

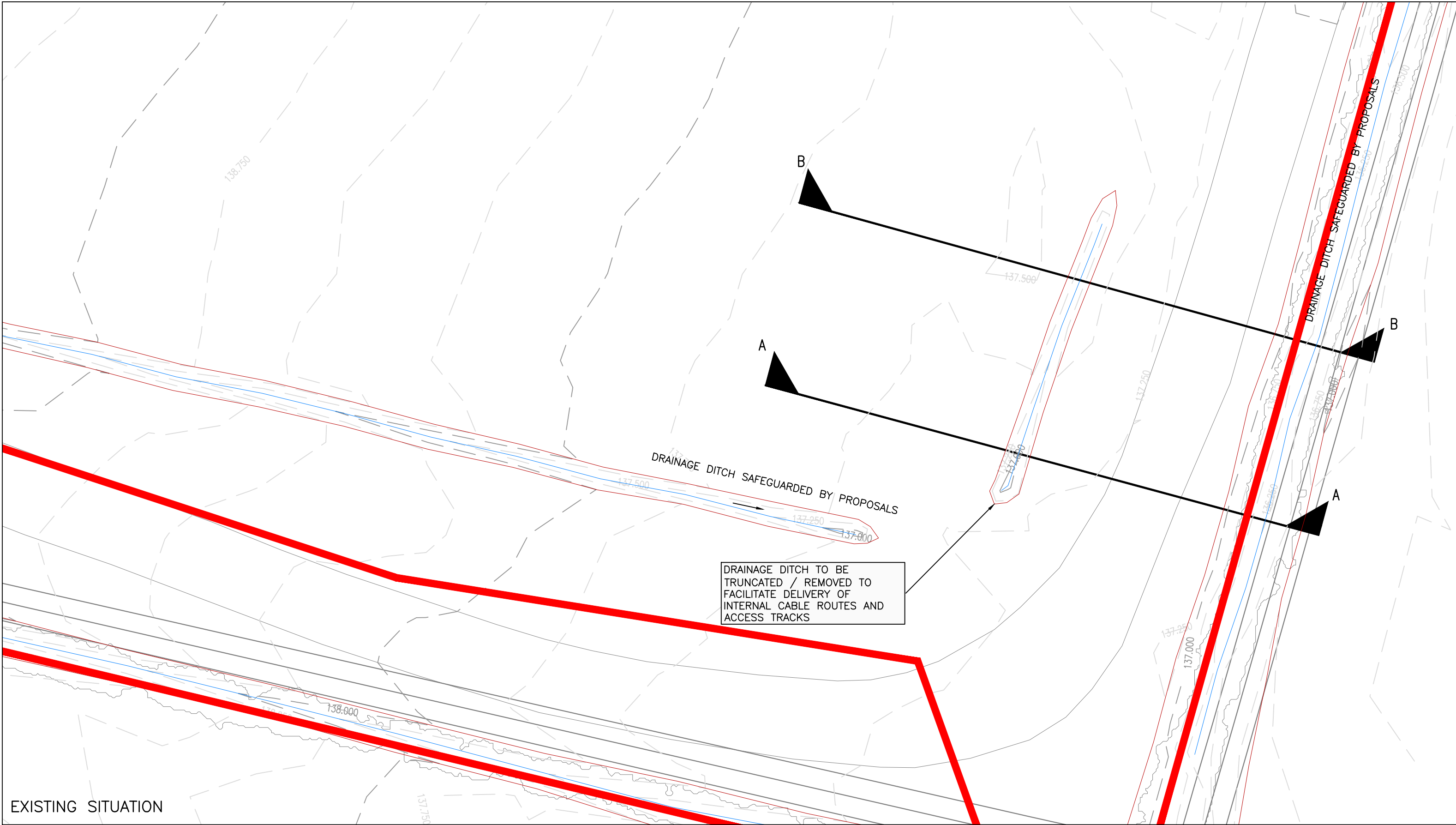


Proposed Solar Farm, Land off Heath Road, Bagworth, Leicestershire Flood Risk Assessment

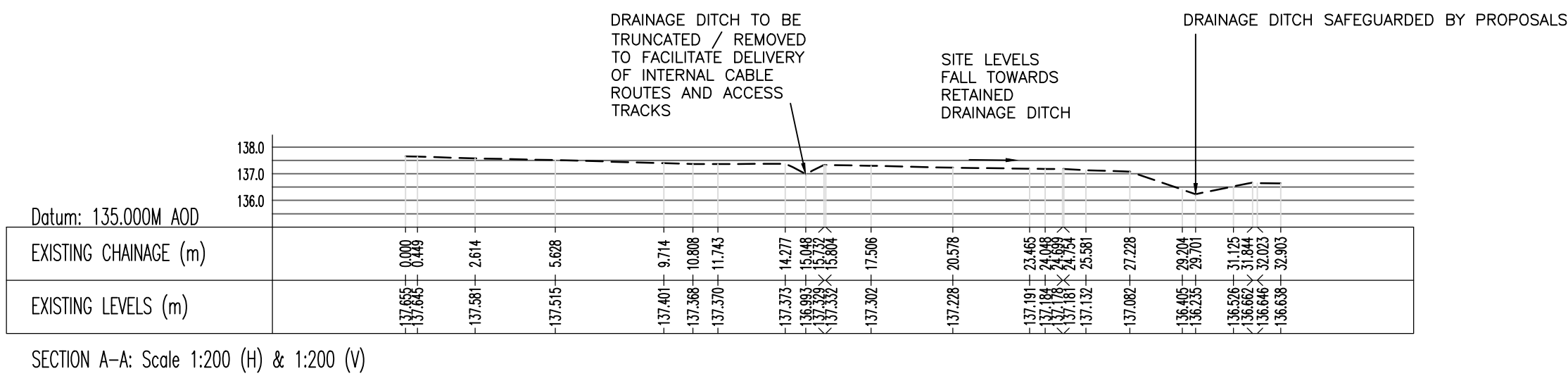
Part 2 of 2 Appendices E – J

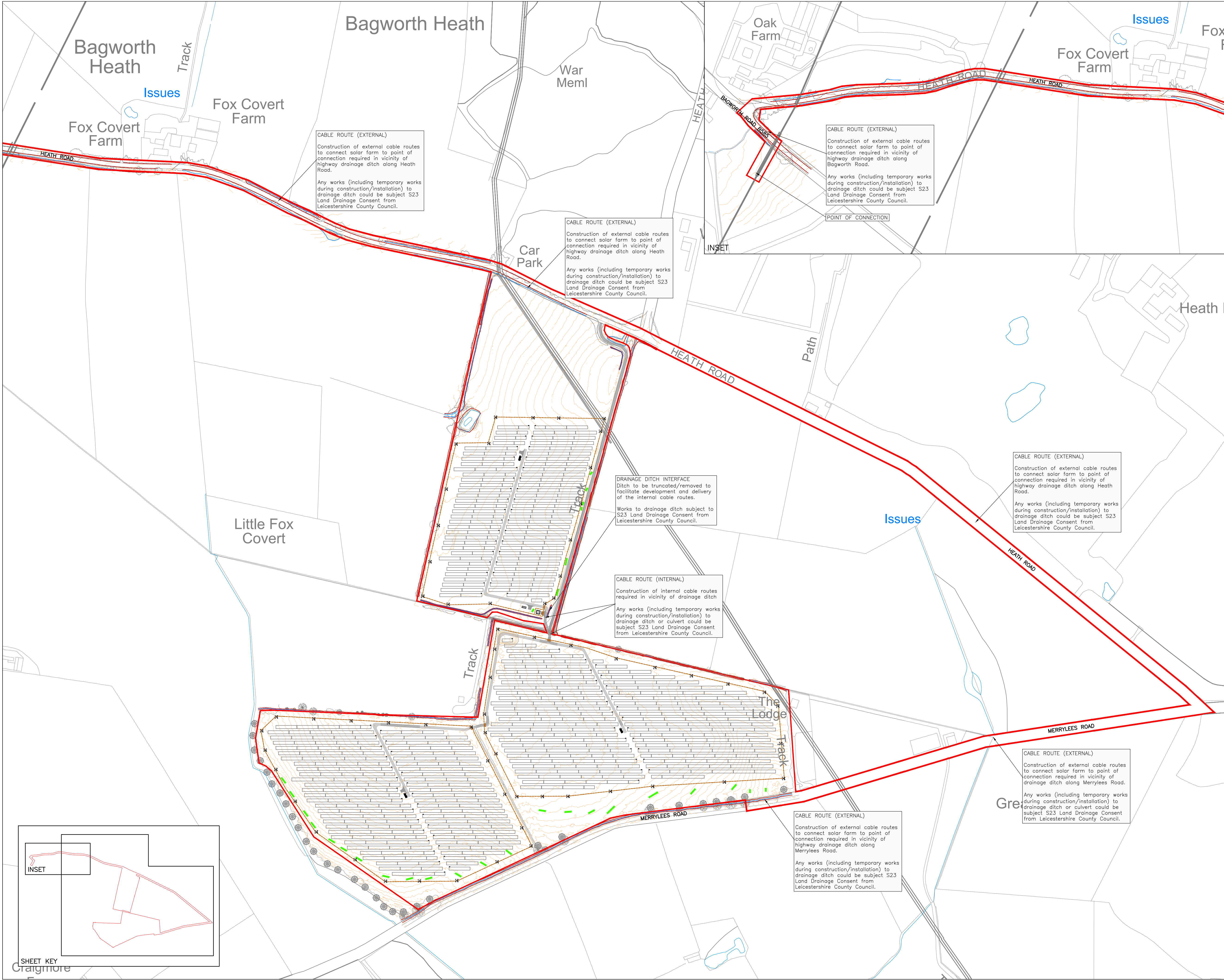
Document Ref: R444-DOC02-FRA-Issue 2

Renewable Connections
June 2025



EXISTING SITUATION





Status

FOR PLANNING

This drawing is produced for the purposes of supporting a planning application and should not be relied upon for tender, pricing, or construction purposes.

0m100m

Scale 1:2,500

KEY

Site Boundary

Top of Bank

Bottom of Bank

NOTES

1. Drawing based on the Site Layout, produced by Renewable Connections, Drawing No. RCN1008-PL-01 Rev 11 (Dated: 12/02/25)

2. Drawing based on Topographical Survey, produced by AIMS Ltd, Drawing No. HR/DWD/HV/001 003 005 006 (Dated: 17/01/2024).

CABLE ROUTE NOTES

3. Route of internal and external cable routes subject to detailed design. External cable route to connect the solar farm to the point of connection would require works within the highway and verge of adjacent roads. It is anticipated the majority of the cable route would be laid with open cut construction techniques.

4. On completion of the works the cable trench would be backfilled and the land reinstated to its former condition.

5. The cable routes do not change the original surface of the land, nor change the land levels and would therefore have no impact on existing hydrology once constructed.

6. The cable itself would be underground and due to the nature of the cable being sealed within a cable jacket/sheath and running through ducting it would be resistant and unaffected by any flood events and the build-up of water around the ducting.

7. Thus, the proposed cable route would not be affected by any existing flooding nor would it impact on any existing flood patterns and thus would not increase flood risk elsewhere.

8. Any works (including temporary works during construction/installation) to any drainage ditch or culvert could be subject S23 Land Drainage Consent from Leicestershire County Council. Requirement for consent to be assessed when location and design of the cable routes are finalised. Indicative locations/areas where consent could be required are labelled on the drawing.

Rev	Date	Description	Drawn	Check
#	10/12/25	First Issue.	BF	

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Stratton Park House, Wamborough Road, Swindon, SN3 4HG

Client

Renewable Connections

Project

Heath Road Solar Farm

Drawing Title

Land Drainage Consent Overview Plan

Sheet 1 of 1

Drawing No.	R444/06	Rev	#
E-Mail:	bfox@pfaconsulting.co.uk		A1

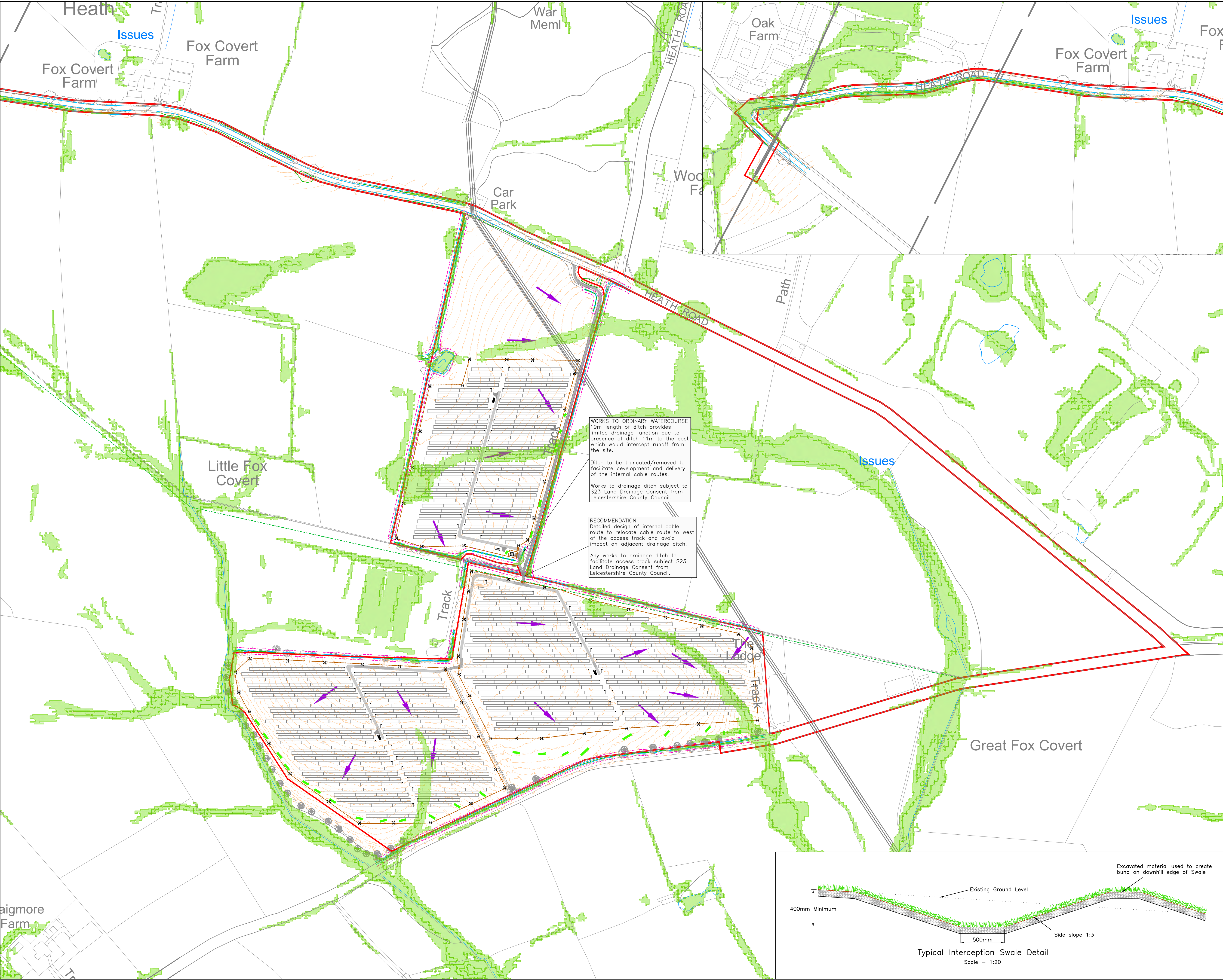
PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	R444: Heath Road - Solar Farm Pre-development Runoff	
Date 10/09/2024 File	Designed by RS Checked by	
Causeway		
Source Control 2020.1.3		
ICP SUDS Mean Annual Flood Input Return Period (years) 1 Soil 0.450 Area (ha) 19.000 Urban 0.000 SAAR (mm) 664 Region Number Region 4 Results l/s QBAR Rural 78.5 QBAR Urban 78.5 Q1 year 65.1 Q1 year 65.1 Q30 years 153.7 Q100 years 201.7		
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PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	R444: Heath Road - Solar Farm Post-development Runoff	
Date 10/09/2024 File	Designed by RS Checked by	
CausewaySource Control 2020.1.3		
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- Site Boundary
- Existing Vegetation
- Proposed Native Woodland Infill
- Proposed Hedgerow Trees
- Proposed Native Hedgerow
- Proposed Native Scrub
- Shade Tolerant Grassland
- Species Rich Grassland
- Retained Arable
- Retained Arable Over-sown with Wild Bird Seed Mix
- Public Right of Way (PRoW)
- Solar Arrays
- Access Tracks
- Built Infrastructure
- Security Fence

client			
Renewable Connections			
project title			
Heath Road Solar Farm			
drawing title			
Illustrative Landscape Strategy			
date	19 NOVEMBER 2024	drawn by	CMA
drawing number	edp7530_d014d	checked	VPo
scale	Refer to scale bar @ A3	QA	Gyo



WORKS TO ORDINARY WATERCOURSE
19m length of ditch provides limited drainage function due to presence of ditch 11m to the east which would intercept runoff from the site.
Ditch to be truncated/removed to facilitate development and delivery of the internal cable routes.
Works to drainage ditch subject to S23 Land Drainage Consent from Leicestershire County Council.

RECOMMENDATION
Detailed design of internal cable route to relocate cable route to west of the access track and avoid impact on adjacent drainage ditch.
Any works to drainage ditch to facilitate access track subject to S23 Land Drainage Consent from Leicestershire County Council.

Status

FOR PLANNING

This drawing is produced for the purposes of supporting a planning application and should not be relied upon for tender, pricing, or construction purposes.

0m100m

Scale 1:2,500

KEY

Site Boundary

Security Fence

Overland Flow Routes

Top of Bank

Bottom of Bank

Interception Swales

3m Watercourse Buffer

Flood Risk Constraints

Risk of Flooding from Surface Water Dataset (Current)

Mid Century Climate Change +20% ('Central' allowance for the 2050s epoch (2040–2080))

Note: +25% Climate Change allowance represents the pluvial 'design flood' for development with a lifetime between 2061 and 2100.

NOTES

1. Drawing based on the Site Layout, produced by Renewable Connections, Drawing No. RCN1008–PLE–01 Rev 11 (Dated: 12/02/25)

2. Surface water flood risk zones based on extract from the Environmental Agency Website (Ref: rafsw_cc01_4bandPolygon.shp, downloaded June 2025)

3. Drawing based on Topographical Survey, produced by AMS Ltd, Drawing No. HR/DWD/HV/001 003 005 006 (Dated: 17/01/2024)

4. Total Length of interception swales provided = 265.00m. Per metre length of interception swale, at 3/4 full (incorporating a 0.1m freeboard), 0.42m³ of storage is available. Therefore the available depression storage provided within the interception swales is 111.3m³. The depression storage volume would increase to 180.2m³.

5. Contains public sector information licensed under the Open Government Licence V3.0.

Rev	Date	Description	Drawn	Check
#	13/06/23	First Issue.	RS	IS
A	05/03/24	Site Boundary Update	JS	
B	12/09/24	New Layout and updated Swales	RS	BF
C	28/10/24	Ditch note added.	BF	
D	05/06/25	Layout Revision. Flood extents updated to latest EA data.	SLC	BF
E	11/12/25	Interception swales depth increased from 0.3m - 0.4m to provide additional depression storage as requested by the LLFA	BF	

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Stratton Park House, Wanborough Road, Swindon, SN3 4HG

Client

Renewable Connections

Project

Heath Road Solar Farm

Drawing Title

Preliminary Drainage Strategy

Sheet 1 of 1

Drawing No. R444/04

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Rev E

A1

HEATH ROAD SOLAR FARM

SURFACE WATER DRAINAGE CHECK SHEET

1. Surface Water Drainage Arrangements

- 1.1. Swales are proposed at the low points of the development site to intercept overland flows. The locations of the Swales are shown on the attached drawing (PFA Consulting, Drawing Number R444/04 Rev D).
- 1.2. Upon commissioning of the Solar Park the Site Manager should complete **Table A**.

Table A: Commissioning Checklist

Drainage Feature	Constructed as designed (Y/N)	Planted with covering vegetation (Y/N)	Notes

- 1.3. During any regular maintenance visits (at intervals no greater than 3 months) the Maintenance Engineer should complete the first column of the Drainage Checklist in the Inspection Report below. The Inspection Report will then be passed onto the Site Manager who will then arrange for the appropriate actions to be initiated.

2. Maintenance Regime

- 2.1. A guide to the general swale maintenance regime is set out in **Table B**.

Table B – Swale Maintenance Procedures

Maintenance Schedule	Required Action
Regular Maintenance (Quarterly)	Litter and debris removal.
	Grass cutting or animal grazing – to retain grass height to site owner's specification.
	Manage other vegetation and remove nuisance plants.
	Inspect infiltration surfaces for ponding, compaction, and silt accumulation. Record areas where water is ponding for > 48 hours.
	Inspect surface for silt accumulation.
Occasional Maintenance	Check for poor vegetation growth due to lack of sunlight or dropping of leaf litter, and cut back adjacent vegetation where possible.
(Annually)	Re-seed areas of poor vegetation growth. Alter plant types to better suit conditions, if required.

Inspection Report

To be completed at approximately 3 month intervals

Date of Inspection:

Inspector:

DRAINAGE CHECKLIST

	Y/N	Actions
1. Do any parts of the swales contain standing water?		
2. Is any water overflowing from the swales?		
3. Are some of the swales overgrown or silted up?		
4. Has there been recent excessive rainfall or local flooding issues near the site?		
5. Are any rivulets (small channels) forming or is there soil erosion due to rainwater?		

Notes:

- a) If YES to Question 3 additional maintenance may be required.
- b) If YES to Questions 4 and 5 then further investigation may be required and consultation with a drainage engineer would be prudent.