



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

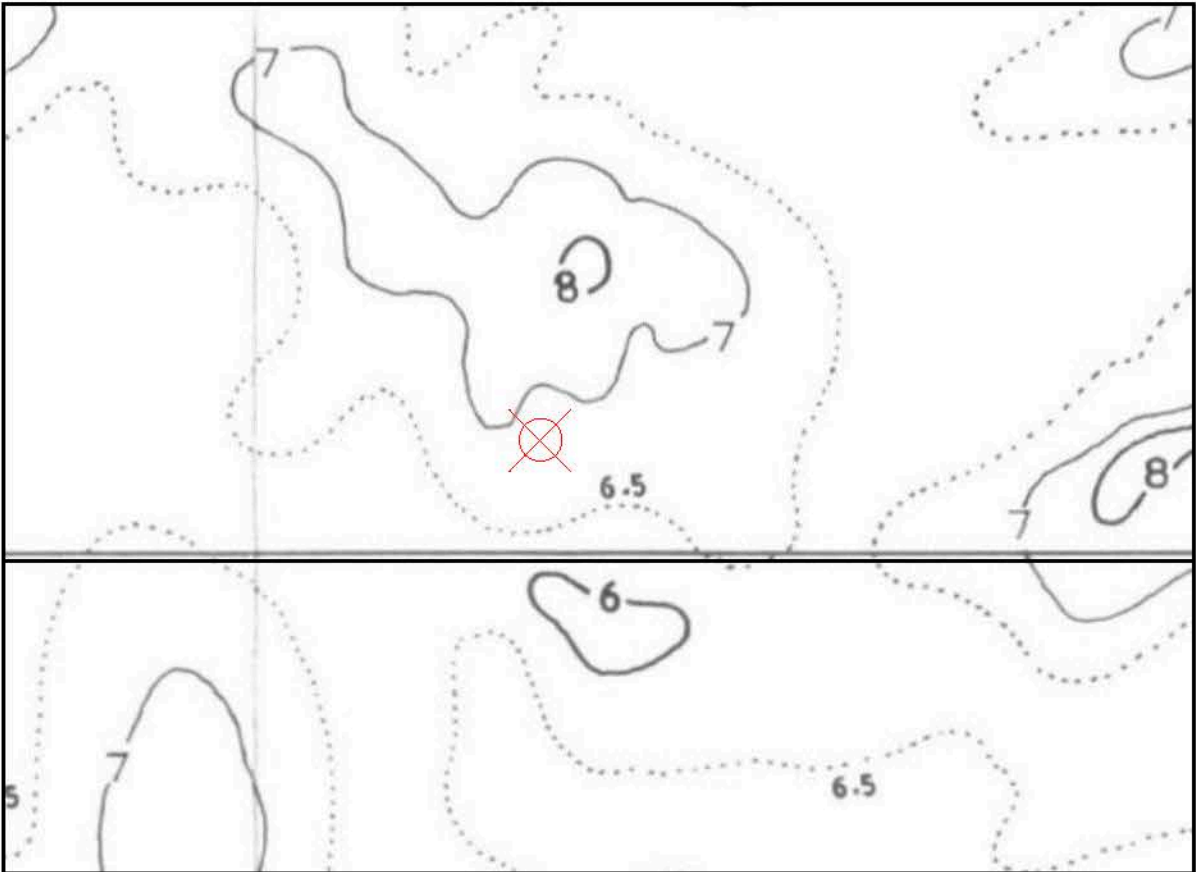
Part 2 of 2 Appendices D – G

Document Ref: R444-DOC02-FRA-Issue 1

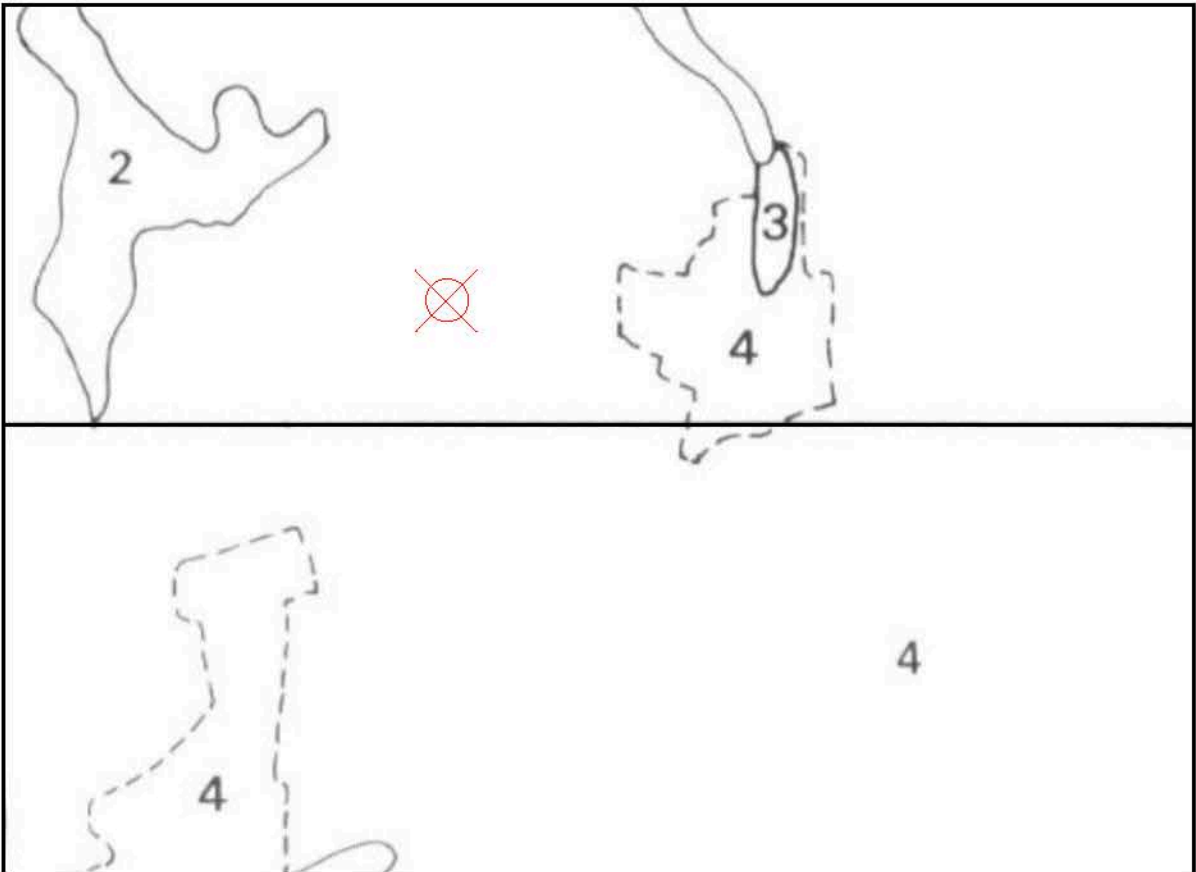
Renewable Connections
June 2025



Location Plan



Standard Average Annual Rainfall (SAAR) (in hundreds of mm)



Winter Rain Acceptance Potential (WRAP)

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.

NOT TO SCALE

NOTES

1. Standard Average Annual Rainfall (SAAR) and Winter Rain Acceptance Potential (WRAP) map extracts shown on this drawing are reproduced from the maps contained in Volume V of the Flood Studies Report - NERC:1975.

Soil Classification			
Soil Class (WRAP)	Soil Index (I ₀ H)	SPR (FEH)	SI (ADAS)
1	0.15	10	0.1
2	0.30	30	0.5
3	0.40	37	0.8
4	0.45	47	1.0
5	0.50	53	1.3

Rev	Date	Description	Drawn	Check
1	28.10.24	First Issue	RS	BF
A	04.06.25	Template updated	SLC	BF

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

Client

Renewable Connections

Project

Heath Road Solar Farm

Drawing Title

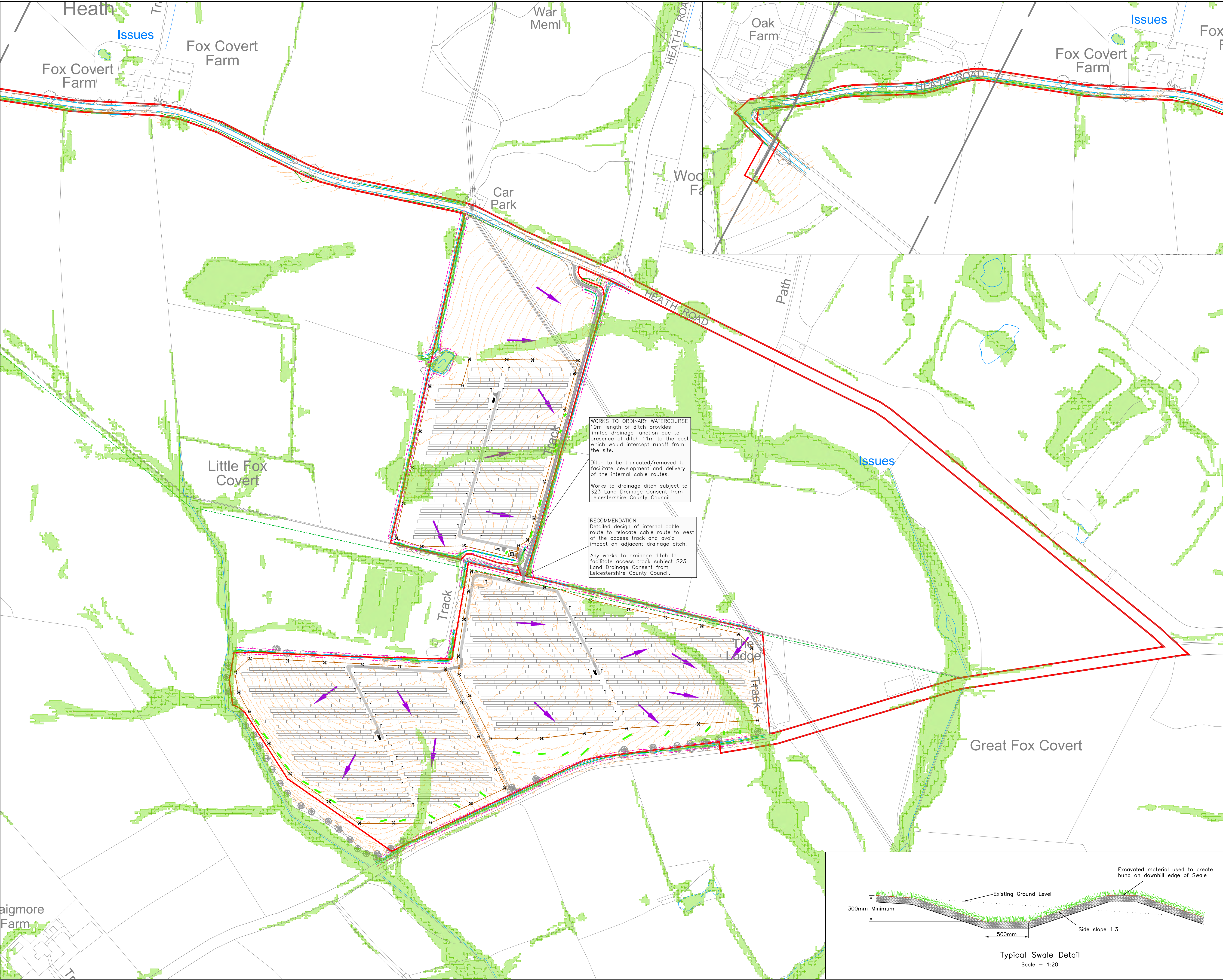
SAAR and WRAP Maps

Sheet 1 of 1

Drawing No.	R444/03	Rev	A
E-Mail:	scosgrove@pfapl.com		A3

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		
ICP SUDS Mean Annual Flood Input Return Period (years)1Soil0.450 Area (ha) 19.000Urban0.001 SAAR (mm)664Region NumberRegion 4 Results1/s QBAR Rural78.5 QBAR Urban78.6 Q1 year65.2 Q1 year65.2 Q30 years154.0 Q100 years201.9		
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Status

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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 (2040–2060))

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: rofsw_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 swales provided = 265.00m. Per metre length of swale, at $\frac{1}{4}$ full, 0.22m³ of storage is available. Therefore the total available storage provided within the swales is 58.30m³.

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

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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.

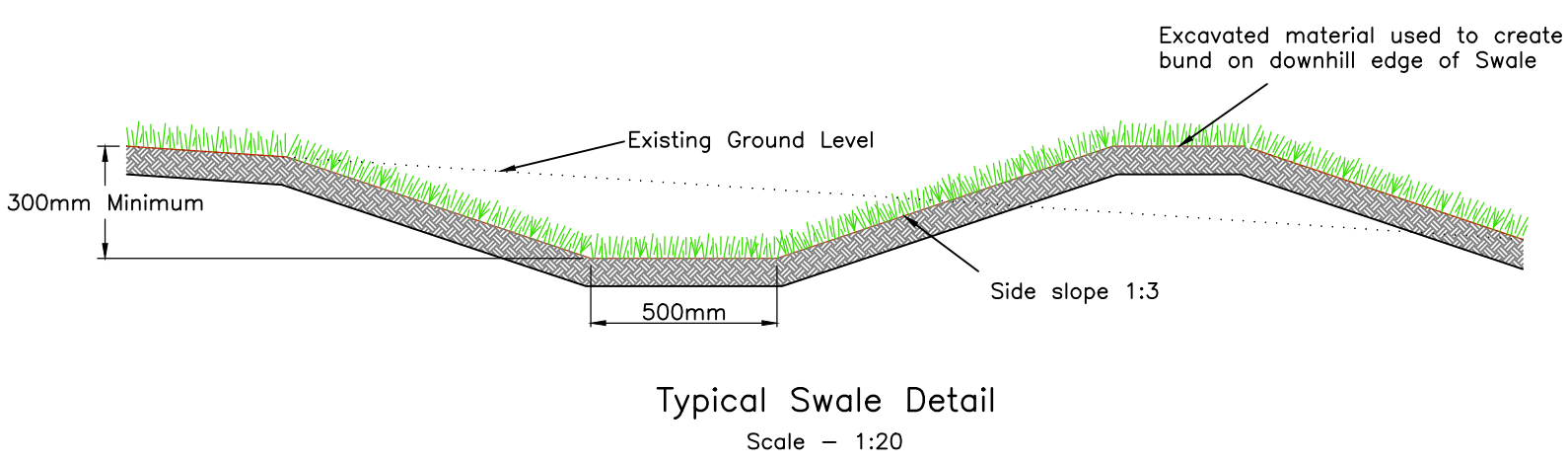
R444/04

Rev

D

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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.