

FLOOD RISK ASSESSMENT AND DRAINAGE IMPACT ASSESSMENT

LOCATION:

Studley Grange, Swindon

CLIENT:

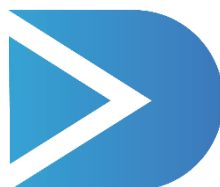
Heaton Planning

DOCUMENT REF:

24667-FRA-001

DATE:

July 2025



DART
ENGINEERS LTD
CIVIL AND STRUCTURAL
ENGINEERING

CONTENTS & AMENDMENT HISTORY

1.0 INTRODUCTION	4
1.1 SOURCES OF DATA	4
1.2 EXISTING SITE	4
1.3 PROPOSED DEVELOPMENT	6
1.4 FLOOD RISK PLANNING POLICY	6
1.5 OTHER RELEVANT POLICY AND GUIDANCE	7
2.0 POTENTIAL SOURCES OF FLOOD RISK.....	9
2.1 FLUVIAL FLOOD RISK	9
2.2 GROUNDWATER FLOOD RISK	10
2.3 FLOOD RISK FROM RESERVOIRS & LARGE WATERBODIES	10
2.4 FLOOD RISK FROM SEWERS.....	10
2.5 PLUVIAL FLOOD RISK	11
2.6 EFFECT OF DEVELOPMENT ON WIDER CATCHMENT	11
2.6.1 Development Drainage	11
3.0 FLOOD RISK MITIGATION	13
3.1 SITE ARRANGEMENTS	13
3.1.1 Sequential Arrangement	13
3.1.2 Finished Levels.....	13
4.0 CONCLUSIONS AND RECOMMENDATIONS	14
5.0 Drainage Impact Assessment.....	15
5.1 Proposed Development	15
5.2 Foul Water Drainage.....	15
5.3 Surface Water Drainage.....	15
5.3.1 Existing Site.....	15
5.3.2 Run Off Destination	16
5.3.3 Climate Change.....	17
5.3.4 Peak Flow Control	17
5.3.5 Designing for Exceedance	18
5.3.6 Operations and Maintenance	18
5.4 SUMMARY	19
6.0 APPENDICES	20
Appendix A – Site Location Plan	20
Appendix B – Indicative Compound Layout & Sections	20
Appendix C – Site Plan	20
Appendix D – Details (Security fence, CCTV, Unbound Stone Rd)	20
Appendix E – Proposed illustrative site layout	20
Appendix F – Proposed illustrative landscaping plan	20
Appendix G – Indicative Solar Panel detail	20

CONTENTS & AMENDMENT HISTORY

Revision	Description	Date	Author	Checked
A	First Issue	July 2025	H Dyson	A Dyson
B	Amended to suit new site location	February 2026	A Dyson	R Thacker
C	Amended to suit updated drawings	March 2026	O Mountain	R Thacker
D	Amended to LLFA objection	June 2026	A Dyson	R Thacker

1.0 INTRODUCTION

This Flood Risk Assessment (FRA) is compliant with the requirements set out in the National Planning Policy Framework (NPPF) and the associated Planning Practice Guidance. The FRA has been produced on behalf of Heaton Planning in respect of a planning application for the proposed solar farm.

Site Name	Studley Grange, Swindon
Location	Studley Grange Landfill Site, Hay Lane, Lydiard Tregoze, Wootton Bassett, Swindon, SN4 9QT
Application Site Area (ha)	6.5ha
Development Type	Energy infrastructure development
NPPF Vulnerability	Less Vulnerable
EA Flood Zone	Flood Zone 1
EA Office	Swindon
Local Planning Authority	Wiltshire

Table 1.1 - Site Summary

1.1 SOURCES OF DATA

This Flood Risk Assessment and Drainage Impact Assessment has been prepared using the following information:

- Site Location Plan and Red Line Boundary Plan
- Proposed Solar Farm Layout and Infrastructure Drawings
- Environment Agency Flood Map for Planning
- Environment Agency Risk of Flooding from Surface Water Mapping
- Environment Agency Reservoir Flood Mapping
- Wiltshire Council Strategic Flood Risk Assessment (SFRA)
- British Geological Survey Mapping
- Ordnance Survey Mapping
- Historic landfill and drainage records where available

This assessment has been prepared with reference to the confirmed application boundary and reflects the current proposed development layout.

1.2 EXISTING SITE

The application site is located at Studley Grange Landfill Site, Hay Lane, Lydiard Tregoze, Wootton Bassett, Swindon, SN4 9QT. The site lies to the west of Swindon and is accessed via the B4005.

The red line application boundary extends to approximately 6.5 hectares, as shown on the submitted location and layout plans.

The site comprises restored landfill which has been successfully revegetated and is currently managed as grazing grassland. The site benefits from an established vegetation cover which promotes interception, evapotranspiration and infiltration of rainfall.

The proposed development will retain the existing grassland cover beneath and between the solar arrays. No widespread stripping of vegetation or creation of extensive impermeable surfaces is proposed.

Existing drainage pathways associated with the historic landfill restoration scheme will be retained where practicable and reviewed during detailed design. A survey of existing drainage infrastructure will be undertaken prior to construction to confirm condition, connectivity and discharge arrangements.

The existing runoff regime is therefore considered to be comparable to a greenfield drainage response notwithstanding the site's historic landfill use.

The site is generally level with gentle variations in topography but does slope top the south east. Surrounding land uses comprise agricultural land and rural infrastructure.

There are watercourses located in the wider vicinity of the site, however no open watercourses pass directly through the application boundary.

Existing surface water drainage is understood to discharge via historic drainage infrastructure associated with the former landfill, subject to confirmation during detailed design.



Figure 1.1 - Site Location

1.3 PROPOSED DEVELOPMENT

The proposed development comprises a ground-mounted solar photovoltaic (PV) array with associated access tracks, inverter stations, transformer compound, control cabin and ancillary infrastructure.

No residential, commercial, welfare, or amenity facilities are proposed as part of the development.

The development does not include any permanent occupied buildings requiring foul drainage connections.

1.4 FLOOD RISK PLANNING POLICY

National Planning Policy Framework

The NPPF sets out the Government's national policies on different aspects of land use planning in England in relation to flood risk. Planning Practice Guidance is also available online.

The Planning Practice Guidance sets out the vulnerability to flooding of different land uses. It encourages development to be located in areas of lower flood risk where possible and stresses the importance of preventing increases in flood risk off site to the wider catchment area.

The Planning Practice Guidance also states that alternative sources of flooding, other than fluvial (river flooding), should also be considered when preparing a Flood Risk Assessment.

This Flood Risk Assessment is written in accordance with the NPPF and the Planning Practice Guidance.

Flood Zones

The Flood Zone Map for Planning has been prepared by the Environment Agency. This identifies areas potentially at risk of flooding from fluvial or tidal sources. An extract from the mapping is included as Figure 1.2 below.

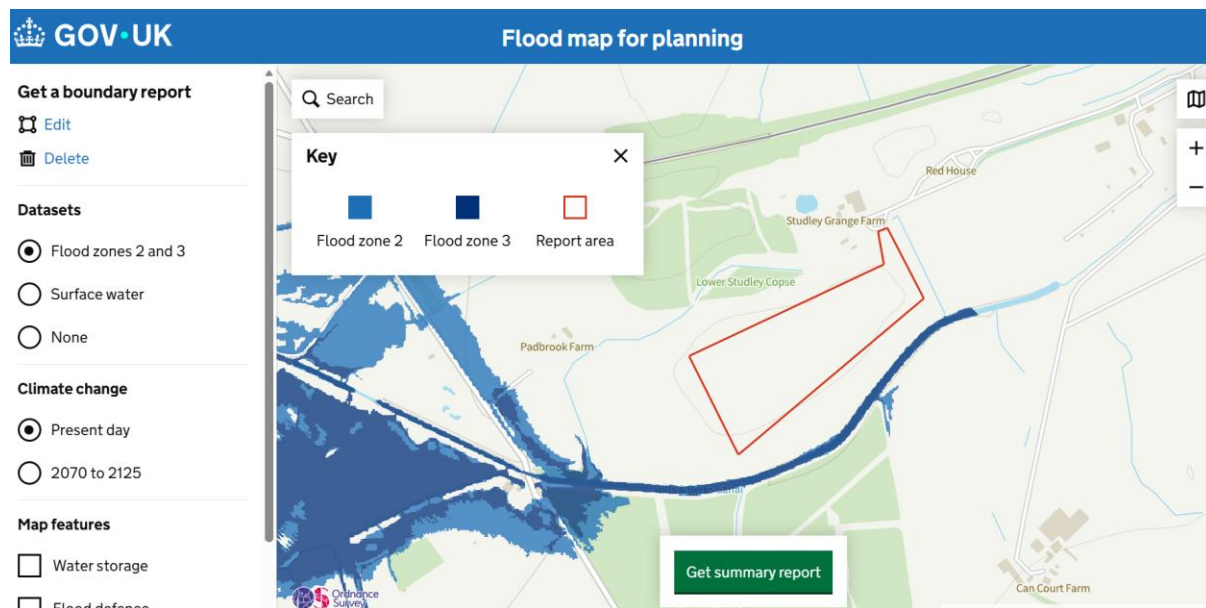


Figure 1.2 - Environment Agency Flood Zone Mapping

The development is shown to be located entirely within Flood Zone 1 (Low Probability) therefore the site is considered to be low risk of flooding. Flood Zone 1 is defined as land assessed as having less than a 0.1% annual probability of flooding from fluvial and tidal sources.

Table 2 of the Planning Practice Guidance classifies land use. Under these classifications the proposed solar farm is considered to be 'less Vulnerable' to the potential impacts of flooding.

Table 3 of the Planning Practice Guidance identifies that any development is considered appropriate within Flood Zone 1.

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable
Flood Zone 1	✓	✓	✓	✓
Flood Zone 2	✓	✓	Exception test required	✓
Flood Zone 3a	Exception test required	✓	x	Exception test required
Flood Zone 3b	Exception test required	✓	x	x

1.5 OTHER RELEVANT POLICY AND GUIDANCE

Strategic Flood Risk Assessment

The Wiltshire Council Strategic Flood Risk Assessment (SFRA) was prepared to review flood risks on a much wider scale to assess the potential for new development within the study

area. The SFRA was used as an evidence base for Local Development Frameworks for each Local Planning Authority.

The SFRA therefore aims to bring together all available flood risk information for a variety of sources to provide a robust assessment. The SFRA therefore is useful for this site-specific FRA by highlighting available data and instances of known flooding in the area.

2.0 POTENTIAL SOURCES OF FLOOD RISK

The table below identifies the potential sources of flood risk to the site, and the impacts which the development could have in the wider catchment prior to mitigation. These are discussed in greater detail in the forthcoming section. The mitigation measures proposed to address flood risk issues and ensure the development is appropriate for its location are discussed within Section 3.0.

Flood Source	Potential Risk				Description
	High	Medium	Low	None	
Fluvial			X		The site is located in flood zone 1.
Tidal				X	There are no tidal influences effecting the site.
Canals				X	None present.
Groundwater			X		Ground conditions are not conducive to fluctuating groundwater levels.
Reservoirs and waterbodies				X	The site is shown to fall outside of the catchment for reservoir and waterbodies flooding.
Sewers			X		The site in question is higher than the surrounding sewers therefore there is a very low risk.
Pluvial runoff			X		One small area of site is at risk of pluvial flooding.
Effect of Development on Wider Catchment			X		The development will retain the existing greenfield drainage characteristics of the site. Given that approximately 95% of the site will remain permeable and undeveloped, post-development runoff characteristics will remain comparable to the existing baseline condition.

Table 2.1 - Pre-Mitigation Sources of Flood Risk

2.1 FLUVIAL FLOOD RISK

As previously mentioned, the site is shown to be within Flood Zone 1 and therefore poses a low risk to the proposed development.

Mitigation measures to address the residual risk posed by the watercourses surrounding the site are discussed within Section 3.0 of this report.

2.2 GROUNDWATER FLOOD RISK

Subject to completion of site investigation to confirm we would assume that natural ground water level is located well below the site surface and the nature of the strata means it is unlikely that there will be perched water above this level.

We therefore do not consider there is a risk of groundwater flooding affecting the development subject to final confirmation upon completion of suitable site investigation.

2.3 FLOOD RISK FROM RESERVOIRS & LARGE WATERBODIES

Reservoir failure flood risk mapping has been prepared by the Environment Agency, this shows the largest area that might be flooded if a reservoir were to fail and release the water it holds. The map displays a worst-case scenario and is only intended as a guide. An extract from the mapping is included as Figure 2.3.

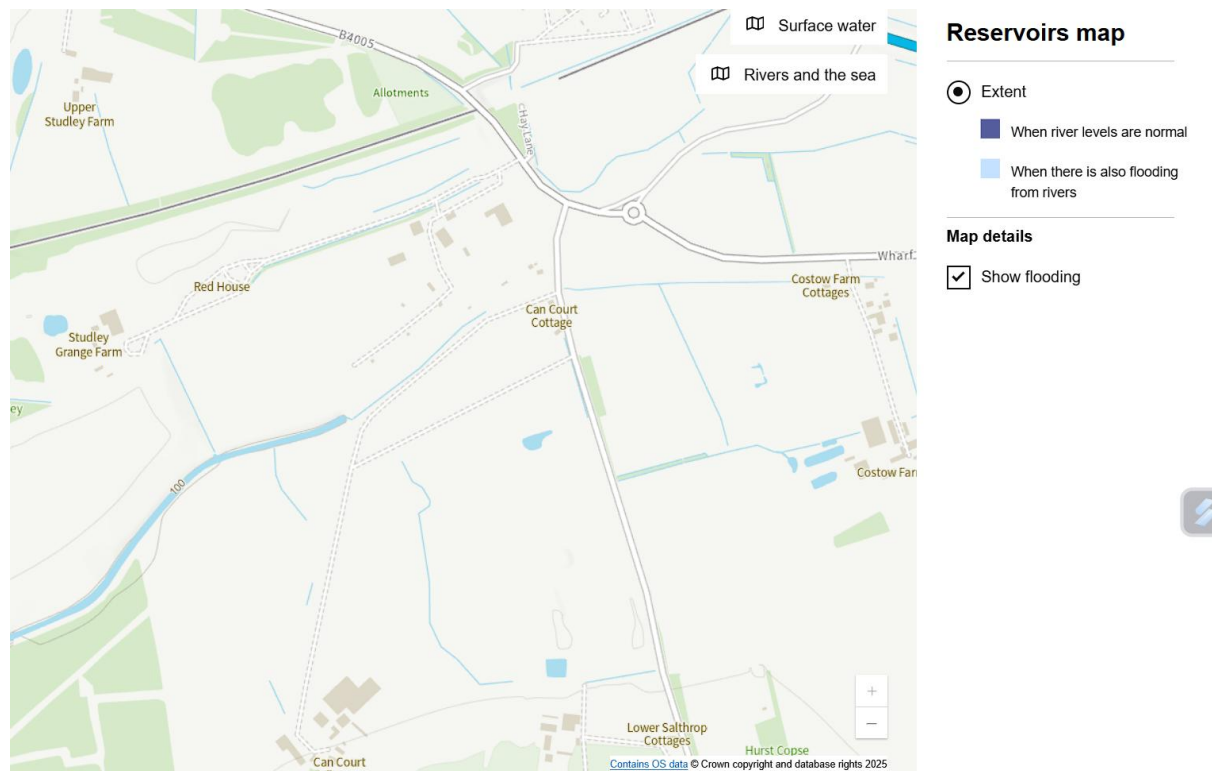


Figure 2.3 - Environment Agency Reservoir Failure Flood Risk Map

Reservoir flood mapping published by the Environment Agency indicates that the site lies outside of any significant reservoir flood inundation extents.

Mapping confirms that neither the site nor its access routes are affected by the predicted maximum extent of reservoir flooding.

The proposed development is therefore not considered to be at risk from reservoir failure.

2.4 FLOOD RISK FROM SEWERS

No public foul or surface water sewers are known to pass through the application boundary.

As such, the development is not considered to be at risk from sewer flooding.

2.5 PLUVIAL FLOOD RISK

Risk of flooding from surface water mapping has been prepared by the Environment Agency, this shows the potential flooding which could occur when rainwater does not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. An extract from the mapping is included as Figure 2.5

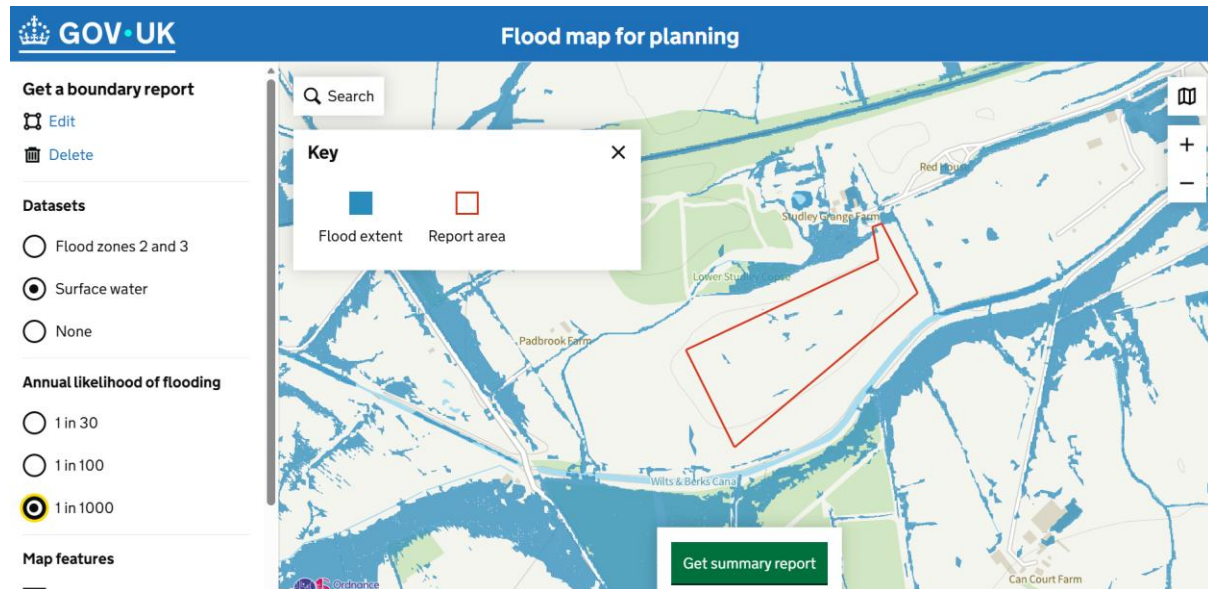


Figure 2.5 - Risk of Flooding from Surface Water Mapping

Environment Agency surface water flood mapping indicates that limited isolated areas of low and medium risk of surface water ponding are present within parts of the wider site. These areas are generally shallow and localised in nature.

A site-wide surface water drainage strategy will be implemented to manage runoff and prevent increased flood risk, incorporating attenuation and controlled discharge.

With appropriate drainage design, the residual risk from surface water flooding is considered to be low.

2.6 EFFECT OF DEVELOPMENT ON WIDER CATCHMENT

2.6.1 Development Drainage

The proposed solar development is predominantly permeable in nature, with approximately 95% of the 6.5ha site remaining as grassland beneath and between solar panels.

The development does not introduce extensive areas of hardstanding or impermeable surfacing. The proposal for the site is a series of ground-mounted solar panel arrays. Each solar array will comprise a series of short narrow aluminium posts supporting the modules. The surface area of the panels is not considered to be an impermeable area that prevents direct infiltration to ground.

The limited areas of hardstanding (access tracks and compound area) represent a very small proportion of the total site area and do not materially alter the overall hydrological response of the site.

As such, the development will maintain the existing greenfield runoff characteristics, and there will be no measurable increase in runoff rates or volumes to the wider catchment.

3.0 FLOOD RISK MITIGATION

Section 2.0 has identified the sources of flooding which could potentially pose a risk to the site and the proposed development. This section of the FRA sets out the mitigation measures which are to be considered within the proposed development detail design to address and reduce the risk of flooding to within acceptable levels.

3.1 SITE ARRANGEMENTS

3.1.1 Sequential Arrangement

The Flood Zone mapping shows the site to be located within flood zone 1.

3.1.2 Finished Levels

Given the site's location within Flood Zone 1, there are no specific requirements for finished floor levels with regard to flood risk.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This Flood Risk Assessment has been prepared on behalf of Heaton Planning in support of a proposed solar farm at Studley Grange, Swindon.

This report demonstrates that the proposed development is not at significant flood risk, and simple mitigation measures have been recommended to address any residual risks that may remain. The identified risks and mitigation measures are summarised as below.

In accordance with Planning Practice Guidance, the proposed solar farm is classified as 'Less Vulnerable' development.

Less Vulnerable development is appropriate within Flood Zone 1 and does not require the Sequential or Exception Tests.

In compliance with the requirements of National Planning Policy Framework, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider catchment area as a result of suitable management of surface water runoff discharging from the site.

On the basis of the available information and proposed mitigation measures, the development is considered acceptable in flood risk and drainage terms and complies with national and local planning policy.

5.0 Drainage Impact Assessment

5.1 Proposed Development

The proposed development comprises a solar farm with associated access tracks, inverter stations, transformer compound and control infrastructure.

5.2 Foul Water Drainage

The proposed solar farm does not generate foul water flows.

No welfare, residential, commercial, or permanent occupied facilities are proposed.

As such, no foul drainage infrastructure is required as part of the development.

5.3 Surface Water Drainage

5.3.1 Existing Site

The site comprises former landfill land which has been restored and is now used for agricultural purposes.

The site benefits from historic engineered drainage infrastructure associated with the landfill restoration.

Existing surface water drainage arrangements will be reviewed and incorporated into the detailed drainage design where appropriate.

The site currently operates as permeable grassland and restored landfill, with established drainage pathways. The baseline runoff regime is therefore considered to reflect greenfield behaviour.

5.3.2 Existing Drainage Verification

Due to the historic landfill use of the site, a review of available drainage records together with a site inspection and verification survey shall be undertaken prior to commencement of development.

The purpose of the survey will be to:

- Confirm the location of existing drainage features.
- Confirm discharge routes.
- Assess operational condition.
- Ensure proposed infrastructure does not adversely affect existing drainage performance.

Any required localised maintenance or repair works will be incorporated into the detailed design phase.

5.3.3 Vegetation and Land Management

The long-term operation of the solar farm will maintain continuous vegetative cover beneath and between the panel arrays.

Grassland areas will be managed through controlled grazing and/or periodic cutting to ensure that vegetation remains established across the site throughout the operational life of the development.

Maintaining vegetative cover will:

- Promote rainfall interception.
- Reduce surface water flow velocities.
- Reduce erosion and sediment transport.
- Maintain infiltration capacity.
- Reduce the potential for concentrated runoff beneath panel drip lines.

Vegetation condition will be inspected at least annually and following significant rainfall events where considered necessary. Areas exhibiting erosion, excessive compaction or poor vegetation establishment will be subject to remedial measures including reseeded, soil conditioning or revised grazing management.

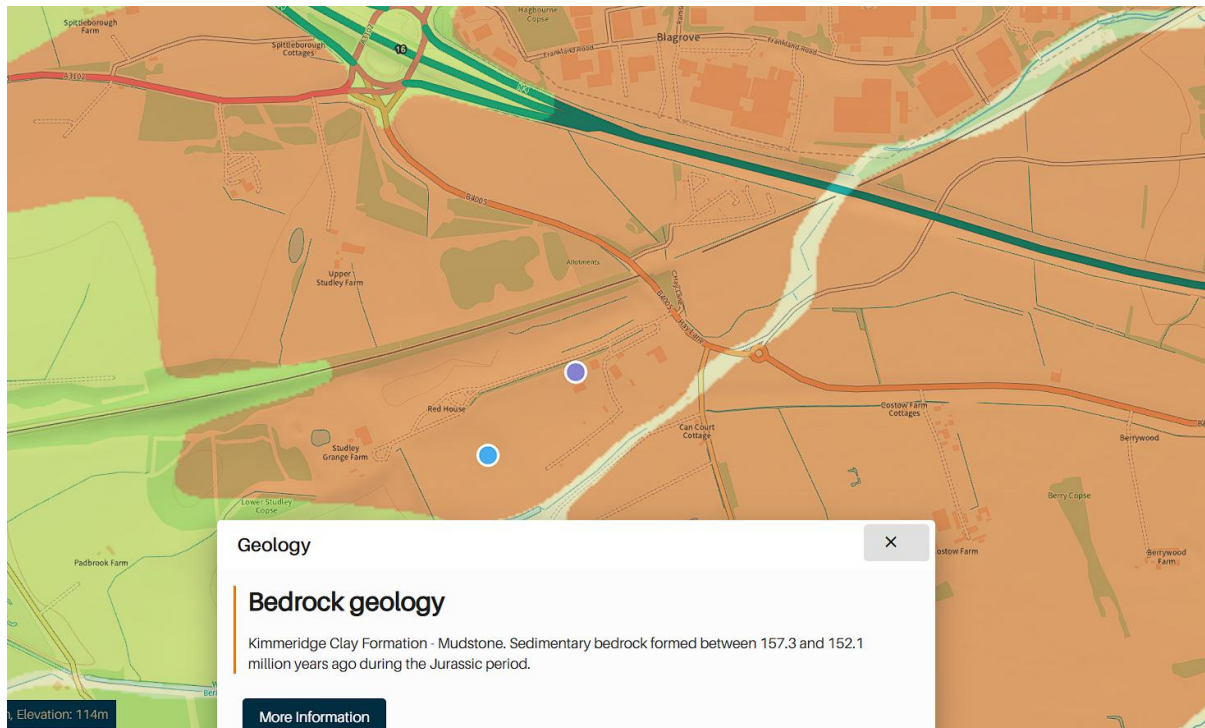
5.3.4 Run Off Destination

Existing topographical mapping demonstrates that the site generally falls from north-west towards the south-east and east.

Surface water runoff currently drains via overland flow pathways and historic landfill drainage infrastructure before discharging to surrounding drainage corridors and watercourses.

The proposed development does not alter site-wide catchment boundaries and therefore existing runoff pathways will remain unchanged.

Existing drainage infrastructure associated with the former landfill restoration works will be reviewed during detailed design and incorporated into the final drainage strategy where appropriate.



5.3.5 Climate Change

As the development does not materially increase impermeable area or runoff rates, the existing greenfield drainage behaviour will remain unchanged under future climate scenarios.

The site will continue to operate as a permeable surface with natural drainage pathways, and therefore climate change does not necessitate additional attenuation infrastructure.

Given the retention of permeable vegetation cover across approximately 95% of the site area, together with the absence of significant new impermeable surfaces, climate change impacts are not anticipated to result in a material increase in runoff rates when compared with the existing site condition.

Existing exceedance routes remain available during extreme rainfall events.

5.3.6 Peak Flow Control

The proposed solar development introduces only minimal impermeable infrastructure, estimated to be approximately 1,500m² across a total site area of 6.5ha (circa 2–3% of the site).

As approximately 95% of the site remains permeable grassland, the overall hydrological response of the site remains equivalent to its current greenfield condition.

Accordingly, formal peak flow control structures and attenuation storage are not required, as there is no material increase in runoff rate or volume compared to the existing baseline.

5.3.7 Designing for Exceedance

Existing topographical information indicates that exceedance flows naturally follow the site's established overland flow routes toward lower ground located to the south and east of the development area.

The proposed solar arrays do not form impermeable barriers to surface water movement and do not obstruct existing overland flow pathways.

Exceedance flows generated during events exceeding the design standard will therefore continue to follow existing drainage pathways and topographic low points.

The development contains no vulnerable receptors within the solar array areas and no occupied buildings requiring flood protection.

An exceedance routing plan has been prepared illustrating:

- Existing flow directions.
- Local low points.
- Existing drainage corridors.
- Proposed discharge pathways.

The plan demonstrates that exceedance flows can be safely conveyed through the site without increasing flood risk elsewhere.

5.3.8 Operations and Maintenance

Responsibility for the existing and retained drainage infrastructure will remain with the site operator.

As no new attenuation or flow control structures are proposed, ongoing maintenance requirements remain consistent with current site management practices.

5.3.9 Surface Water Sensitivity Assessment

Published industry research relating to operational solar farms indicates that runoff response is primarily influenced by vegetation condition and soil health rather than panel coverage itself.

The proposed development retains grassland cover beneath and between panel rows and therefore preserves infiltration opportunities across the majority of the site.

In the unlikely event of localised vegetation degradation beneath panel drip lines, runoff would remain dispersed across a large permeable area and would not result in a significant increase in site-wide runoff rates.

Accordingly, the development is not anticipated to materially alter the hydrological response of the site compared with the existing condition.

5.3.10 Ground Conditions and GI

A Ground Investigation will be undertaken prior to commencement of development. The investigation will:

- Confirm restoration soil thickness.
- Confirm landfill cap constraints.
- Confirm groundwater conditions.
- Review contamination risks.
- Assess infiltration characteristics where appropriate.

The findings of the Ground Investigation will inform the final detailed drainage design and ensure that no new contamination pathways are introduced.

5.3.10 Drainage Strategy for Compound and Access Roads

The proposed compound, switchgear area, control building and access tracks represent a small proportion of the total site area.

Access tracks comprise permeable unbound stone construction and therefore permit infiltration through the pavement structure.

Runoff from the compound area will discharge to adjacent permeable grassed areas where it will infiltrate naturally.

These elements do not materially alter the overall site hydrological response and therefore no attenuation infrastructure is considered necessary.

5.4 SUMMARY

This report has been prepared to assess the drainage impact for the proposed solar development at Studley Grange, Swindon.

The development is predominantly permeable in nature, with approximately 95% of the site remaining grassland beneath and between solar arrays. The limited hardstanding areas do not materially alter the hydrological response of the site.

Surface water will continue to drain in accordance with the existing greenfield regime and historic landfill drainage infrastructure.

As there is no material increase in runoff rates or volumes, additional attenuation or flow restriction measures are not required.

The development will not increase flood risk on or off site and is therefore considered acceptable in drainage and flood risk terms.

6.0 APPENDICES

Appendix A – Site Location Plan

Appendix B – Indicative Compound Layout & Sections

Appendix C – Site Plan

Appendix D – Details (Security fence, CCTV, Unbound Stone Rd)

Appendix E – Proposed illustrative site layout

Appendix F – Proposed illustrative landscaping plan

Appendix G – Indicative Solar Panel detail

Appendix H – Flood Exceedance and Drainage Plan

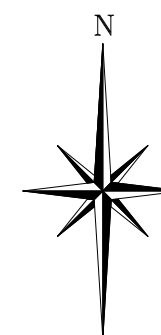
Appendix A

Site Location Plan



Legend

Site Boundary

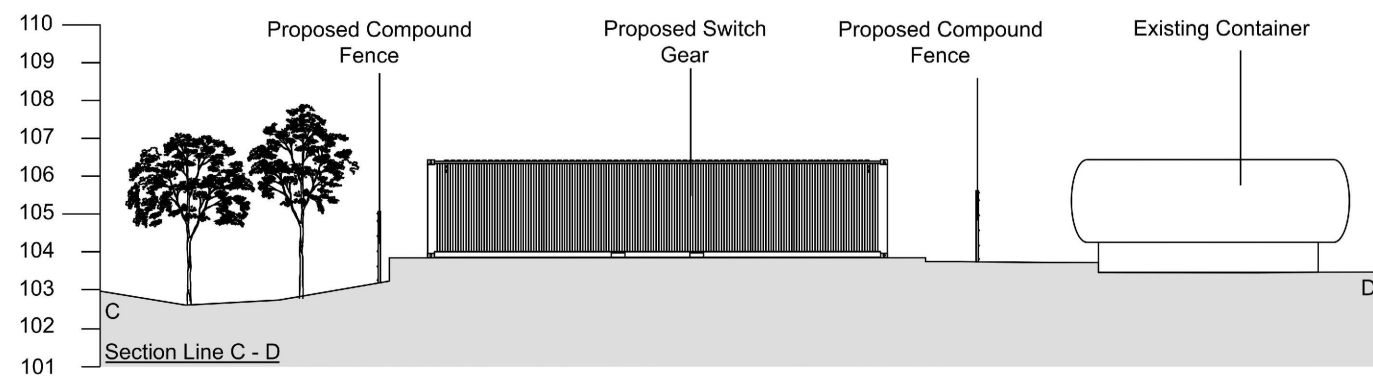
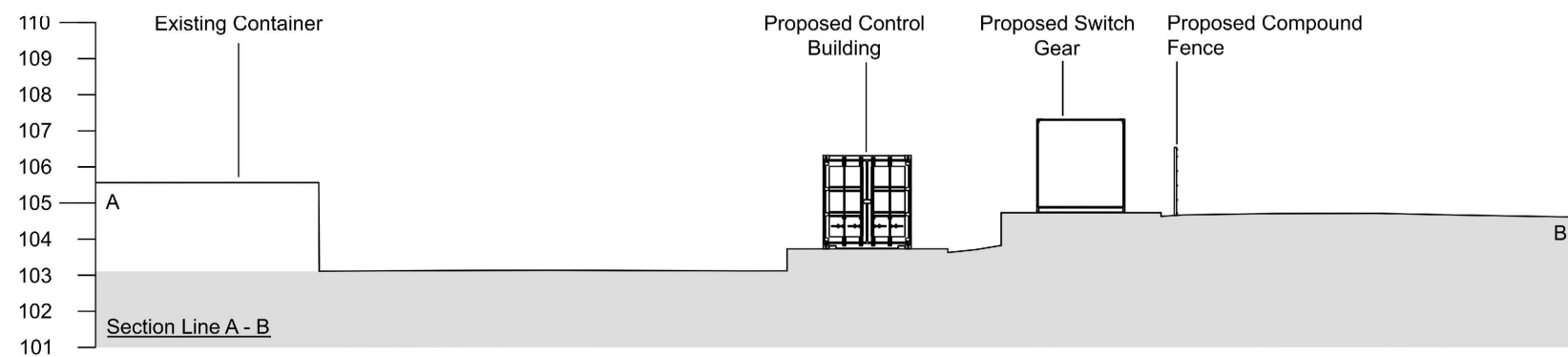
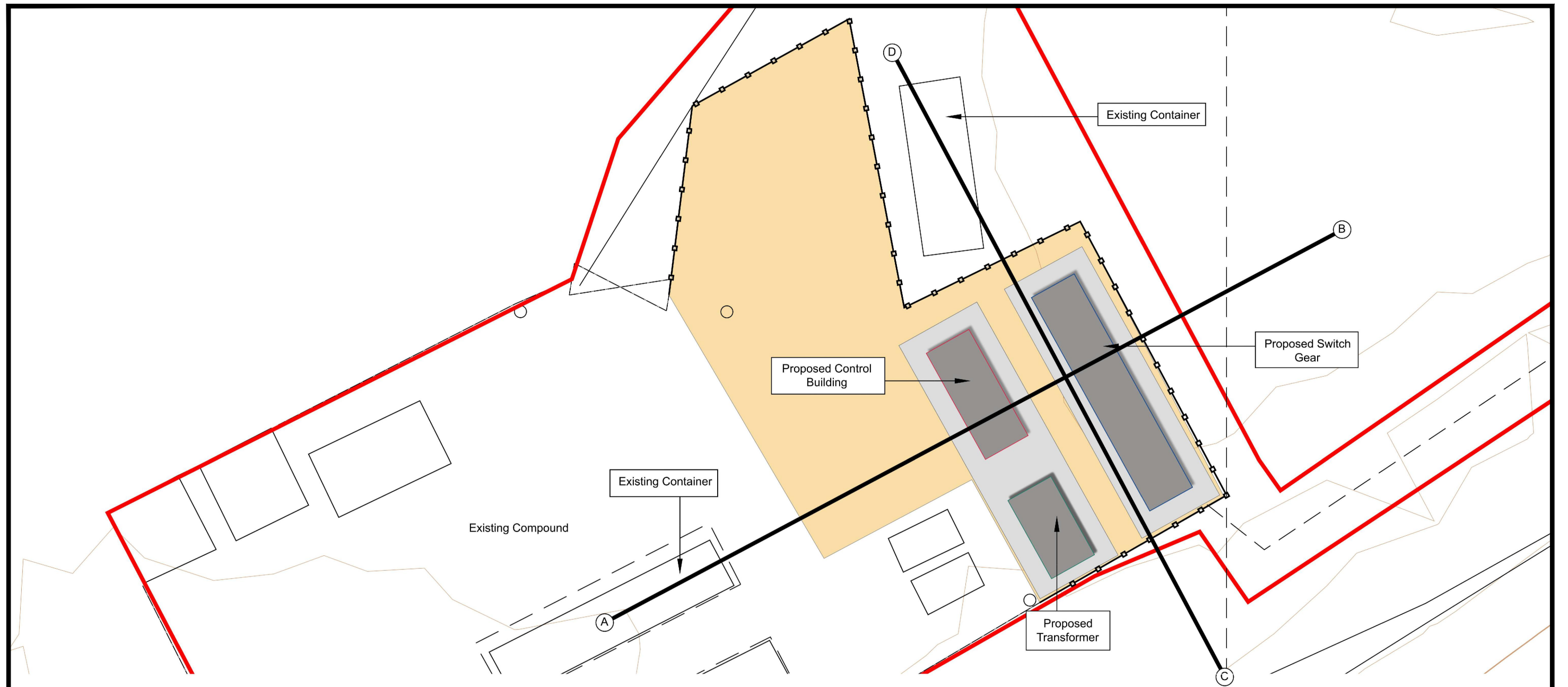


Reproduced from Superplan Data © (scale-free) by permission of Ordnance Survey © on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2006 all rights reserved. Licence number 100036438.

REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biiffa			
Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail: michelle.saunders@biffa.co.uk			
PROJECT	Planning		
LOCATION	Studley		
DRAWING TITLE	Site Location Plan		
DRAWING No.	HEA064-001	COMPUTER REF.	***
DRAWN	H/PLANNING	DATE	12/03/26
SCALE(S)	1:25000@A3		

Appendix B

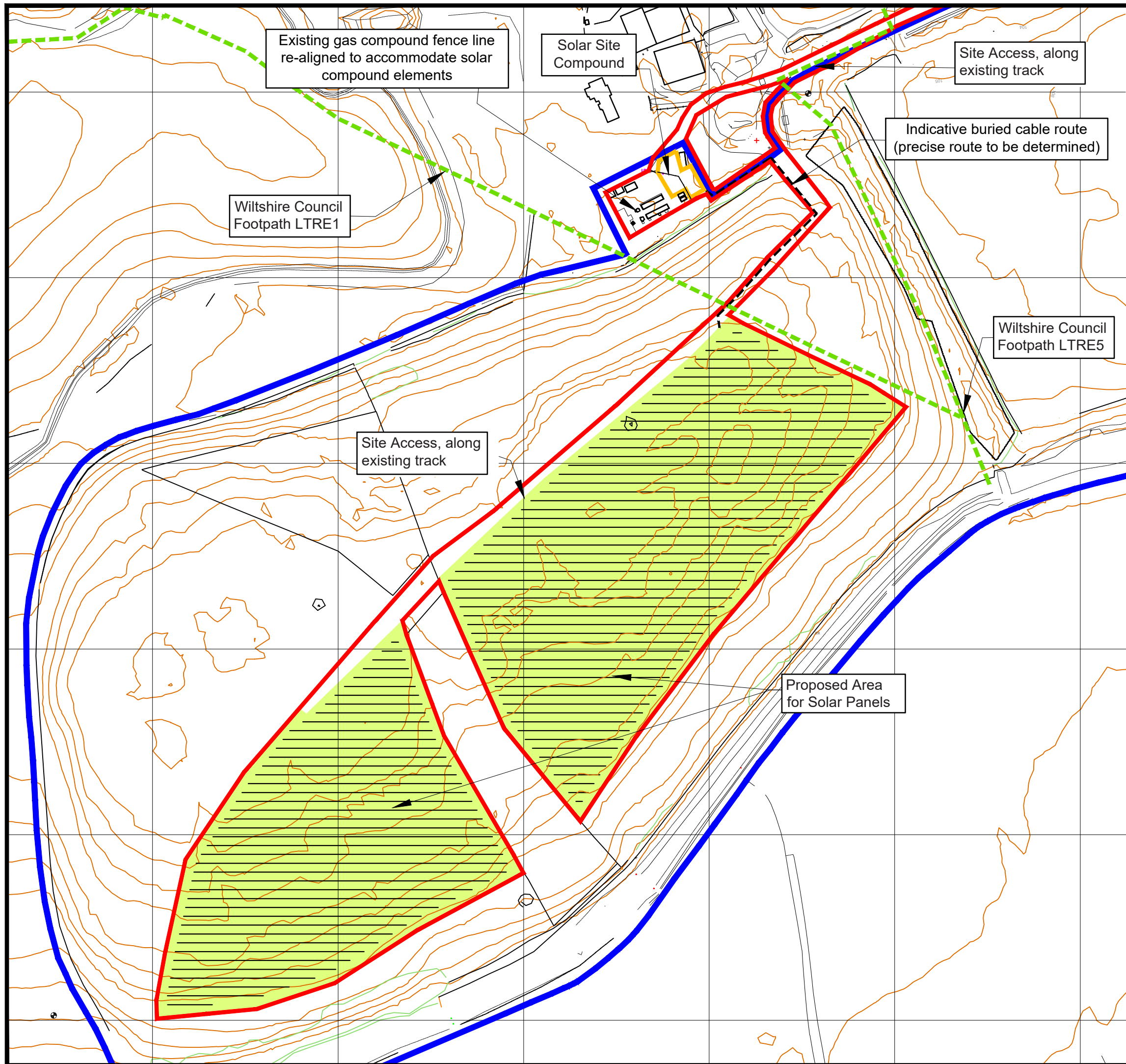
Indicative compound layout & sections



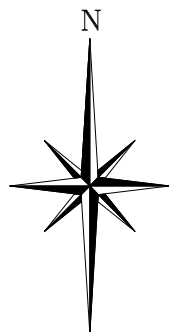
REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biffa			Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail: michelle.saunders@biffa.co.uk
PROJECT	Planning		
LOCATION	Studley		
DRAWING TITLE	Indicative Compound Layout and Sections		
DRAWING No.	HEA064-005	COMPUTER REF.	***
DRAWN	H/PLANNING	DATE	12/03/26
SCALE(S)	1:200 @A3		

Appendix C

Site Plan



- Legend**
- Application Site Boundary (6.5ha)
 - Other Land under Applicants Control
 - Solar Site Compound Area (0.1ha)
 - Solar Panel Development (Area 4.6ha)
 - Indicative Buried Cable Route
 - Wiltshire Council Rights of Way
 - Grassland Enhancement, around field margins and below /between panels (5.2ha)

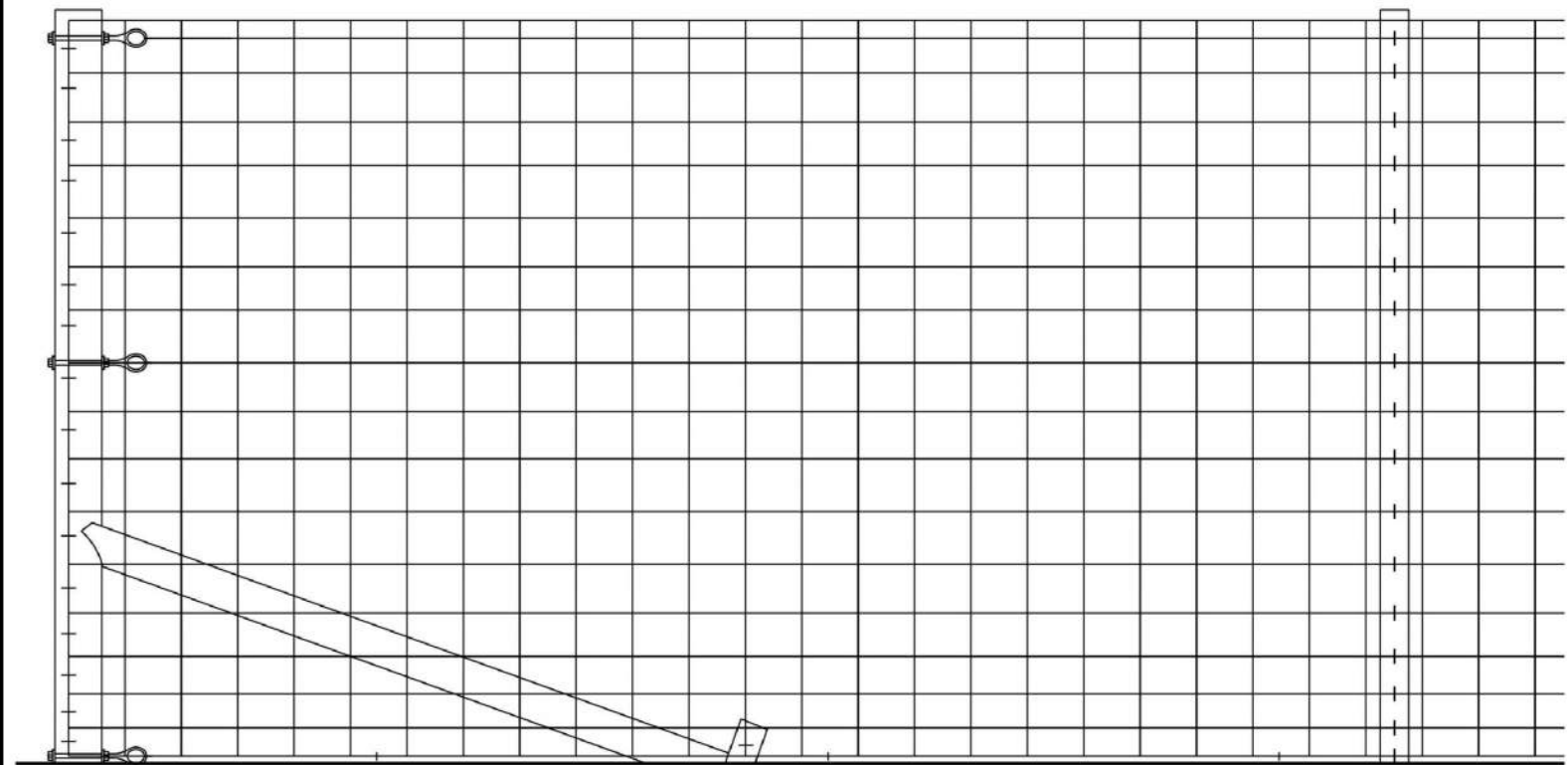


Reproduced from Superplan Data ® (scale-free) by permission of Ordnance Survey ® on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2006 all rights reserved. Licence number 100036438.

REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biffa			Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail michelle.saunders@biffa.co.uk
PROJECT		Planning	
LOCATION		Studley	
DRAWING TITLE		Site Plan	
DRAWING No.		HEA064-002	COMPUTER REF. ***
DRAWN		H/PLANNING	DATE 12/03/26 SCALE(S) 1:2000 ©A3

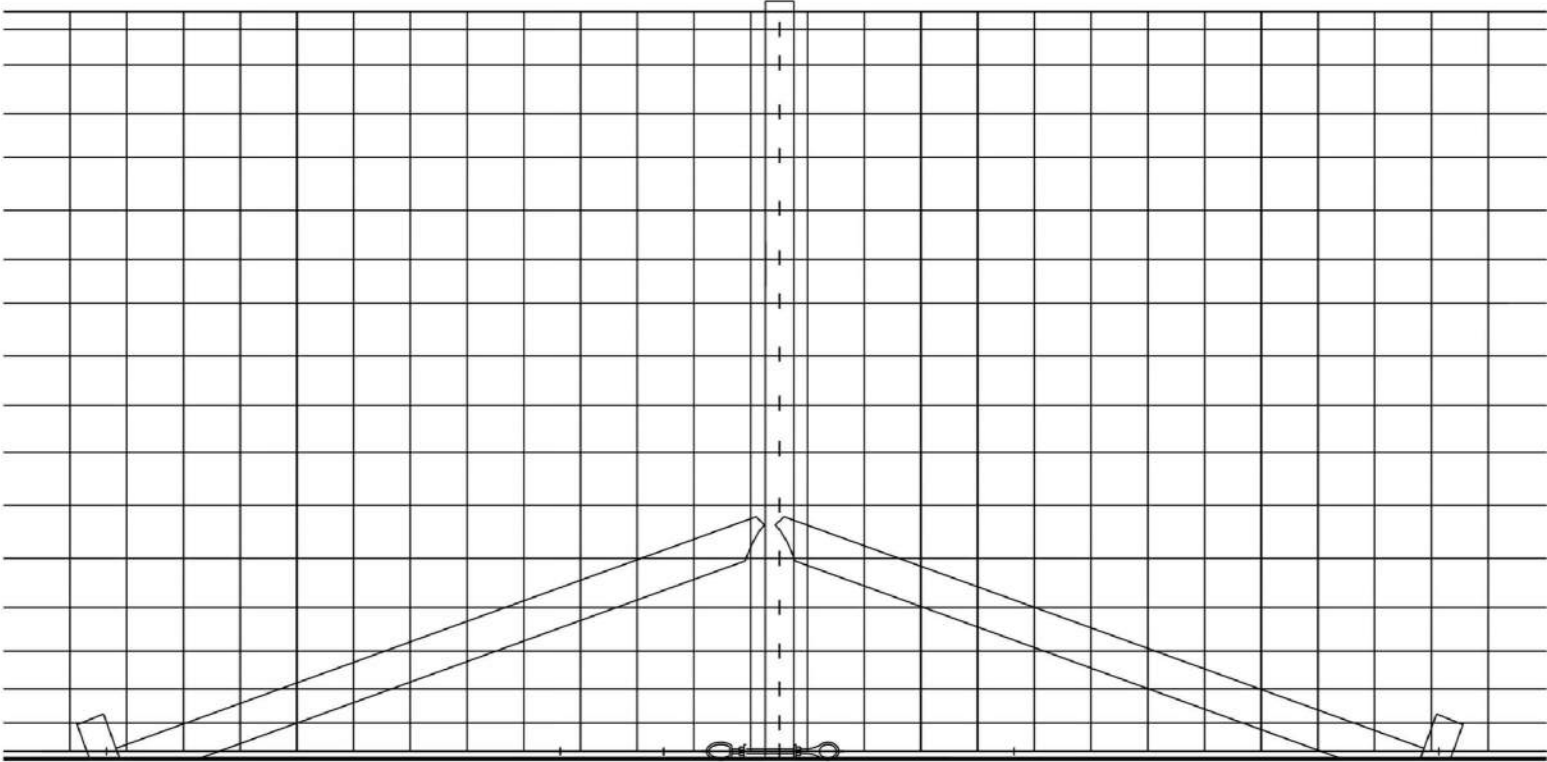
Appendix D

Details (Security Fence, CCTV, Unbound Stone Rd)



All construction works to take account of depth of restoration soils, so avoid damage to landfill cap and other infrastructure.

Galvanised steel wire mesh to be Heavy Duty Pig Fence Ref. B8/80/15. Top, middle and bottom wires shall be 3.15mm diameter and all other vertical and horizontal wires shall be 2.5mm diameter. The mesh shall be attached to straining posts and intermediate posts with 40 x 4mm staples. At intermediate posts only horizontal wires shall be stapled but staples are not to be home so as to allow for the wires horizontal movement when retensioned.



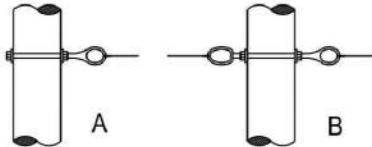
All construction works to take account of depth of restoration soils, so avoid damage to landfill cap and other infrastructure.

3.15mm diameter zinc coated high tensile steel wires (in compliance with BS 4102) shall be tensioned between straining posts with eye bolt strainers as shown in fixing details A & B. Staples are not to be driven home so as to allow for the wires horizontal movement when retensioned.

Straining post will be provided at all ends, changes of direction and acute variations in level, in intervals not exceeding 100m in any straight lengths of fence

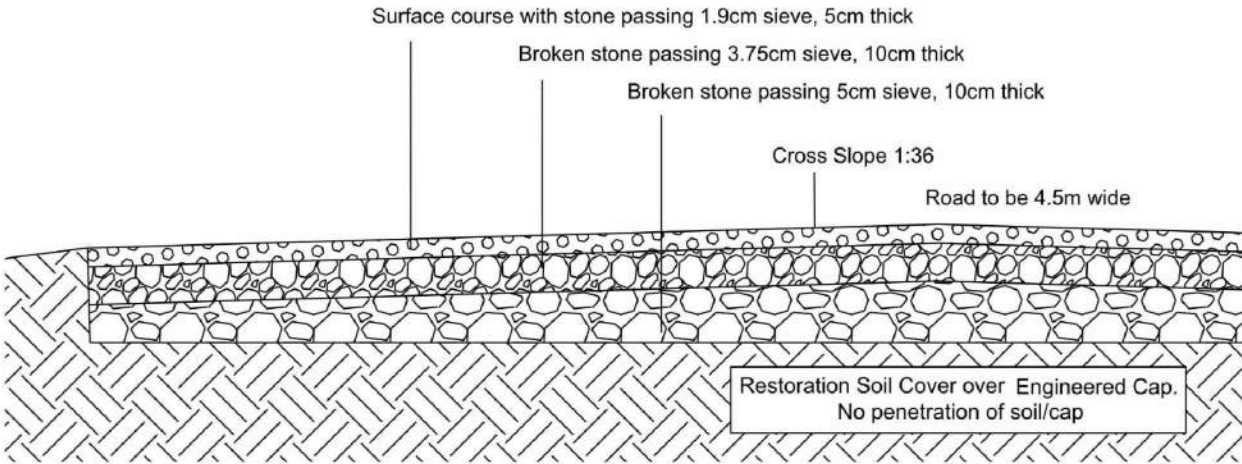
Typical Deer Fencing Detail

Scale 1:20 @ A3



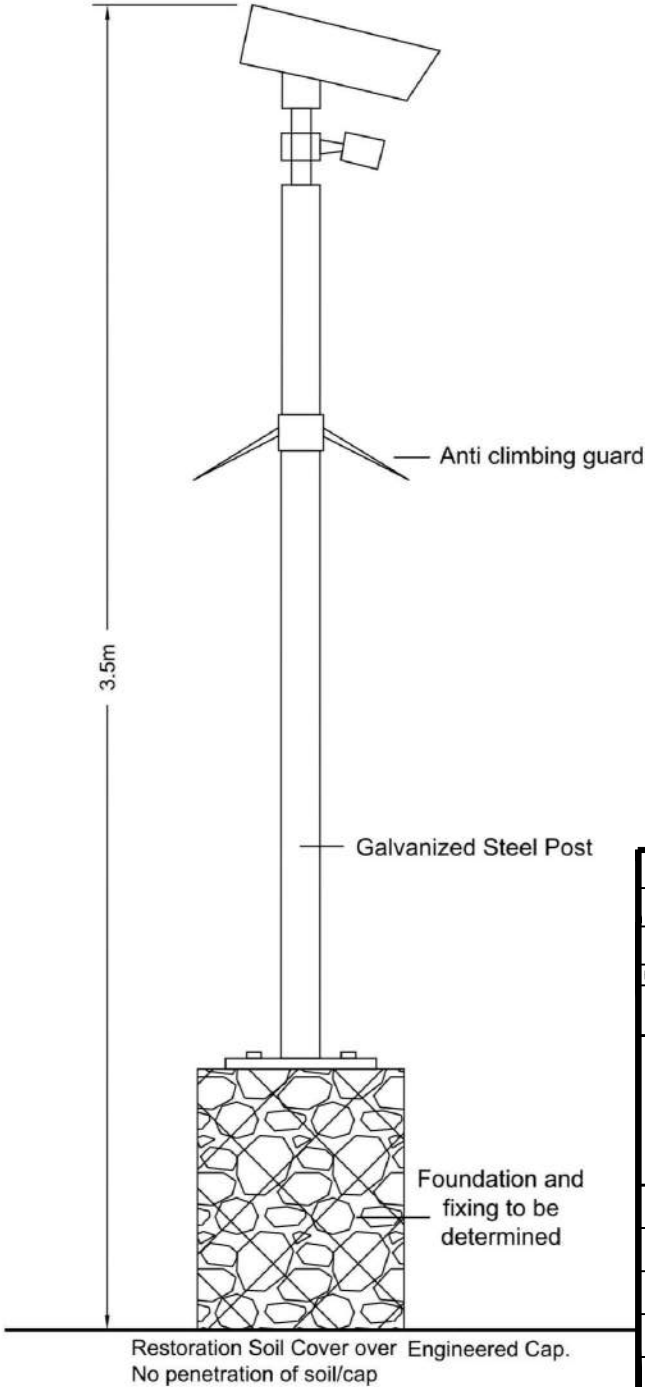
Typical Unbound Stone Road Detail

Scale 1:20 @ A3



Typical Security CCTV Detail

Scale 1:20 @ A3

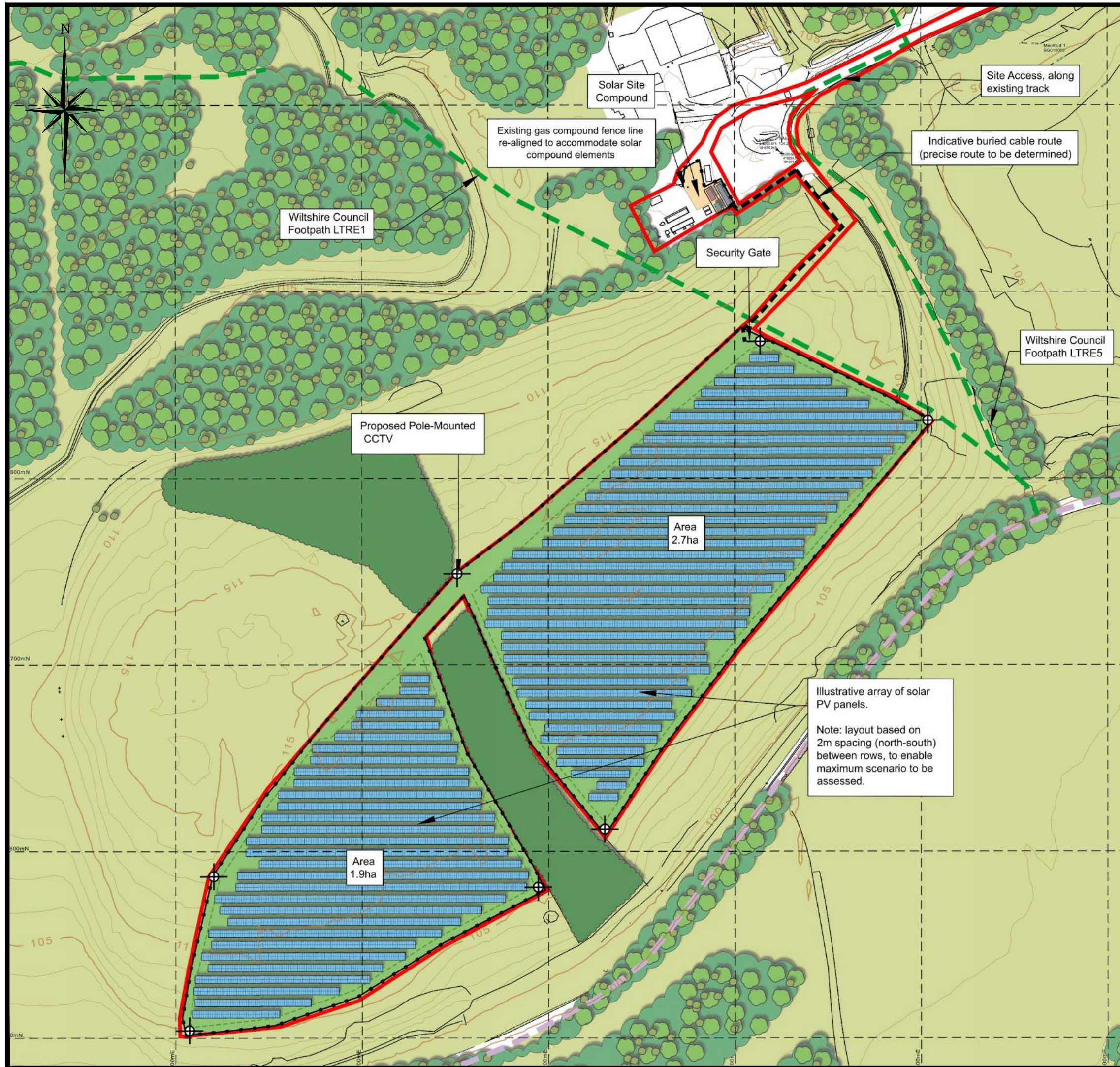


Note: All detail for planning purposes only and subject to detail design

REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biffa Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail michelle.saunders@biffa.co.uk			
PROJECT	Planning		
LOCATION	Studley		
DRAWING TITLE	Details (Security Fence, CCTV, unbound stone rd)		
DRAWING No.	HEA064-006	COMPUTER REF.	***
DRAWN	H/PLANNING	DATE	12/03/26
SCALE(S)	1:20 @A3		

Appendix E

Proposed Illustrative Site Layout



- Legend**
- Application Boundary
 - Public Right of Way
 - Permissive Footpath
 - Indicative buried cable route (precise route to be determined)
 - Existing Contours (5m intervals)
 - Existing Vegetation
 - Landfill Restoration Planting
 - Illustrative Solar Panel Array
 - Proposed PV Field Area
 - Proposed Perimeter Security Fence
 - Proposed Pole-Mounted CCTV
 - Proposed Inverter
 - Control Building
 - Transformer And Plinth
 - Hard Standing
 - Switch Gear
 - Proposed Grassland Enhancement, around field margins and below /betwe panels

Reproduced from Superplan Data © (scale-free) by permission of Ordnance Survey © on behalf of The Controller of Her Majesty's Stationary Office. © Crown copyright 2006 all rights reserved. Licence number 100036438.

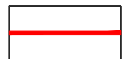
REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biffa		Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail michelle.saunders@biffa.co.uk	
PROJECT		Planning	
LOCATION		Studley	
DRAWING TITLE		Proposed Illustrative Site Layout	
DRAWING No.		HEA064-003	COMPUTER REF. ***
DRAWN	H/PLANNING	DATE	12/03/26
SCALE(S)		1:2000 @A3	

Appendix F

Proposed illustrative landscaping plan



Legend



Application Site Boundary



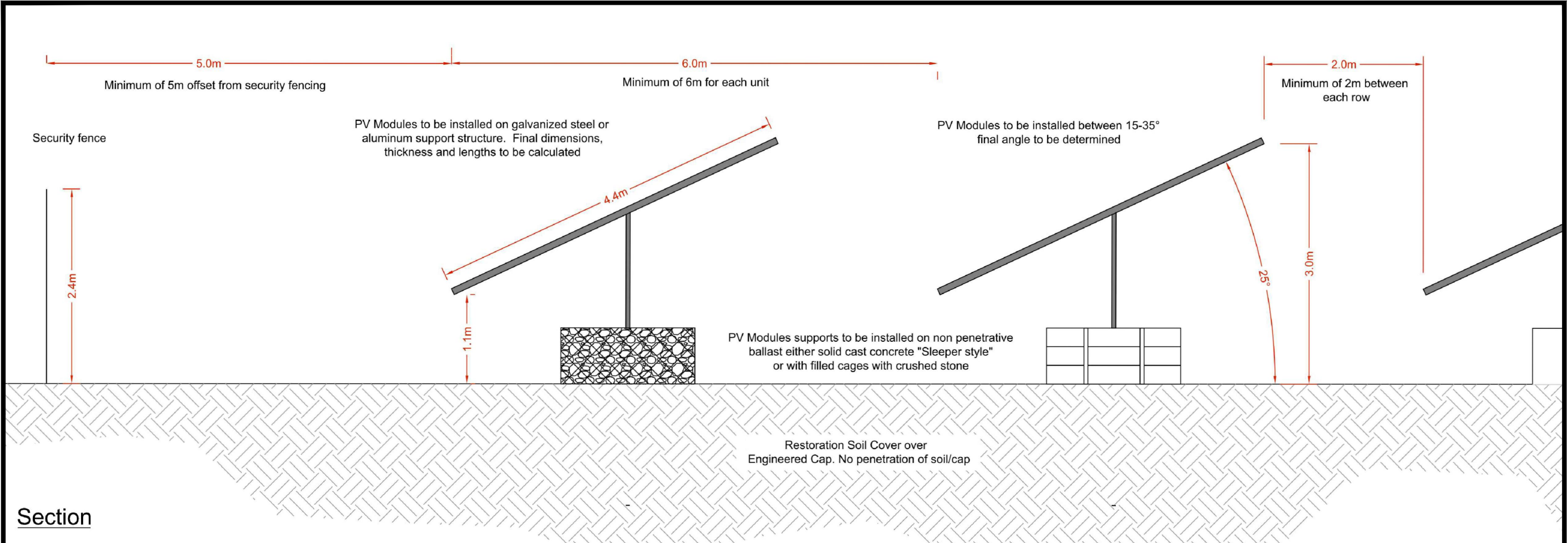
Proposed Neutral Grassland

Reproduced from Superplan Data ® (scale-free) by permission of Ordnance Survey ® on behalf of
The Controller of Her Majesty's Stationery Office. © Crown copyright 2006 all rights reserved.
Licence number 100036438.

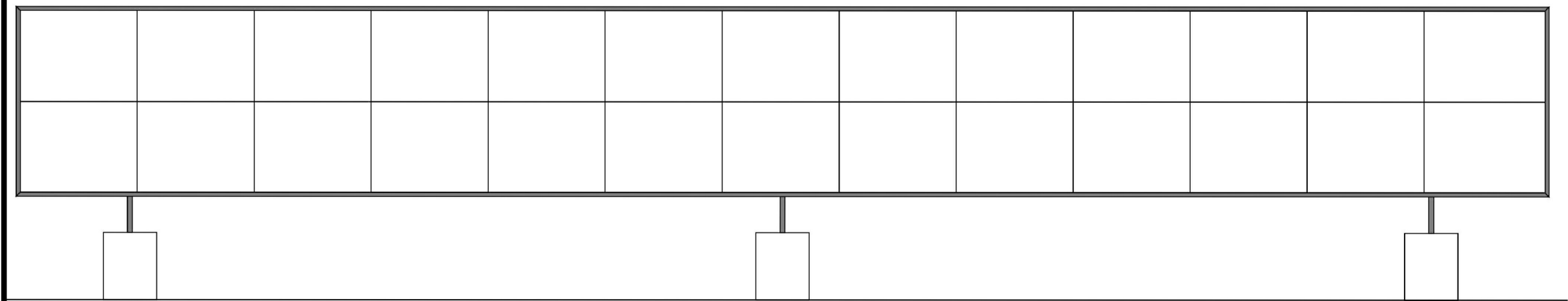
REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
		Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail michele.saunders@biffa.co.uk	
PROJECT	Planning		
LOCATION	Studley		
DRAWING TITLE	Proposed Illustrative Landscaping Plan		
DRAWING No.	HEA064-007	COMPUTER REF.	***
DRAWN	H/PLANNING	DATE	12/03/26
		SCALE(S)	1:2000 @A3

Appendix G

Indicative Solar Panel Detail



Section



Elevation



REV.	DATE	DRAWN	DESCRIPTION
THIS INFORMATION IS CONFIDENTIAL AND THE PROPERTY OF BIFFA WASTE SERVICES LTD. AND IS RELEASED ON CONDITION THAT NONE OF THE INFORMATION SHALL BE DISCLOSED TO ANY THIRD PARTY OR REPRODUCED IN WHOLE OR PART WITHOUT THE PRIOR CONSENT IN WRITING OF BIFFA WASTE SERVICES LTD.			
Biffa Biffa Waste Services Ltd Poplars Landfill site Lichfield Road Cannock Staffordshire WS11 8NQ Mob: 07834092155 e-mail michelle.saunders@biffa.co.uk			
PROJECT	Planning		
LOCATION	Studley		
DRAWING TITLE	Indicative Solar Panel Detail		
DRAWING No.	HEA064-004	COMPUTER REF.	***
DRAWN	H/PLANNING	DATE	12/03/26
SCALE(S)	1:50 @A3		

Appendix H

Flood Exceedance Drainage Layout

