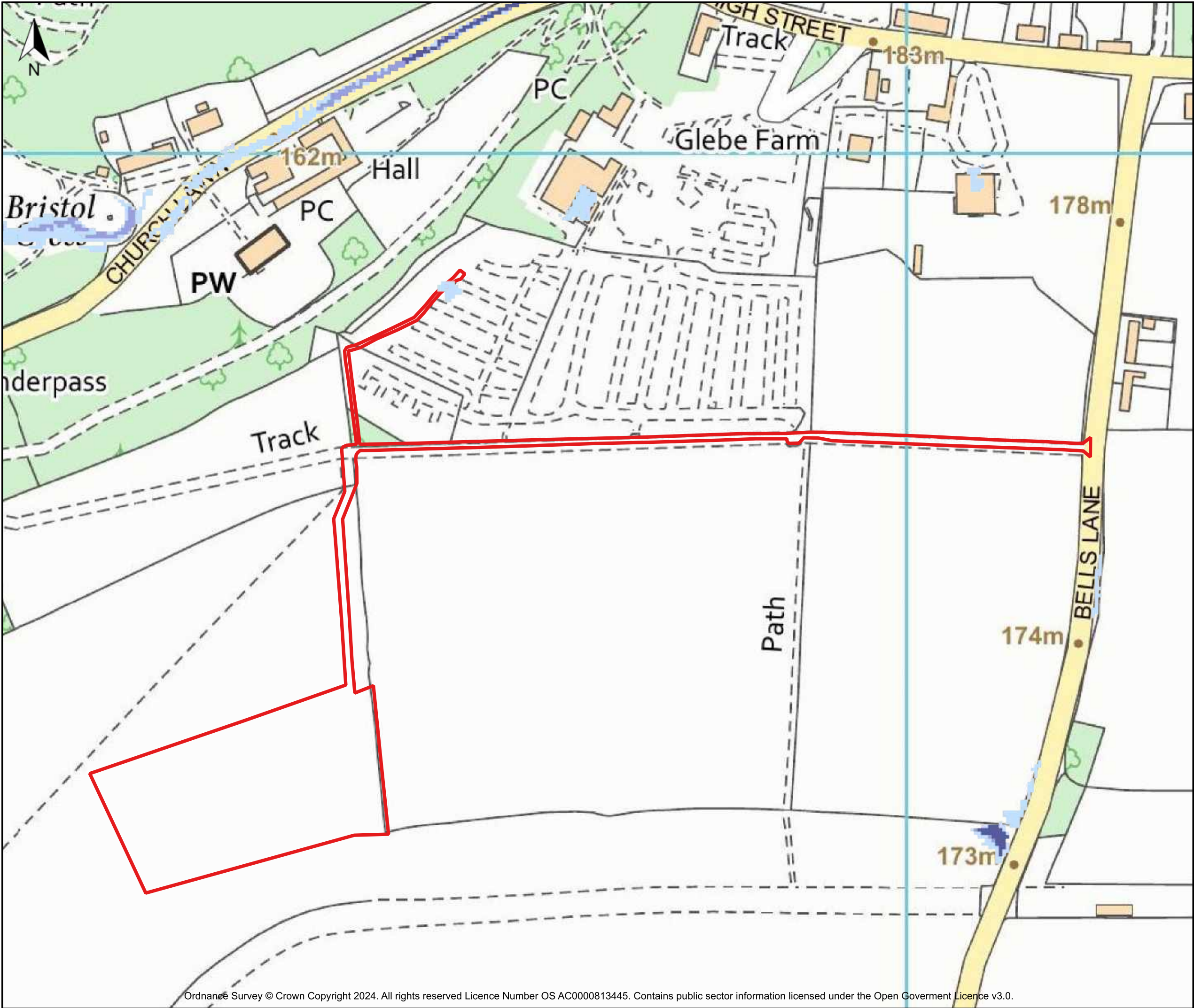
Client: **Aardvark EM Limited**

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Project No.: **C2899**



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Key

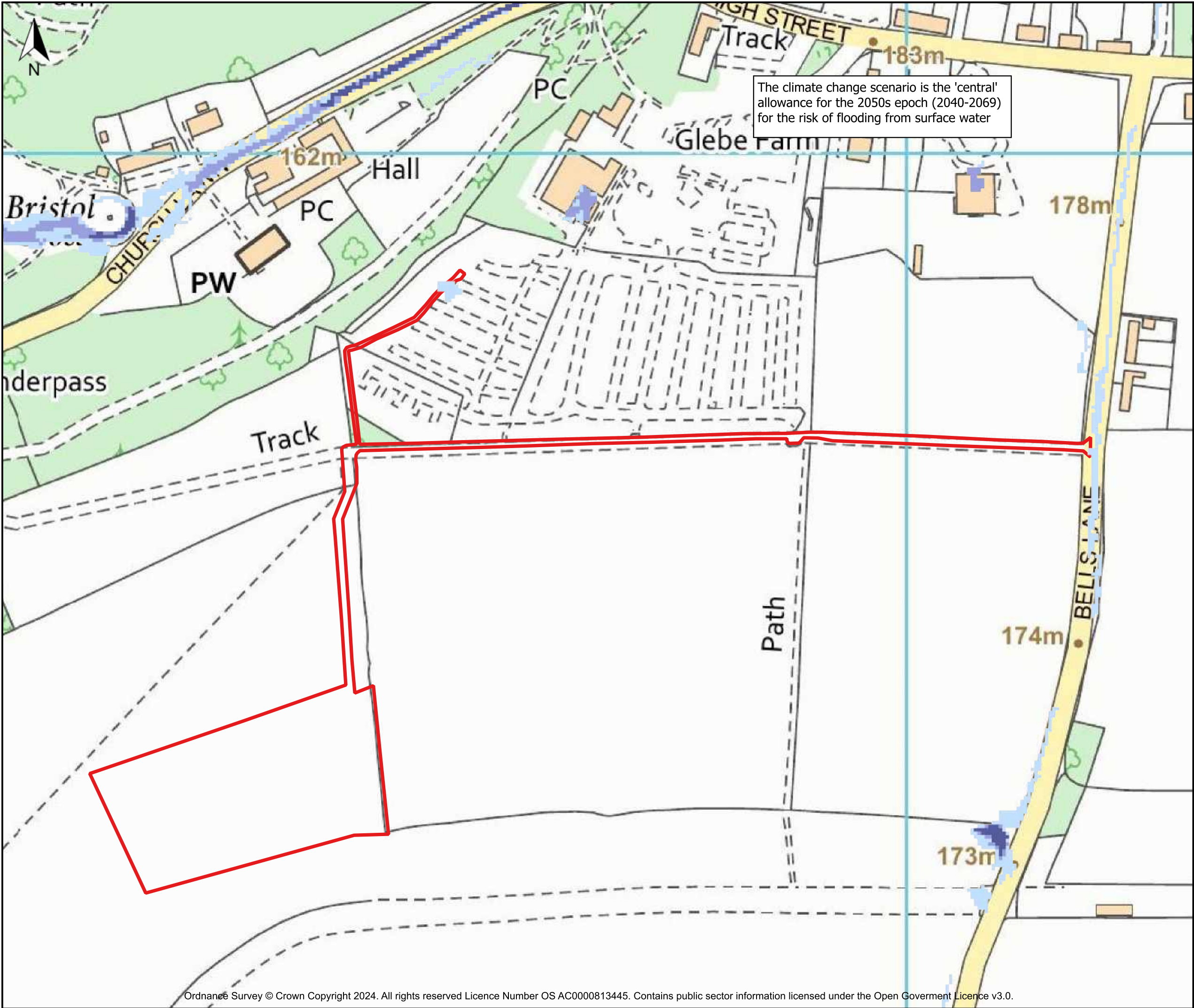
- Red Line Boundary
- Low Risk
- Medium Risk
- High Risk

Figure 3.2: EA's Surface Water Flood Map

Client:	Aardvark EM Limited
Project:	Stourhead Solar Farm
Project No.:	C2899



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- Key**
- Red Line Boundary
 - Low Risk
 - Medium Risk
 - High Risk

Figure 3.3: **EA's Surface Water Climate Change Flood Map**

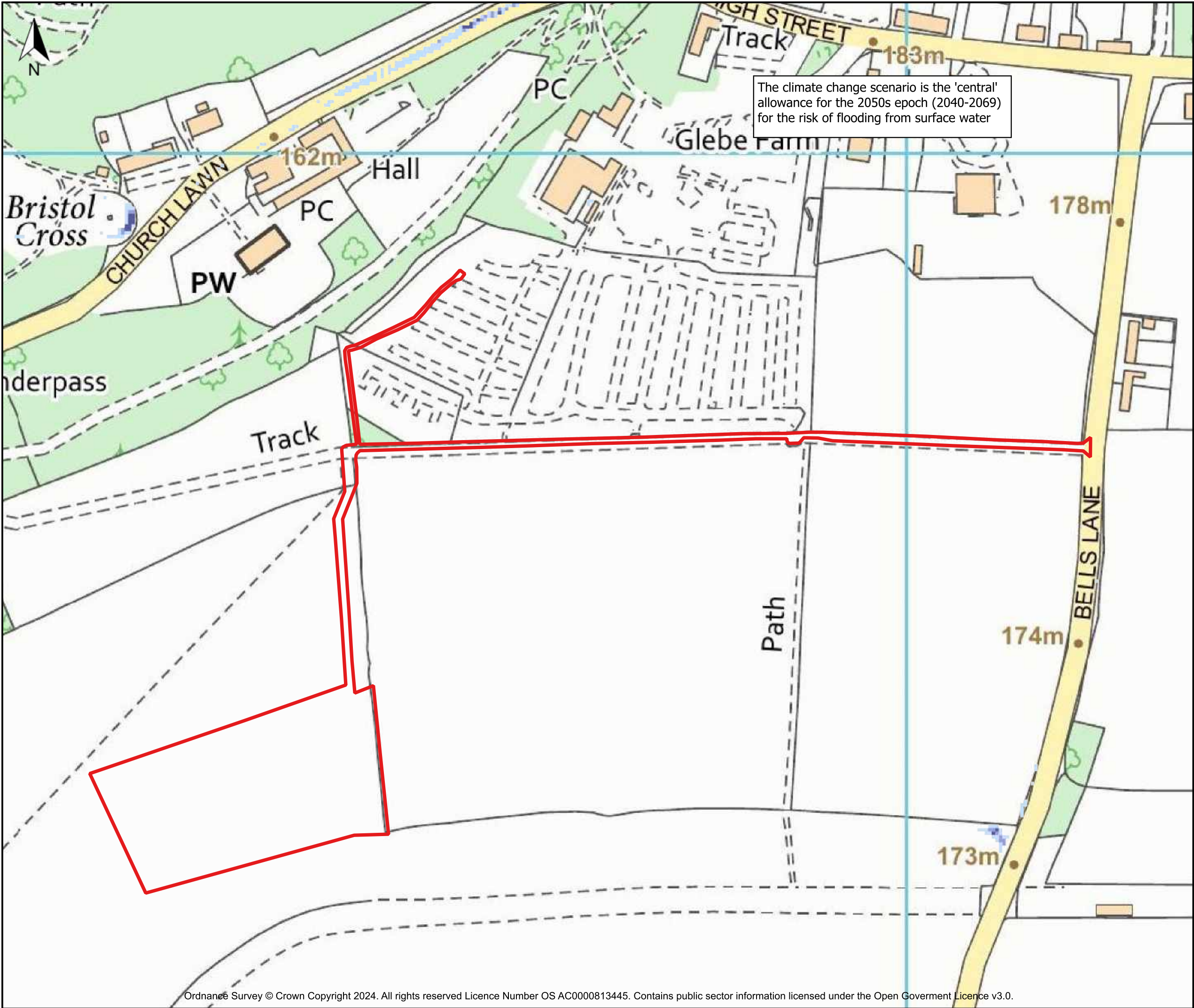
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Project: **Stourhead Solar Farm**

Project No.: **C2899**



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Key

- Red Line Boundary
- Low Risk
- Medium Risk
- High Risk

Figure 3.4: **EA's Surface Water Climate Change Flood 0.2 m Depth Map**

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Project: **Stourhead Solar Farm**

Project No.: **C2899**



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Key

-  Red Line Boundary
-  Granular Sub-base

Distribution Board

Indicative extent of the granular-sub-base. The 300 mm deep sub-base will be formed of permeable materials with a 30% void ratio.

Figure 4.1: **Outline Drainage Plan**

Client: **Aardvark EM Limited**

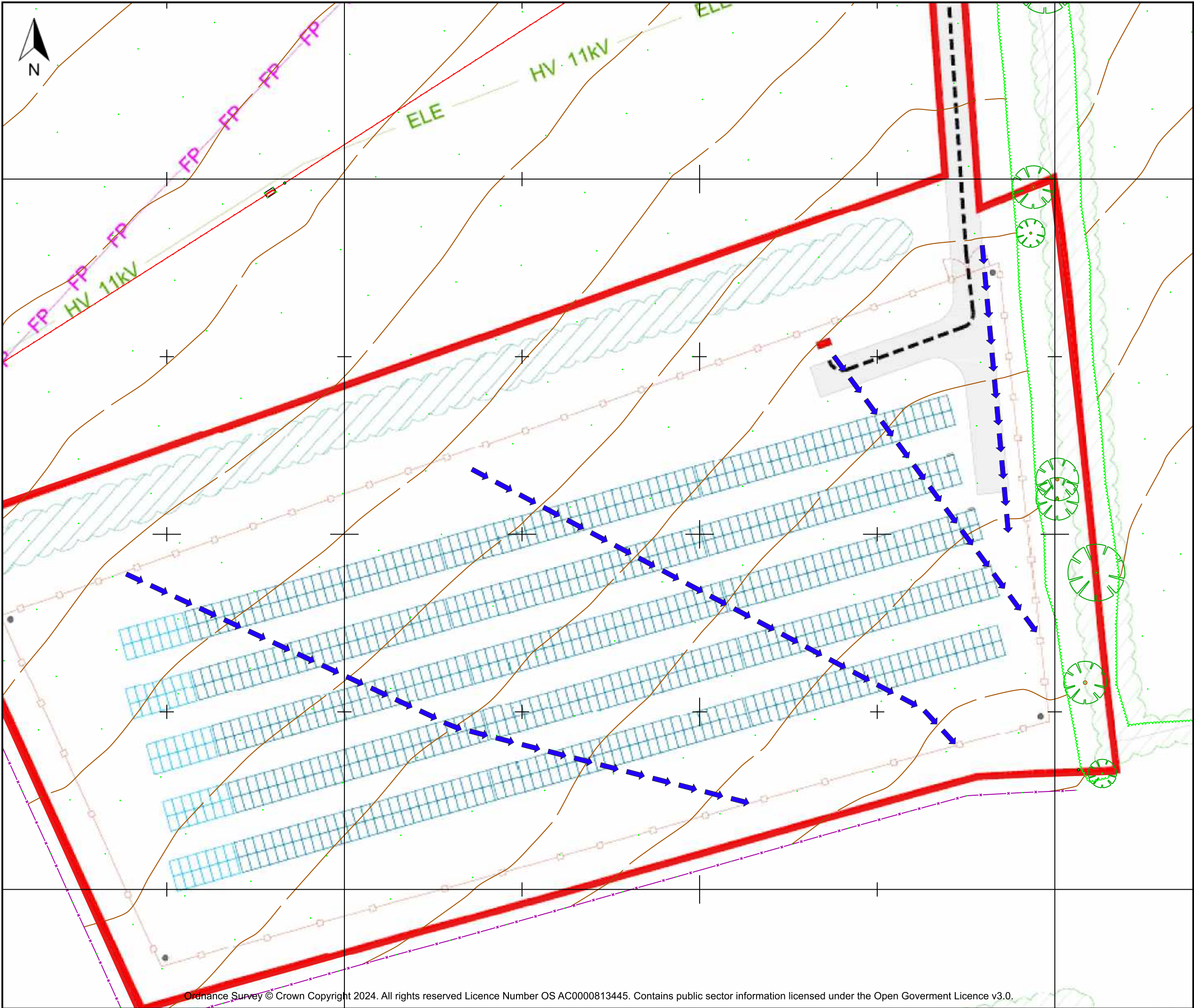
Project: **Stourhead Solar Farm**

Project No.: **C2899**



RMA
ENVIRONMENTAL

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Key

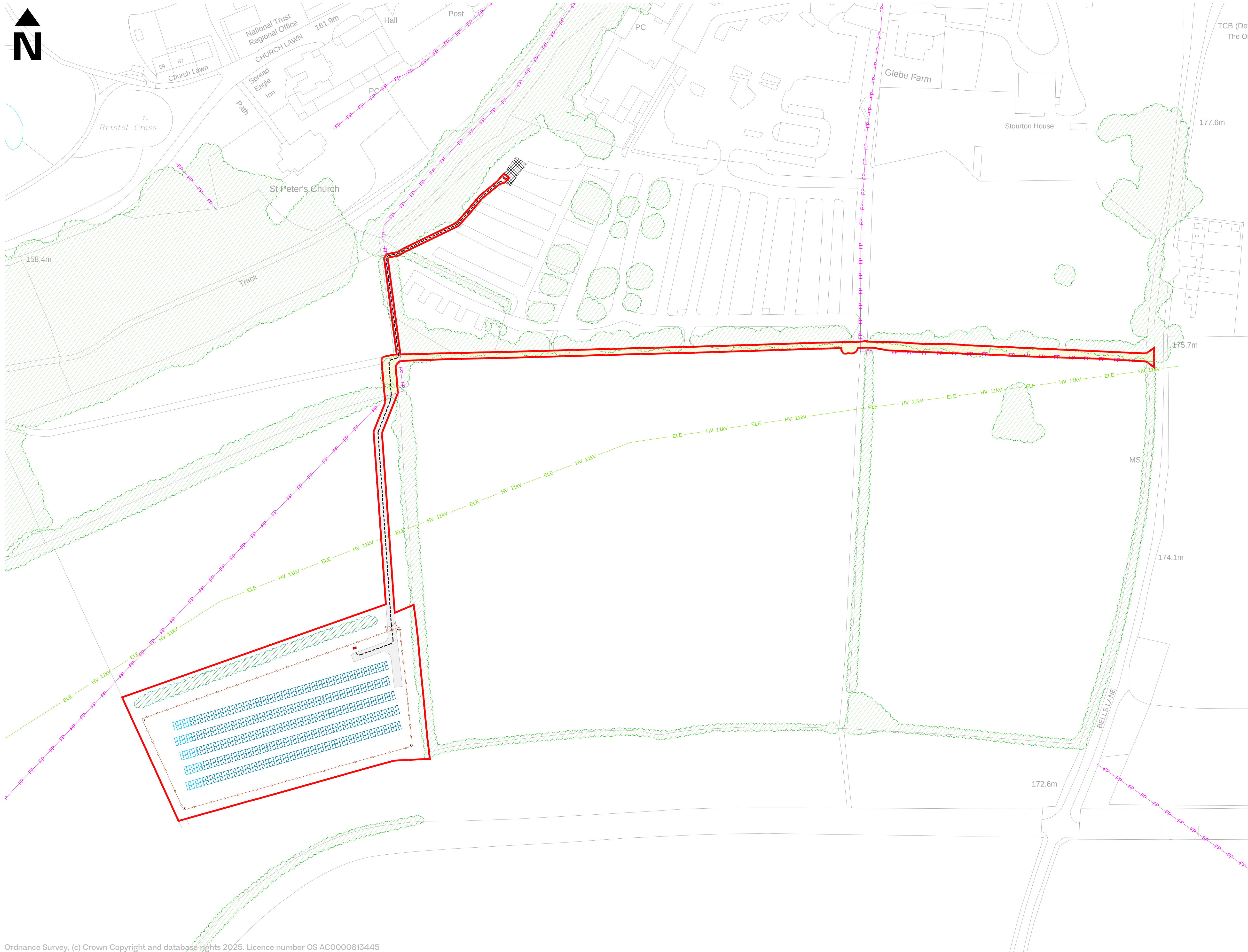
- Red Line Boundary
- Granular Sub-base
- Exceedance Flows
- 0.5 m Contours

Figure 4.2: Exceedance Plan	
Client:	Aardvark EM Limited
Project:	Stourhead Solar Farm
Project No.:	C2899



Drawn: RW	Checked: VBH	Date: 24/03/26	Scale: 1:500@A3
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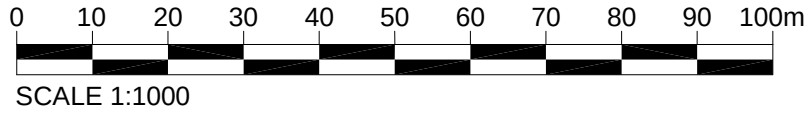
Appendix A: Proposed Development Plans



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STOURHEAD SOLAR FARM - PROPOSED SITE LAYOUT PLAN

Scale: 1:1000@A1



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This drawing is to be submitted for planning purposes only. All dimensions are to be confirmed on site prior to commencement of work.

Revisions:					
Revision	Date	Revision Notes	Drawn	Inspected	
01	14.10.25	First Issue	RR	ZH	
02	28.10.25	Red Line Boundary and Indicative Substation adjusted, DVD Access Track, Transformer and Switchgear removed, Distribution Panel relocated, Panel spec changed to 2 in P, inter row spacing increased to 4m, Panels adjusted to be in line with southern fence line	RR	ZH	
03	29.10.25	Western and Southern field boundaries formed by stock fencing added, Red Line Boundary and CCTV adjusted	RR	ZH	
04	30.03.26	RLB, Cable Route, Indicative Substation Compound and Logo Amended	EM	SP	
05	21.04.26	RLB and Indicative Substation Compound Area Amended	EM	ZH	
06	22.04.26	Red Line Boundary Amended	MR	ZH	

LEGEND:	
	PLANNING APPLICATION BOUNDARY
	SITE ACCESS
	TEMPORARY CONSTRUCTION ACCESS TRACK
	PERIMETER FENCELINE
	CABLE ROUTE
	WATERCOURSES
	FOOTPATH

SITE INFRASTRUCTURE:	
	SSE INDICATIVE COMPOUND AREA
	SECURITY GATE (PERIMETER FENCE)
	CCTV CAMERA
	PV DISTRIBUTION BOARD
	STRING INVERTER

SERVICES:	
	ELE HV 11kV
	O/H 11kV LINE
	ELE HV 11kV

VEGETATION:	
	EXISTING VEGETATION
	PROPOSED VEGETATION

INDICATIVE PV MODULE LAYOUT:	
	FULL TABLE PV ARRAY
	QUARTER TABLE PV ARRAY

Status: **PLANNING**

Project: **STOURHEAD SOLAR FARM**

Client:



The National Trust, PO Box 7083, Stratford-Upon-Avon, CV37 9XE
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enquiries@nationaltrust.org.uk www.nationaltrust.org.uk



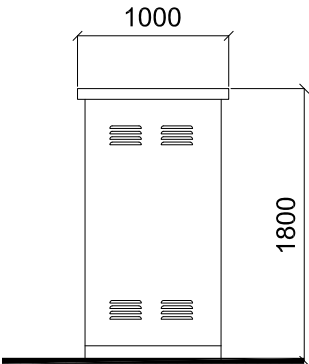
UTU DESIGN LTD
Unit B2, The Courtyard, Severn Drive, Tewkesbury Business Park, GL20 8GD
+44(0) 1684 850016 design@utu.design www.utu.design

Drawing Title: **STOURHEAD SOLAR FARM
PROPOSED SITE LAYOUT PLAN**

Drawn: RR	Checked: ZH	Drawing Scale: 1:1000	Site: A1
Project Code: AEM053-	Drawing Number: PL-01	Revision: 06	

Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	14.10.25	First Issue	RR	ZH
02	28.10.25	Drawing Number changed	RR	ZH

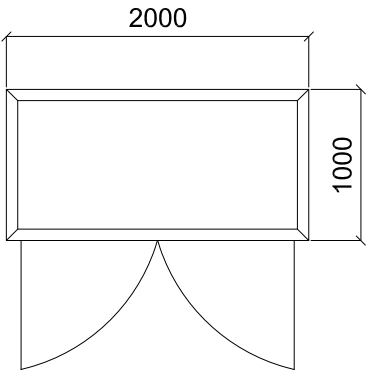
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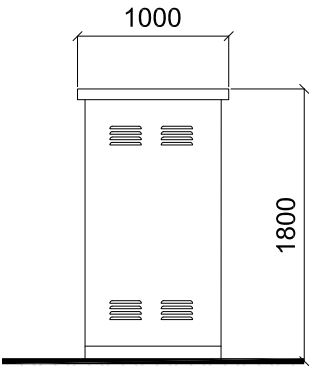
SIDE ELEVATION



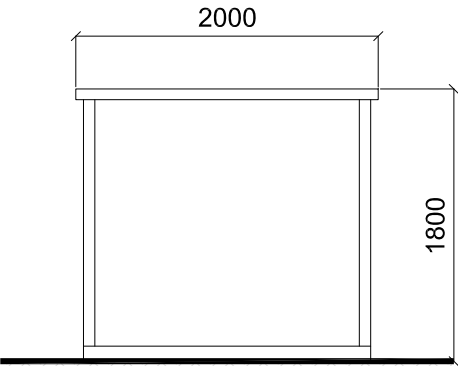
FRONT ELEVATION



PLAN



SIDE ELEVATION



REAR ELEVATION

Status:

PLANNING

Project:

STOURHEAD SOLAR FARM

Client:



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Designer:



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Drawing Title: STOURHEAD SOLAR FARM
DISTRIBUTION BOARD

Drawn: RR	Checked: ZH	Drawing Scale: 1:50	Size: A3
Project Code: AEM053	Drawing Number: SD01	Revision: 02	



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Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	14.10.25	First Issue	RR	ZH
02	28.10.25	Drawing Number changed	RR	ZH

LEGEND:



SIDE ELEVATION

FRONT ELEVATION

Status:

PLANNING

Project:

STOURHEAD SOLAR FARM

Client:



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Drawing Title:

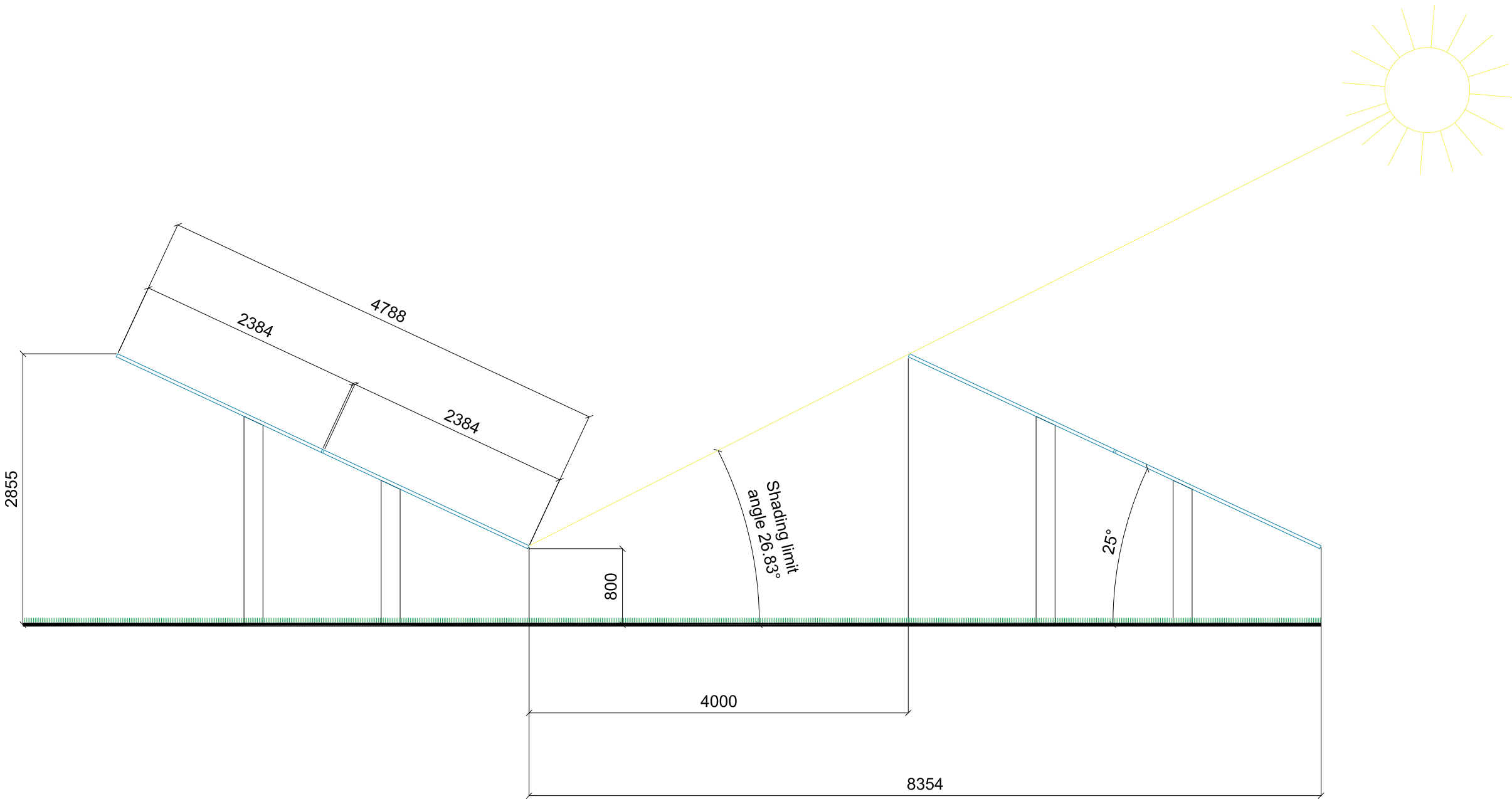
STOURHEAD SOLAR FARM
STRING INVERTER

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Revisions:				
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01	14.10.25	First Issue	RR	ZH
02	28.10.25	Panel Spec and Drawing Number changed	RR	ZH

LEGEND:



Status:

PLANNING

Project:

STOURHEAD SOLAR FARM

Client:



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Designer:

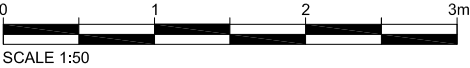


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+44(0) 1584 850010 design@utu.design www.utu.design

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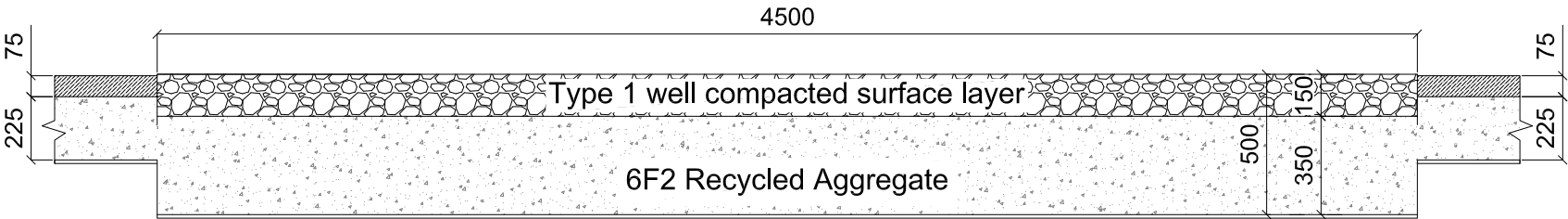
**STOURHEAD SOLAR FARM
PV DETAIL**

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AEM053	SD03	02	



Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	14.10.25	First Issue	RR	ZH
02	28.10.25	Drawing Number changed	RR	ZH

LEGEND:



Status:

PLANNING

Project:

STOURHEAD SOLAR FARM

Client:



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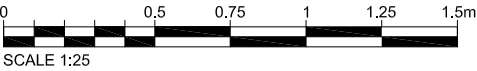


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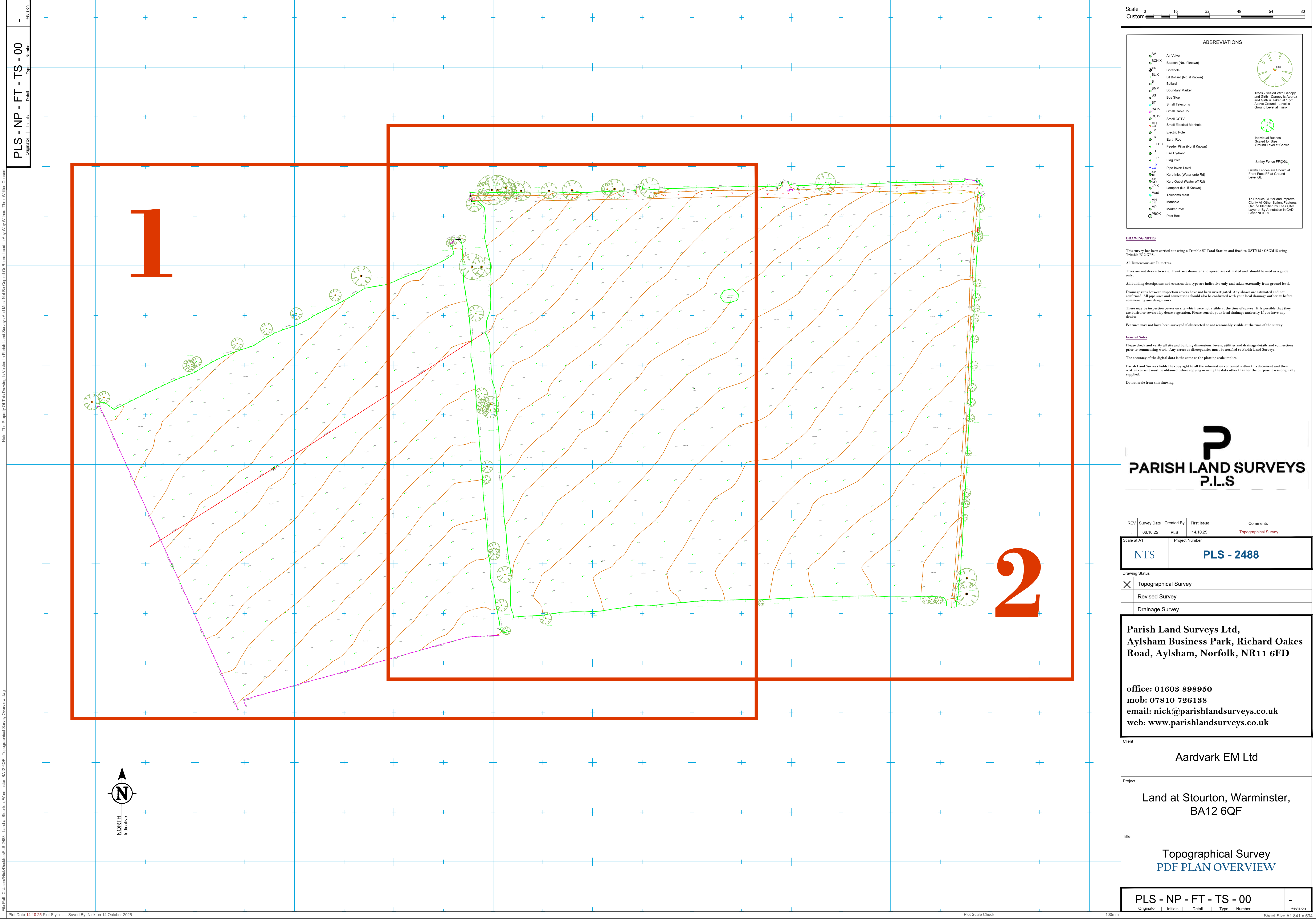
Drawing Title:

**STOURHEAD SOLAR FARM
ACCESS TRACK**

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Appendix B: Topographical Survey

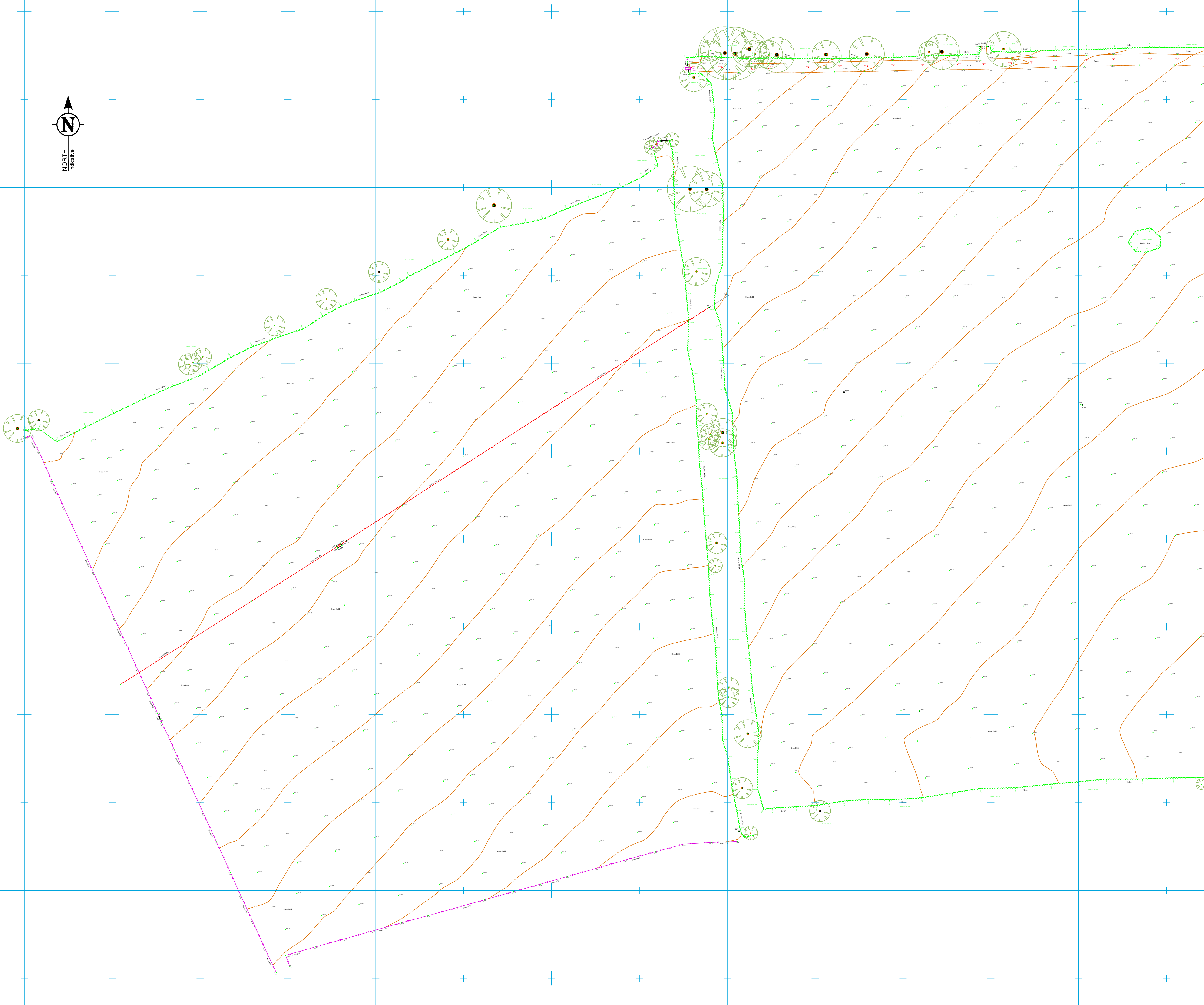
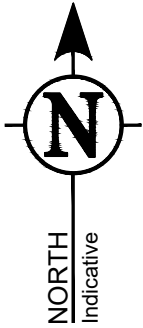


Note: The Property Of This Drawing Is Vested In Parish Land Surveys And Must Not Be Copied Or Reproduced In Any Way Without Their Written Consent.

File Path: C:\Users\Nick\Desktop\PLS-2488 - Land at Stourton, Warmminster, BA12 6QF - Topographical Survey Overview 1.dwg

Plot Date: 14.10.25 Plot Style: ---- Saved By: Nick on 14 October 2025

PLS - NP - FT - TS - 01					Revision
Originator	Initials	Detail	Type	Number	
-					



Scale 0 10 20 30 40 50
1:500

ABBREVIATIONS

AV	Air Valve	
BN	Beacon (No. if known)	
BH	Borehole	
BL	Li Bolland (No. if Known)	
B	Bollard	
BMP	Boundary Marker	
BS	Bus Stop	
BT	Small Telecoms	
CATV	Small Cable TV	
CCTV	Small CCTV	
MH	Small Electrical Manhole	
EP	Electric Pole	
ER	Earth Rod	
FEED	Feeder Pillar (No. if Known)	
FH	Fire Hydrant	
FL	Flag Pole	
IL	Pipe Invert Level	
IO	Kerb Inlet (Water onto Rd)	
KS	Kerb Outlet (Water off Rd)	
LP	Lampost (No. if Known)	
Mast	Telecoms Mast	
MH	Manhole	
MP	Marker Post	
PBOX	Post Box	

Trees - Scaled With Canopy and Girth - Canopy is Approx and Girth is Taken at 1.5m Above Ground - Level is Ground Level at Trunk

Individual Bushes Scaled for Size Ground Level at Centre

Safety Fence FF@GL

Safety Fences are Shown at Front Face FF at Ground Level GL

To Reduce Clutter and Improve Clarity All Other Salient Features Can be Identified by Their CAD Layer or By Annotation in CAD Layer NOTES

DRAWING NOTES

This survey has been carried out using a Trimble S7 Total Station and fixed to OSTN15 / OSGM15 using Trimble R12 GPS.

All Dimensions are in metres.

Trees are not drawn to scale. Trunk size diameter and spread are estimated and should be used as a guide only.

All building descriptions and construction type are indicative only and taken externally from ground level.

Drainage runs between inspection covers have not been investigated. Any shown are estimated and not confirmed. All pipe sizes and connections should also be confirmed with your local drainage authority before commencing any design work.

There may be inspection covers on site which were not visible at the time of survey. It is possible that they are buried or covered by dense vegetation. Please consult your local drainage authority if you have any doubts.

Features may not have been surveyed if obstructed or not reasonably visible at the time of the survey.

General Notes

Please check and verify all site and building dimensions, levels, utilities and drainage details and connections prior to commencing work. Any errors or discrepancies must be notified to Parish Land Surveys.

The accuracy of the digital data is the same as the plotting scale implies.

Parish Land Surveys holds the copyright to all the information contained within this document and their written consent must be obtained before copying or using the data other than for the purpose it was originally supplied.

Do not scale from this drawing.

PARISH LAND SURVEYS P.L.S

REV	Survey Date	Created By	First Issue	Comments
-	06.10.25	PLS	14.10.25	Topographical Survey

Scale at A1	Project Number
1:500	PLS - 2488

Drawing Status

☒	Topographical Survey
☐	Revised Survey
☐	Drainage Survey

Parish Land Surveys Ltd,
Aylsham Business Park, Richard Oakes
Road, Aylsham, Norfolk, NR11 6FD

office: 01603 898950
mob: 07810 726138
email: nick@parishlandsurveys.co.uk
web: www.parishlandsurveys.co.uk

Client

Aardvark EM Ltd

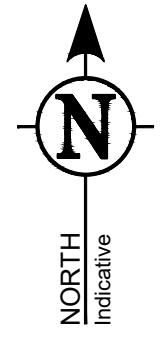
Project

Land at Stourton, Warmminster,
BA12 6QF

Title

Topographical Survey
PDF PLAN 1

PLS - NP - FT - TS - 01	-
Originator	Revision
Initials	
Detail	
Type	
Number	



Drawing Status	
X	Topographical Survey
	Revised Survey
	Drainage Survey

office: 01603 898950
mob: 07810 726138
email: nick@parishlandsurveys.co.uk
web: www.parishlandsurveys.co.uk

Project	Land at Stourton, Warminster, BA12 6QF
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PLS - NP - FT - TS - 02					-
Originator	Initials	Detail	Type	Number	Revision

Appendix C: Greenfield Runoff Rates

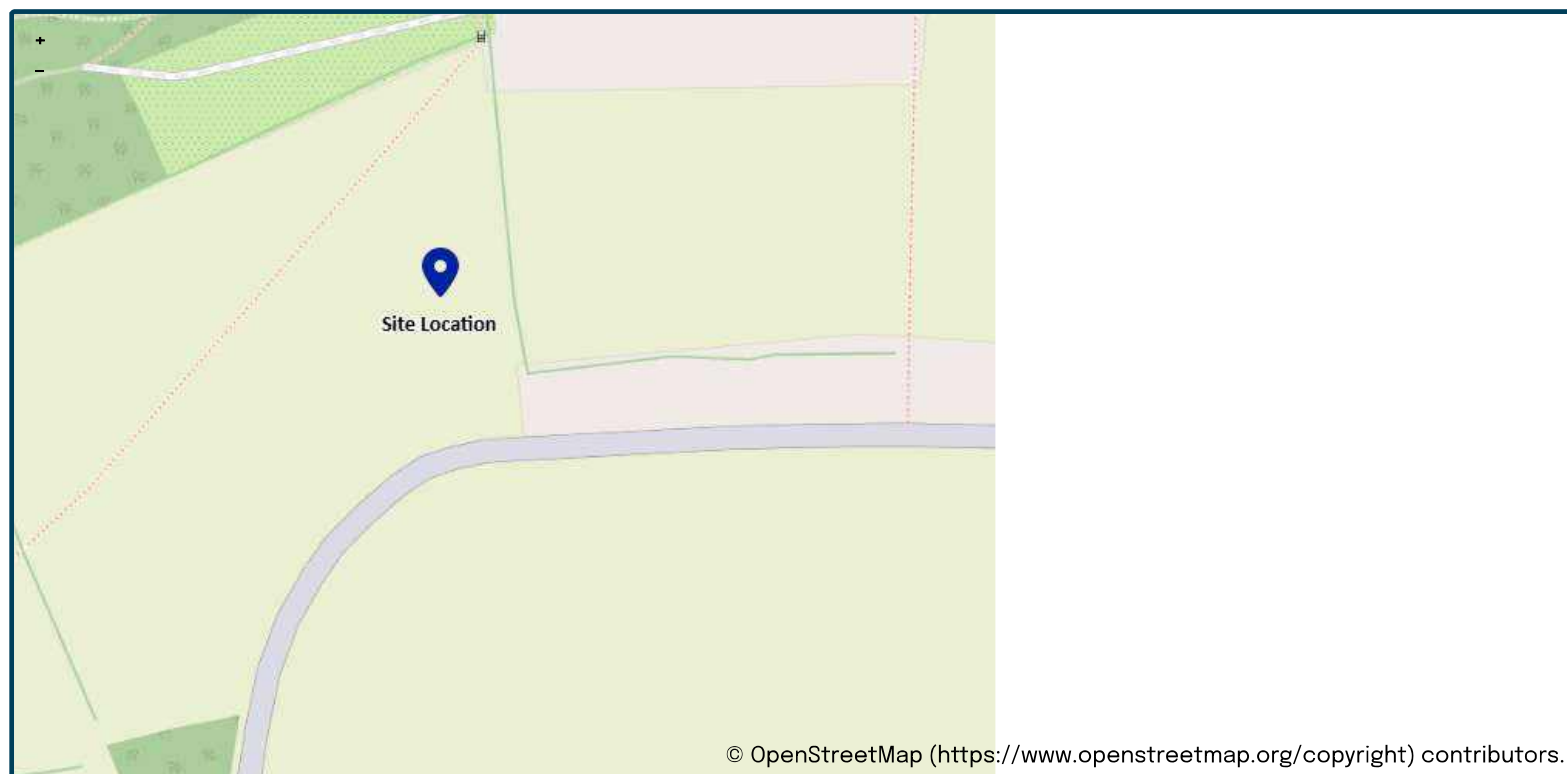
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	04/12/2025
Calculated by	Rosie Wagstaff
Reference	C2899
Model version	2.2.2

Location

Site name	Stourhead
Site location	Stourton



Site easting (British National Grid)	377659
Site northing (British National Grid)	133647

Site details

Total site area (ha)	1.47	ha
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Greenfield runoff

Method

Method	FEH statistical (2025)
--------	------------------------

FEH statistical (2025)

	<u>My value</u>	<u>Map value</u>
SAAR9120 (mm)	1006	mm
BFIHOST19scaled	0.667	
QMed-QBar conversion	1.075	1.075
QMed (l/s)	4.3	l/s
QBar (FEH statistical 2025) (l/s)	4.7	l/s

Growth curve factors

	<u>My value</u>	<u>Map value</u>
Hydrological region	8	8
1 year growth factor	0.78	
2 year growth factor	0.93	
10 year growth factor	1.49	
30 year growth factor	1.95	
100 year growth factor	2.43	
200 year growth factor	2.78	

Results

Method	FEH statistical (2025)	
Flow rate 1 year (l/s)	3.6	l/s
Flow rate 2 year (l/s)	4.3	l/s
Flow rate 10 years (l/s)	6.9	l/s
Flow rate 30 years (l/s)	9.1	l/s
Flow rate 100 years (l/s)	11.3	l/s
Flow rate 200 years (l/s)	13.0	l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent ‘zero’ figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.2) developed by HR Wallingford and available at [uksuds.com](https://www.uksuds.com) (<https://www.uksuds.com/>). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [uksuds.com/terms-conditions](https://www.uksuds.com/terms-conditions) (<https://www.uksuds.com/terms-conditions>). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Appendix D: FEH Data

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Appendix E: SuDS Maintenance Schedule

Table E1: Permeable Paving Operation and Maintenance Requirements

Schedule	Required Action	Frequency
Regular maintenance	Brushing and vacuuming.	Three times per year or as required based on observations or manufacturers' recommendations.
Occasional maintenance	Stabilise and mow contributing and adjacent areas.	As required.
	Removal of weed.	As required.
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required.
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required.
	Rehabilitation of surface and upper sub-structure	As required (if infiltration performance is reduced as a result of significant clogging).
Monitoring	Initial inspection	Monthly for three months after installation.
	Inspect for evidence of poor operation and/or weed growth. If required take remedial action.	3-Monthly, 48 hours after large storms.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually.
	Monitor inspection chambers	Annually.