

Soil Management Plan (SMP).

Clump Solar Farm, Northeast of Earl Shilton, Leicester.

Revision	Date	Description	Prepared by	Approved by
1.0	OCT 2025	First Issue	P Mitchell	<i>PJ Mitchell</i>

1. Introduction

This Soil Management Plan outlines strategies to protect, manage, and enhance soil resources on a solar photovoltaic (PV) farm site. It focuses on preventing soil erosion during construction, maintaining stable ground conditions throughout the asset's lifespan, and supporting vegetation that reduces erosion and improves biodiversity.

2. Site Description

Location	Clump Solar Farm, Leicester
Site area	Total hectares 76 hectares
Land use	Typically, agricultural
Topography	Flat or gently sloping
Soil characteristics	Drainage, texture, compaction risk
Environmental features	Watercourses, hedgerows, public footpaths

The Development consists of the construction of a solar farm which includes the following elements:



Solar photovoltaic (PV) modules on ground mounted metal racking.
Fencing.
Access gates.
Transformer stations.
Excavations and cable laying
Storage containers.
CCTV camera poles.
Access tracks
Substation.

The Development would cover an area of approximately 76 hectares (ha) and have a capacity of approximately 50 megawatts (MW AC).

There will be a minimum clearance of 2.5 metre (m) between PV array rows.

3. Objectives

Minimise soil disturbance	Contractors, sunnerg
Prevent erosion	Contractors, sunnerg
Maintain ground stability	Design, Contractors, sunnerg
Supporting vegetation and biodiversity	Design, Contractors, sunnerg
Prevent contamination	SMT HSE Contractors, sunnerg

4. Soil Assessment

Baseline	Topsoil depth, soil texture, compaction, organic matter, erosion risks result from Geotechnical surveys
Construction risks	Pile tests and Panel foundations, trenching, substations, access routes, compounds.

Reference:

- GEA Geotechnical survey technical results
- POT Results

5. Phasing Plan for Soil Management

1. Pre-Implementation Phase

- **Soil Survey & Mapping** – Identify soil types, depth, organic matter content, compaction zones, and drainage patterns.
- **Risk Assessment** – Highlight erosion-prone areas, contamination risks, and compaction hazards.
- **Zoning** – Divide the site into manageable units based on soil characteristics and intended use.

2. Stripping & Storage Phase

- **Topsoil Removal** – Strip topsoil separately from subsoil, following the mapped zones.
- **Stockpiling** – Store soils in low, stable mounds to prevent compaction and nutrient loss.

- **Erosion Control** – Use silt fences, cover crops, or mulching to protect exposed soil.

3. Active Use / Disturbance Phase

- **Traffic Management** – Restrict heavy machinery to designated haul routes.
- **Seasonal Timing** – Avoid soil disturbance during wet periods to reduce compaction.
- **Interim Cover** – Use temporary vegetation or geotextiles to protect bare soil between works.

4. Restoration & Improvement Phase

- **Soil Replacement** – Return topsoil in the reverse order of stripping, ensuring correct depth.
- **Soil Conditioning** – Add organic matter, lime, or gypsum as needed to restore structure and fertility.
- **Revegetation** – Establish permanent vegetation to stabilise soil and enhance biodiversity.

5. Monitoring & Maintenance Phase

- **Regular Testing** – Check organic matter, pH, and compaction annually.
- **Adaptive Management** – Adjust practices based on monitoring results and seasonal conditions.
- **Long-Term Protection** – Maintain ground cover and avoid overgrazing or excessive tillage.

6. Soil strip, storage and management of stockpiles

1. All area that requires topsoil strip will be marked by the surveyor as agreed by the landowner and the client and as per agreed design.
2. A calibrated Cat scan will be used to be used to check locate and mark services.
3. The existing ground and turf will be stripped to a depth of 250mm by the excavator 360 using the grading bucket, and the material will be relocated using a 6-ton wheeled forward tipping dumper placed in a designated area within the project boundary this will start to form the road to the compound.

4. The stockpiles will be in a safe area away from any hazards such as overhead powerlines and water courses.
5. The stockpile or bund will be managed by the 360 excavators to ensure the bund is consolidate and no higher than 3 metres and a 1.3 batter to ensure the topsoil bund is stable.
6. Where sub soils and topsoil are removed an additional separate stockpile will be created and the same methodology will be used to manage the stockpile.
7. Based on the length of the project, the bunds will either be seeded to ensure stability or encourage natural weed growth.
8. During wet weather works will be stopped to ensure the area doesn't become unworkable for future works
9. Erosion protection, seeding, and run off control, The stockpile will be situated and located away from streams and dykes or any water course.
10. Exclusion zones and plant movement restrictions to prevent compaction will be implemented by the site management team and that segregation will be implemented.

Soil Replacement / Reinstatement Methodology

1. At the end of the project any areas that have been stripped of topsoil that are not permeant access will be reinstated to its original condition.
2. The areas will be reinstated from the furthest point of the site to the access point in a controlled condition to ensure any areas that are reinstated are not disturbed after reinstatement.
3. The removal all aggregates and teram used and to ensure all has been removed by the site manager.
4. All top weeds grass and vegetation will be removed from the stockpile before loading.
5. The excavator 360 will load the subsoil into the 6-ton forward tipping dumper and will tip on to the stripped area in a methodical way as planned on site.
6. This subsoil will be placed throughout the stripped areas and tracked in
7. The excavator 360 will then load the topsoil into the 6-ton dumper and will tip on top of the sub soil once tipped checked for any debris that was missed during the initial strip.
8. The sunnerg site management team will ensure that visual checks are carried out on all reinstatement works.

9. All topsoil will be tracked in using the excavator 360 to ensure that the areas is level and as same standard or better than original conditions.

Sunnergs approved methodology will be managed, supervised and adhered to during both the construction and decommissioning phases, as required by the condition.

Stockpile locations: Red



7. Soil Conservation & Erosion Control

Control	Responsibility
Strip topsoil only where necessary	Sub/Contractors, sunnerg
Store soil in controlled bunds	Sub/Contractors, sunnerg

Protect stockpiles	Sub/Contractors, sunnerg
Limit vehicle movement	Sub/Contractors, sunnerg
Install silt controls	Design, Contractors, sunnerg
Use ground protection mats	Sub/Contractors, sunnerg
Re-seed disturbed areas	Sub/Contractors, sunnerg

8. Operational:

Control	Responsibility
Maintain vegetation	SMT Contractors' Operation and Maintenance
Use shade-tolerant grass mixes	SMT Contractors' Operation and Maintenance
Maintain watercourse buffers	SMT Contractors' Operation and Maintenance

9. Vegetation & Groundcover

Control	Responsibility
Establish diverse grassland mix	Contractors' Operation and Maintenance
Seasonal mowing or managed grazing	Contractors' Operation and Maintenance
Avoid heavy equipment	Contractors' Operation and Maintenance
Control	Responsibility
Avoid unnecessary fertilizers	Contractors' Operation and Maintenance
Apply compost only if required	Contractors' Operation and Maintenance
Keep chemicals away from water features	SMT HSE Contractors' Operation and Maintenance

10. Fertility & Nutrient Management

Control	Responsibility
Maintain vegetation	Design, Contractors, sunnerg

Use shade-tolerant grass mixes	Design, Contractors, sunnerg
Maintain watercourse buffers	Design, Contractors, sunnerg

11. Contamination Prevention

Control	Responsibility
Spill kits and protocols	Contractors, sunnerg
Drip trays	Contractors, sunnerg
Bunded oil equipment	Contractors, sunnerg
Regular inspection of assets	Contractors, sunnerg HSE SMT

12. Access Roads & Compaction

Control	Responsibility
Use permeable stone	Design, Sunnerg Quality Control
Geotextile layers	Design, Contractors, sunnerg
Minimise heavy plant	Contractors, sunnerg
Aerate compacted soil if needed	Contractors, sunnerg

13. Cable Trench Management

Control	Responsibility
Excavate in dry conditions	Contractors, sunnerg
Separate topsoil and subsoil	Contractors, sunnerg
Backfill in layers	Contractors, Sunnerg Quality Control
Re-seed trenches promptly	Contractors, sunnerg Operation and Maintenance

14. Monitoring

Construction:	Daily/weekly and post-storm checks
Operational:	Quarterly checks and annual compaction review

15. Responsibilities

Site Manager:	Implementation
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Environmental Officer	Monitoring
Contractors:	Compliance
Maintenance team	Long-term care

16. Emergency Procedures

Emergency procedures must be implemented and tested during construction and Operations and Maintenance this includes washouts, spills, storm damage, and contamination discovery.

17. Continuous Improvement

Annual review and adoption of new best practices.

Appendix:

GEA Technical results

POT Results

Sunnerg trench design

Clump PV Design