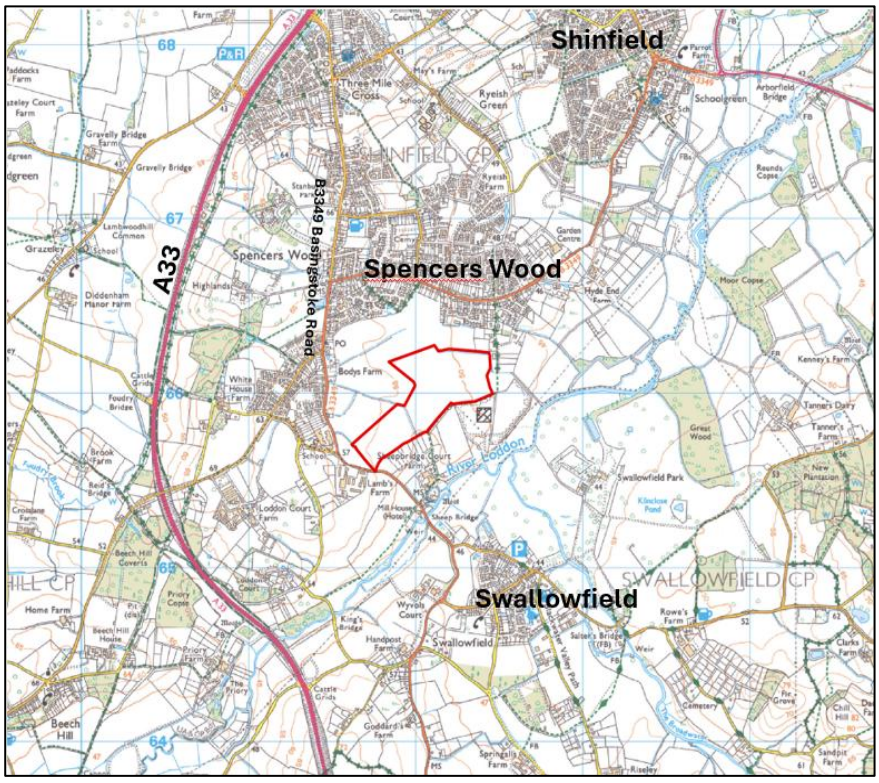
Drainage Strategy

Spencer Wood Solar Farm,
Land North Of Sheepbridge Court Farm,
Basingstoke Road, Swallowfield, RG7 1PT

Planning permission: 232653
Planning Condition: 6



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APPENDICES

DOCUMENT INFORMATION & CONTROL

INFORMATION

GTPUK/Our Project Reference	2021-0085_Spencers Wood Solar Farm
Local Planning Authority:	Wokingham Council
Local Planning Authority Reference:	232653
Planning Condition:	6

CONTROL

Date	Version	Author	Notes
20/09/2025	1	JJ	
05/12/2025	2	JJ	Swale calculations added. Existing site drains included.

Glossary

CEMP	Construction Environmental Management Plan
FRDA	Flood Risk and Drainage Assessment by Ashfield Solutions Group

1. INTRODUCTION

1.1 This Drainage Strategy sets out the drainage measures to be set in place for the development of a solar farm at Land North Of Sheepbridge Court Farm, Basingstoke Road, Swallowfield, RG7 1PT. It has been produced as per the requirements of Condition 6 attached to planning permission 232653 and Ashfield Solutions Group Flood Risk & Drainage Assessment ref: 155622-F01 (FRDA) dated 08/03/2023 submitted with the planning applications (Appendix 1).

1.2 Wokingham Borough Council drainage department was satisfied with the details and calculations within the FRDA (Appendix 5) and it is understood that policy have not changed since that time. The condition of the site has not changed since that time. Section 4.5 of the Flood Risk & Drainage Assessment (FRDA)concluded that no drainage scheme was required and recommended the provision of Swales with a combined length of 443 metres as betterment along the eastern and southern boundaries of the site as set out in Figure 1 below:

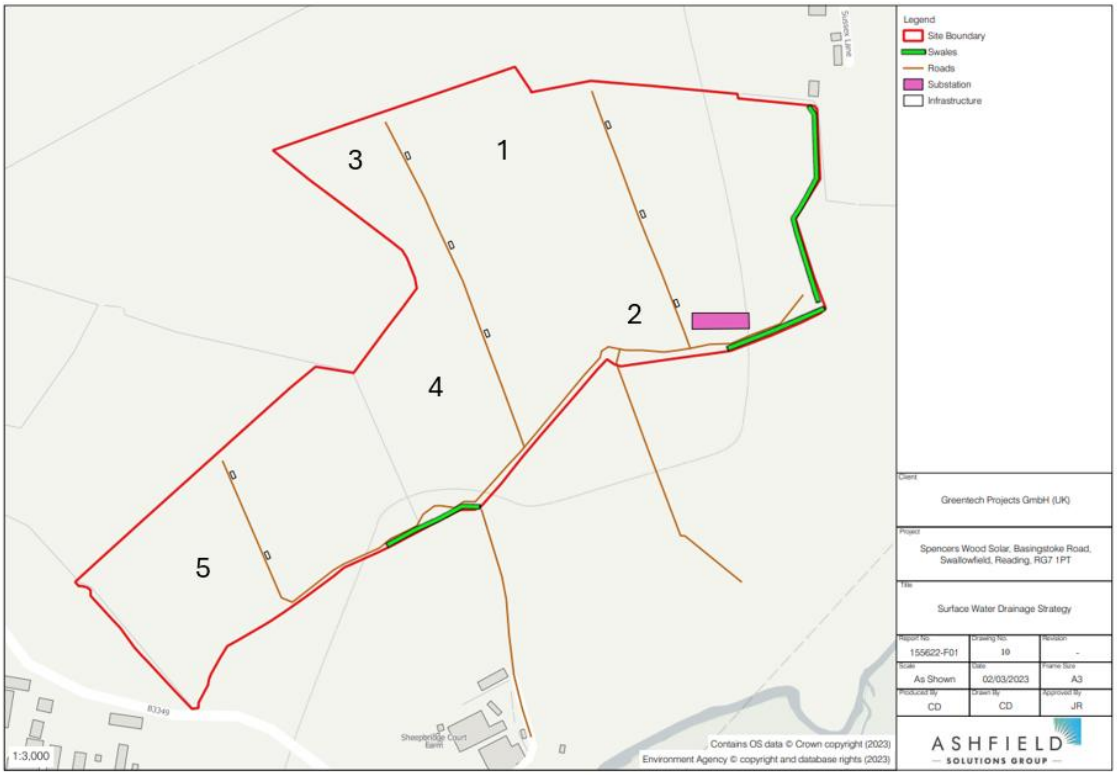

Figure 1: Plan 155622-F01showing the location of proposed swales in green.

1.3 Section 4.5 of the FRDA concluded that with a depth of 0.3 metres and base width of 0.5 metres the total storage volume of the swales would be approximately 66.5m^3 which was calculated as having a greater storage volume than the Quick Storage Estimate volume of additional runoff calculated at 45m^3 by the increase in impermeable area on the site. The FRDA also recommended that the proposed access road should be permeable in nature and continue to allow infiltration.

1.4 There is an existing open land drain along the south-west boundary of Field 5 (the western field) and which is shown on Ordnance survey maps. This is the highest part of the site and drains a neighbouring farm (simply passing along the western boundary) so is not of relevance to the proposal or the drainage of fields on the site.

1.5 There are 2 other existing ditches along the north-east boundary and north section of the south-east boundary of Field 5 that form a t-junction before flowing into a pond at the south-west corner of Field 4. These have been marked on the greentech Site Landscape Plan Rev.9. From the pond this drain then exits the site via a culvert beneath the existing farm track leading into the site and re-emerging along the east side of existing farm track and then flows alongside the track to the farmyard and beyond.

2. DRAINAGE STRATEGY

2.1 As set out in Section 4.4 of the FRDA run-off from the panels and the substations will discharge directly onto the ground adjacent to and beneath the structures where it will soak into the ground at the same rate that it presently does in its existing greenfield state. Similarly, any rainwater falling onto the permeable stone areas will soak into the ground beneath at the same rate that it presently does. Thus, the existing hydrological regime will be maintained without resulting in any increased volume or rate of run-off.

2.2 This drainage strategy sets out to implement the recommendations of the FRDA and as a precautionary measure will provide an additional 235 metres of swale length to bring the total swale length to approximately 678 metres. The additional swale length extends parallel to the south boundary to the operational site access entrance and alongside the track extending from Field 4 in to Field 5 (but not connecting with the existing drains to ensure that the swales fill to full capacity before overflowing into the drains).

2.3 The swales are shown on the site landscape plan Rev. 9 attached to Appendix 2 and set out in Figure 2 below:

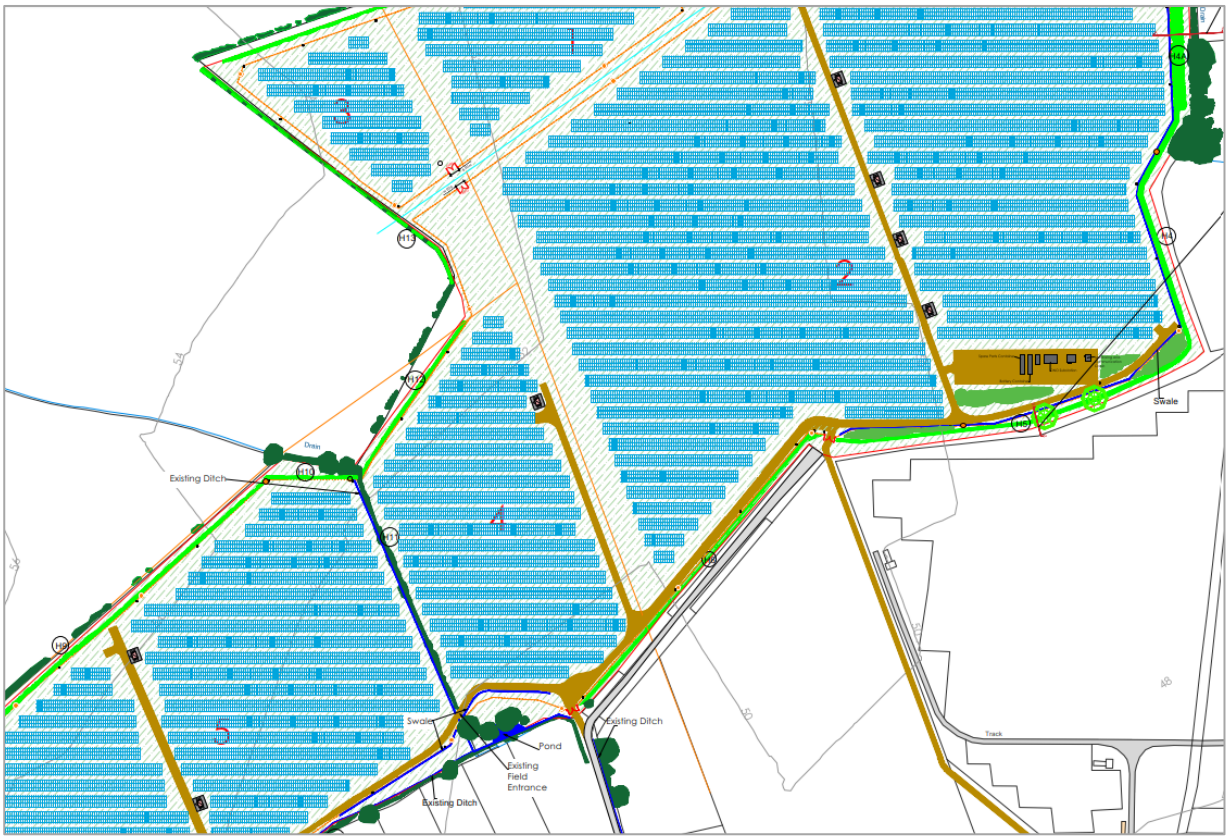

Figure 2: Extract of Greentech Site Landscape Plan Rev. 9 showing ditches and proposed swales

2.4 The swales to be installed will be 0.5 metres wider than the FRDA recommendations, as set out in the plans attached to Appendix 3 and set out in Figure 3 below:

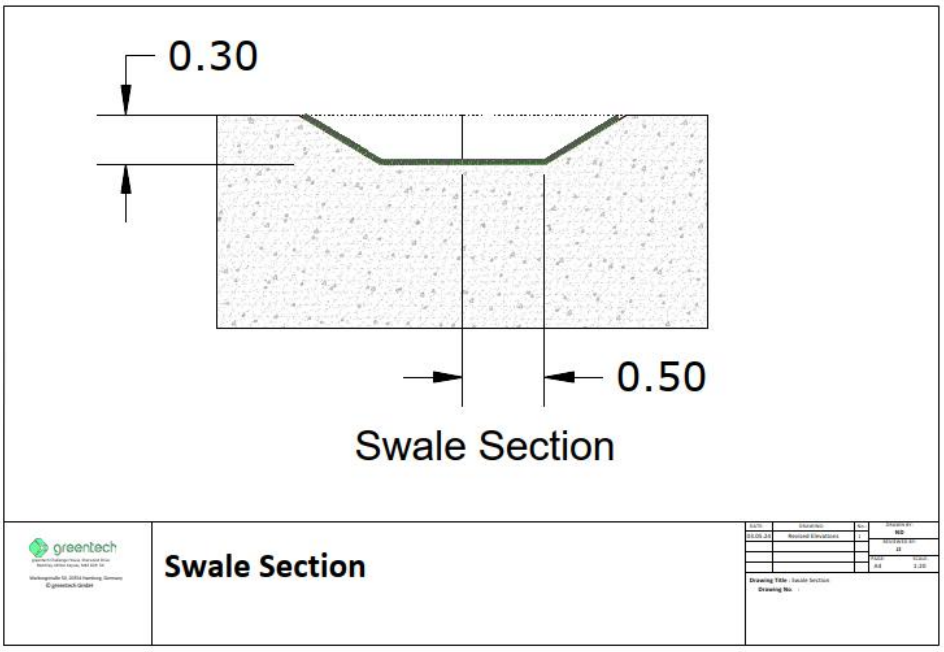

Figure 3: Swale cross-section

2.5 The swales are therefore twice as wide (1 metre width at the base) as that specified by the Ashfield FRDA and have a cross-section of 0.45 square metres. The storage capacity of the swales is therefore 303 cubic metres. The swales have also been placed so as to intercept water flows before reaching the drains or land south of the site. New hedgerow and shrub planting along the south boundary will also be beneficial in retaining water.

2.6 The tracks will be formed of MOT Type 3 subbase laid on top of a geotextile membrane as set out in the plans attached to Appendix 4 and set out in Figure 4 below:

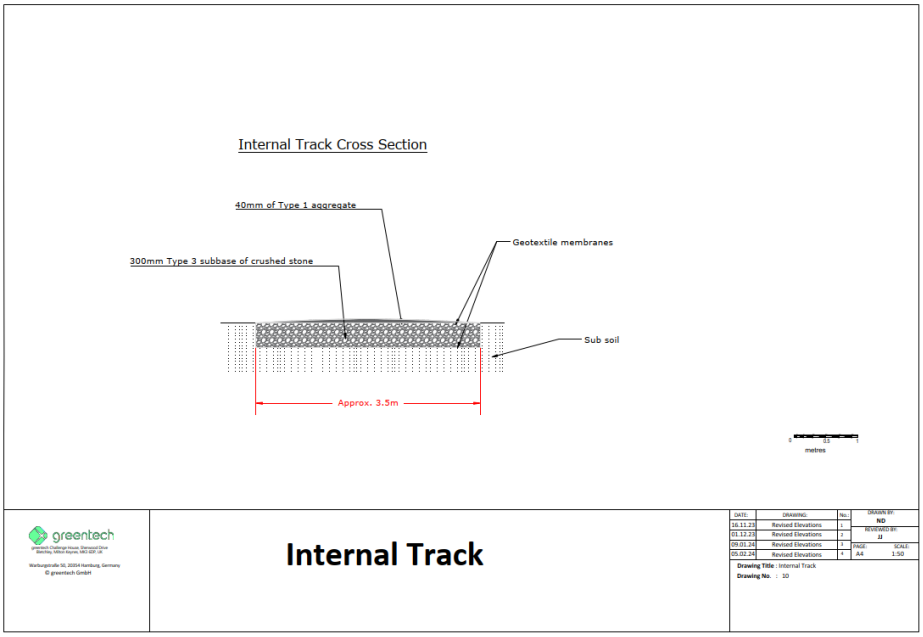

Figure 4: Track cross-section using MOT Type 3 subbase.

2.7 All other hardstandings within the site will be girded by infiltration trenches 0.5 metres wide and 0.5 metres deep as set out in Figure 5 below. The infiltration trenches will be closed systems and will not drain off-site.

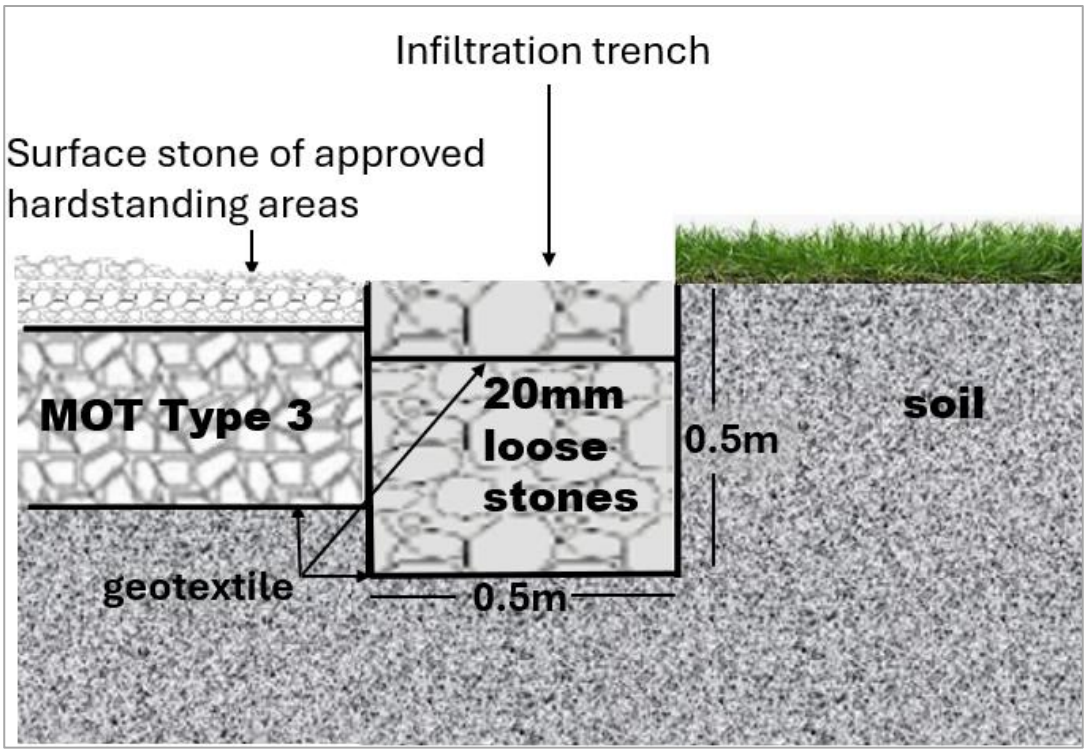

Figure 5: Infiltration Trench

3. POST CONSTRUCTION MANAGEMENT

3.1 As set out in the approved CEMP the fencing, construction compound and solar farm field track will be installed first, with the field track being utilised by the telehandlers delivering framework and panels to the fields in a sequential manner. This method of assembly operation seeks to minimise ground disturbance and compaction. However, as a precaution low disturbance subsoiling/chisel ploughing will be undertaken across the fields following completion of works followed by overseeding of bare patches and disturbed areas in accordance with the approved landscape planting plan.

Examples of solar panels stacked ready for installation onto framework.

3.2 Regular maintenance activity will be undertaken as set out below to ensure that drainage features remain functional and fit for purpose throughout the lifetime of the solar farm:

Activity	Frequency	Typical Tasks
Routine Regular Maintenance	Monthly	• Litter picking • Swale/ditch inspection, removal of branches etc.
Meadow Maintenance	6 monthly	• Manage the grassland wildflower meadow in accordance with LEMP. 2 cuts per year to maintain a healthy sward. Inspect quality of sward.
Occasional maintenance	Annually	• Silt, branch and debris clearance of swales, infiltration tranches, and ditches. • Re-seeding wild flower meadows where any bare patches are identified.
Remedial maintenance	Repairs and maintenance as required	• track repair, erosion repair of swales and ditches, removal of silt build up.

Appendix 1:

Ashfield Solutions Flood Risk & Drainage Assessment

Appendix 2:

greentech Site/Landscape Plan Rev.9

Appendix 3:

Swale Cross-section

Appendix 4:

Track Cross-section

Appendix 5:

Wokingham Borough Council Drainage Consultation Reponse to Planning Application