

Project:	Sperberry Hill Solar	Scheme No:	14855
Subject:	SuDS Management and Maintenance Plan	Revision:	01
Client:	Axis P.E.D Ltd	Date:	08/07/2026
Doc Ref:	14855-33069-SuDS Management and Maintenance Plan-01	Status:	First Issue
Author:	Ryan Moore BSc (Hons) MCIWEM		
Checker:	Andrew Russell BEng (Hons) IEng MICE		
Approver:	Adam Caldwell MEng (Hons)		

Introduction

Waterco Datrys have been instructed to prepare a SuDS Management and Maintenance Plan in support of a proposed solar farm with associated battery storage and ancillary infrastructure at land to the south of Wymondley Substation and south of Sperberry Hill, St Ippolyts, Hertfordshire, SG4 7NZ. A location plan and an aerial image are included in Appendix A.

The purpose of the following document is to set out the basis and the management and maintenance of the elements of the Sustainable Drainage System (SuDS) throughout the lifetime of the proposed development.

Development Description

The proposed solar farm development will comprise of solar panels, 8no. battery storage units, string inverters, a DNO substation and a switch and control rooms. Development proposals also include internal stone tracks, 2no. improved existing access points off Little Almshoe Lane, and an access point from Stevenage Road. A General Arrangement Plan is included in Appendix B.

SuDS Layout and Design

As illustrated on the Surface Water Drainage Layout, included in Appendix C, the proposed surface water drainage system utilises various SuDS features to intercept and manage all surface water runoff generated by the proposed development. The design of the surface water drainage system aims to attenuate surface water runoff to as close to the source as possible.

The SuDS features are to be used in management train sequence, and the design is based on the discharge of surface water to ground via infiltration drainage techniques.

The proposed surface water drainage system will comprise of the following components:

- Infiltration basin, including inlet headwalls.
- Porous (gravel) surfacing.
- Filter drain with associated stone surround trench.

- Surface water inspection chambers.
- Firewater management system, including shut-off valve.

Management & Maintenance of SuDS Features

The proposed surface water drainage system will be maintained by the Site Owner or an appointed Contractor for the lifetime of the proposed development.

There are 3no. categories of maintenance activities referred to within this report:

Regular maintenance (monthly to annually) – Consists of basic maintenance tasks done on a frequent and predictable schedule, including vegetation management, litter / debris removal and inspections.

Occasional maintenance (annually up to 25 years) – Consists of maintenance tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (e.g., sediment removal).

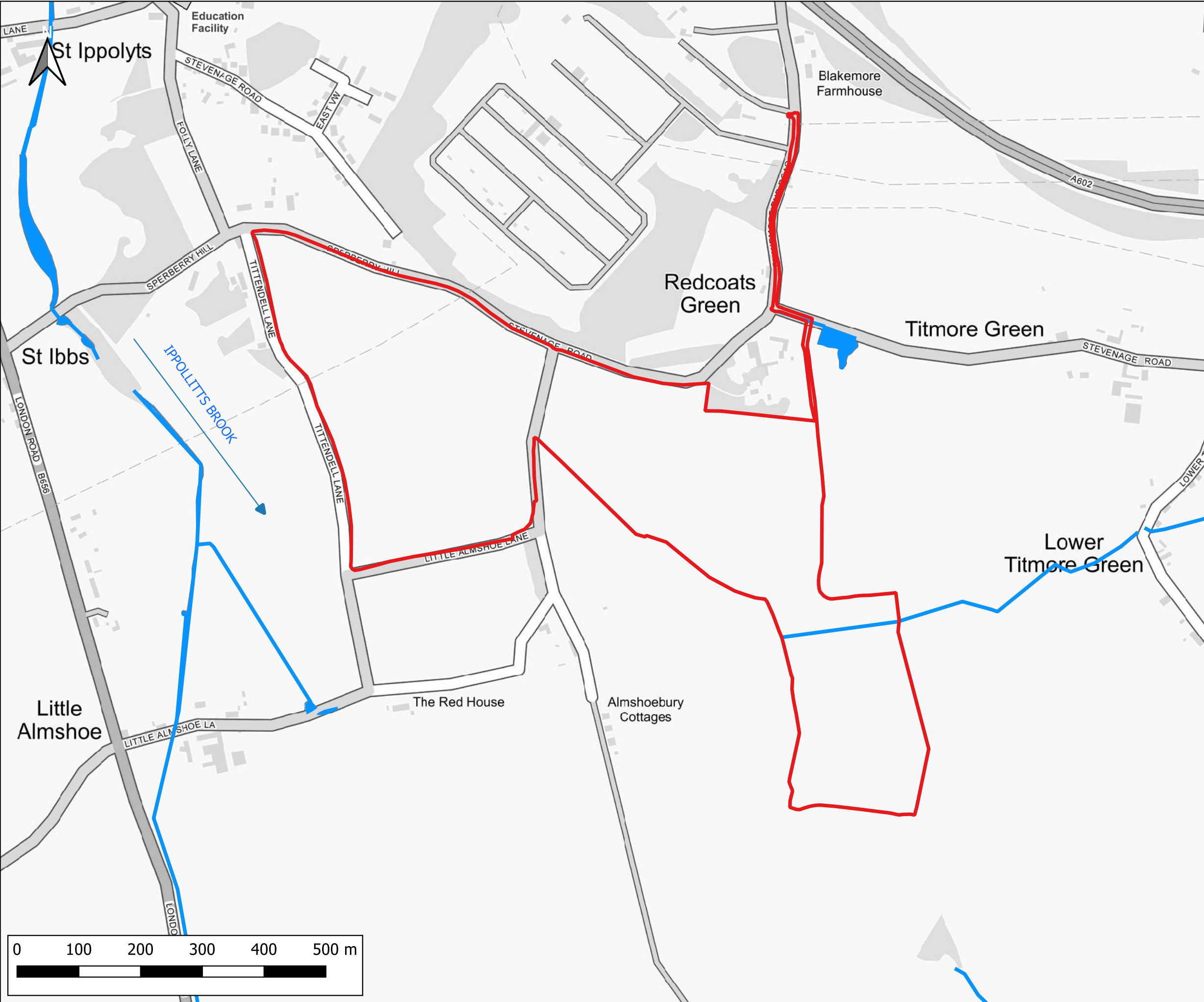
Remedial maintenance – Consists of intermittent tasks that may be required to rectify faults associated with the surface water drainage system, although the likelihood of faults has been minimised by good design. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events and as such, timings are difficult to predict.

CDM Regulations (2015) and generic health and safety criteria should be ascertained with maintenance activities detailed within the Health and Safety Plan and an appropriate risk assessment should be undertaken prior to undertaking maintenance activities.

General maintenance activities for the proposed infiltration basin, porous (gravel) surfacing, filter drain with stone surround trench and surface water inspection chambers, as detailed within the CIRIA 'SuDS Manual', are included within Appendix D.

Maintenance of the proposed headwalls and firewater management system will be as per the manufacturer's instructions / guidance.

Appendix A – Location Plan and Aerial Image



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Watercourses
- Waterbodies

CLIENT:

Axis P.E.D Ltd

www.waterco.co.uk

SCHEME:

Sperberry Hill Solar

PLOT TITLE:

Location Plan

PLOT STATUS:		FINAL		DATE:	01-10-2024
DRAWN:	JJ	CHECKED:	MW	APPROVED:	AW
PLOT SCALE AT A3:				1:6000	
PLOT NAME:					14855_Location_Plan
REVISION:					-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

CLIENT:

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SCHEME:

Sperberry Hill Solar

PLOT TITLE:

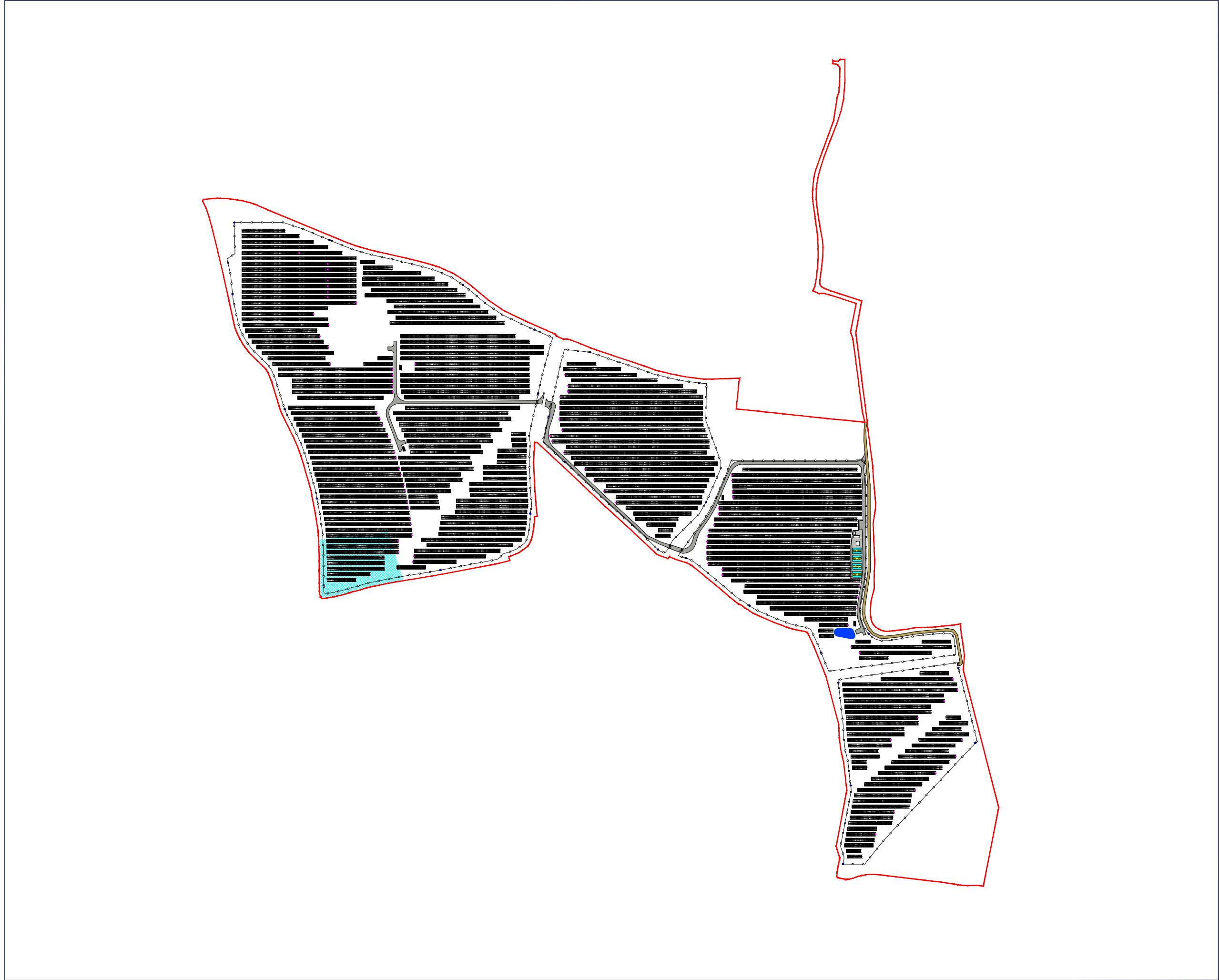
Aerial Plan

PLOT STATUS:		DATE:	
FINAL		01-10-2024	

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
JJ	MW	AW	1:6000

PLOT NAME:	REVISION:
14855_Aerial_Plan	-

Appendix B – General Arrangement Plan



- Application Site
- Deer / Stock Fence
- Solar PV Arrays
- String Inverter
- Transformer Station
- Battery Container
- Battery Transformer Unit
- Other Building (Labelled)
- Existing Access Track Upgraded
- Proposed Access Track
- Proposed Compound Areas
- Archaeologically Sensitive Area
- Surface Water Attenuation Basin
- CCTV

0344 8700 007
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Client
Brockwell Storage and Solar Ltd

Project
Sperberry Hill Solar Array and BESS

Drawing Title

General Arrangement

Scale
1:5000 @A3

Date
October 2024

Dwg no
3732-01-03

Status
Planning

Drawn
TR

Checked
ToK

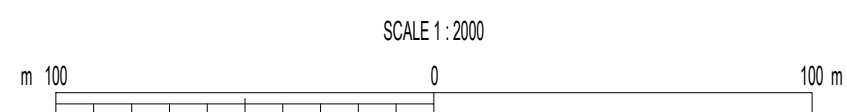
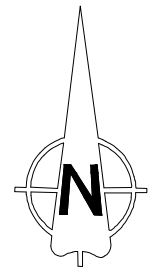
Rev
H

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Appendix C – Surface Water Drainage Layout Drawings



NOTES

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KEY

— SITE BOUNDARY

SITE LOCATION

GRID REFERENCE: 520640, 226399
SITE ADDRESS: LAND SOUTH OF SPERBERRY HILL, ST IPPOLYTS, HERTFORDSHIRE, SG4 7NZ

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I01	08/07/26	FIRST ISSUE	RM	AR	AC
REV	DATE	DESCRIPTION	ORG	CHK	APP

CLIENT

AXIS P.E.D LTD

PRINCIPAL DESIGNER

AXIS P.E.D LTD


Waterco Ltd., Eden Court,
Lon Parow Business Park, Ruffin LL15 1NJ
tel (+44) 1824 702220
www.waterco.co.uk

SCHEME

SPERBERRY HILL SOLAR

TITLE

SURFACE WATER DRAINAGE LAYOUT
KEY PLAN

ORIGINATOR R.MOORE	CHECKER A.RUSSELL	APPROVER A.CALDWELL
-----------------------	----------------------	------------------------

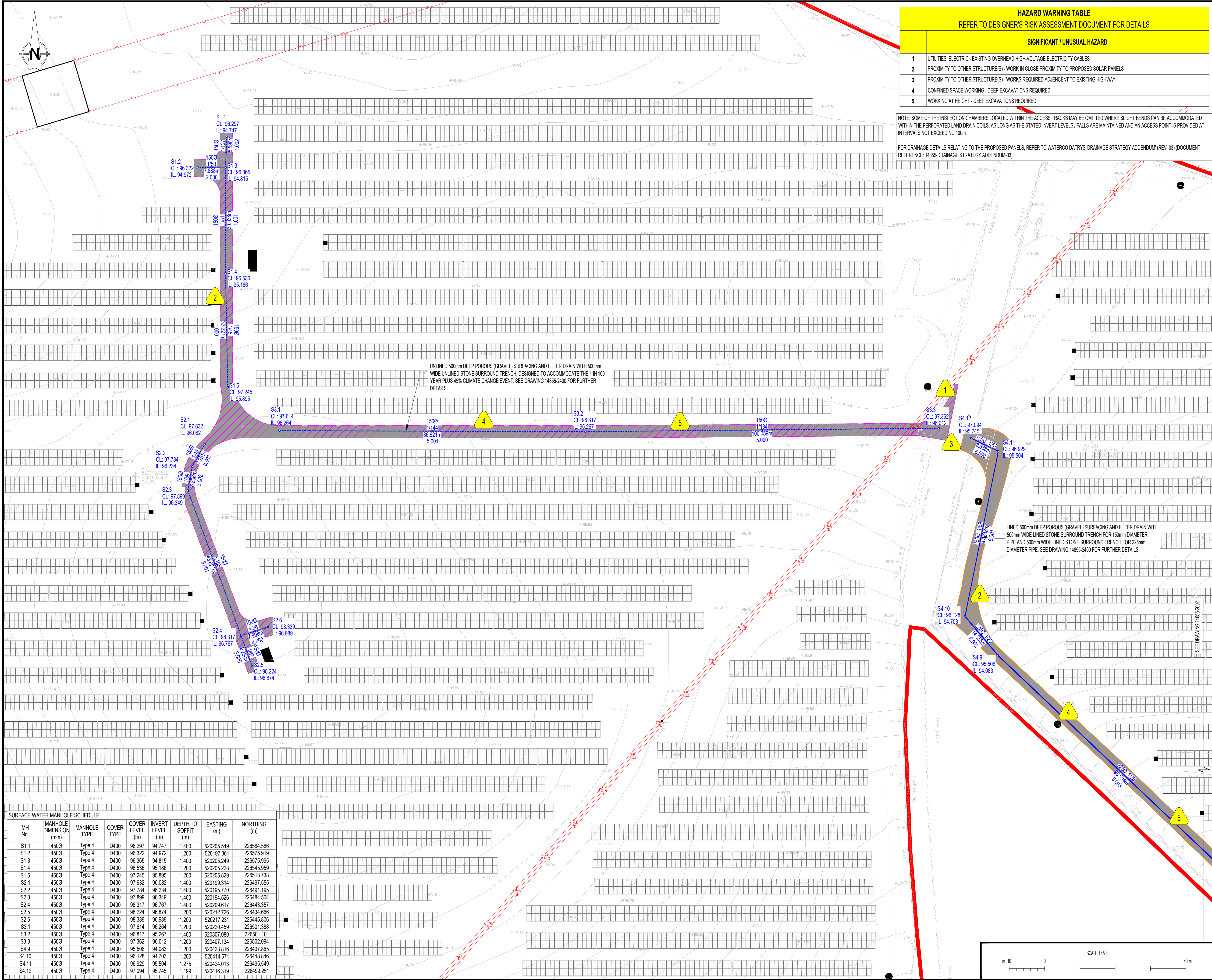
STATUS

FOR INFORMATION

SCALE / SHEET SIZE 1:2000 / A1	REV I01
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DRAWING NUMBER

14855-2000



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KEY

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- PROPOSED FILTER DRAIN WITH UNLINED STONE SURROUND
- PROPOSED FILTER DRAIN WITH LINED STONE SURROUND
- PROPOSED SURFACE WATER INSPECTION CHAMBER
- PROPOSED UNLINED POROUS (GRAVEL) SURFACING
- PROPOSED LINED POROUS (GRAVEL) SURFACING
- AREAS OF RESIDUAL EXTRAORDINARY / UNEXPECTED HAZARD. SEE DESIGNER'S RISK ASSESSMENT.

REFERENCE CALCULATIONS

14855-DRAINAGE AREA 1-CAUSEWAY FLOW CALCULATION-01
14855-DRAINAGE AREA 2-CAUSEWAY FLOW CALCULATION-01
14855-DRAINAGE AREA 3-CAUSEWAY FLOW CALCULATION-01
14855-DRAINAGE AREA 4-CAUSEWAY FLOW CALCULATION-01

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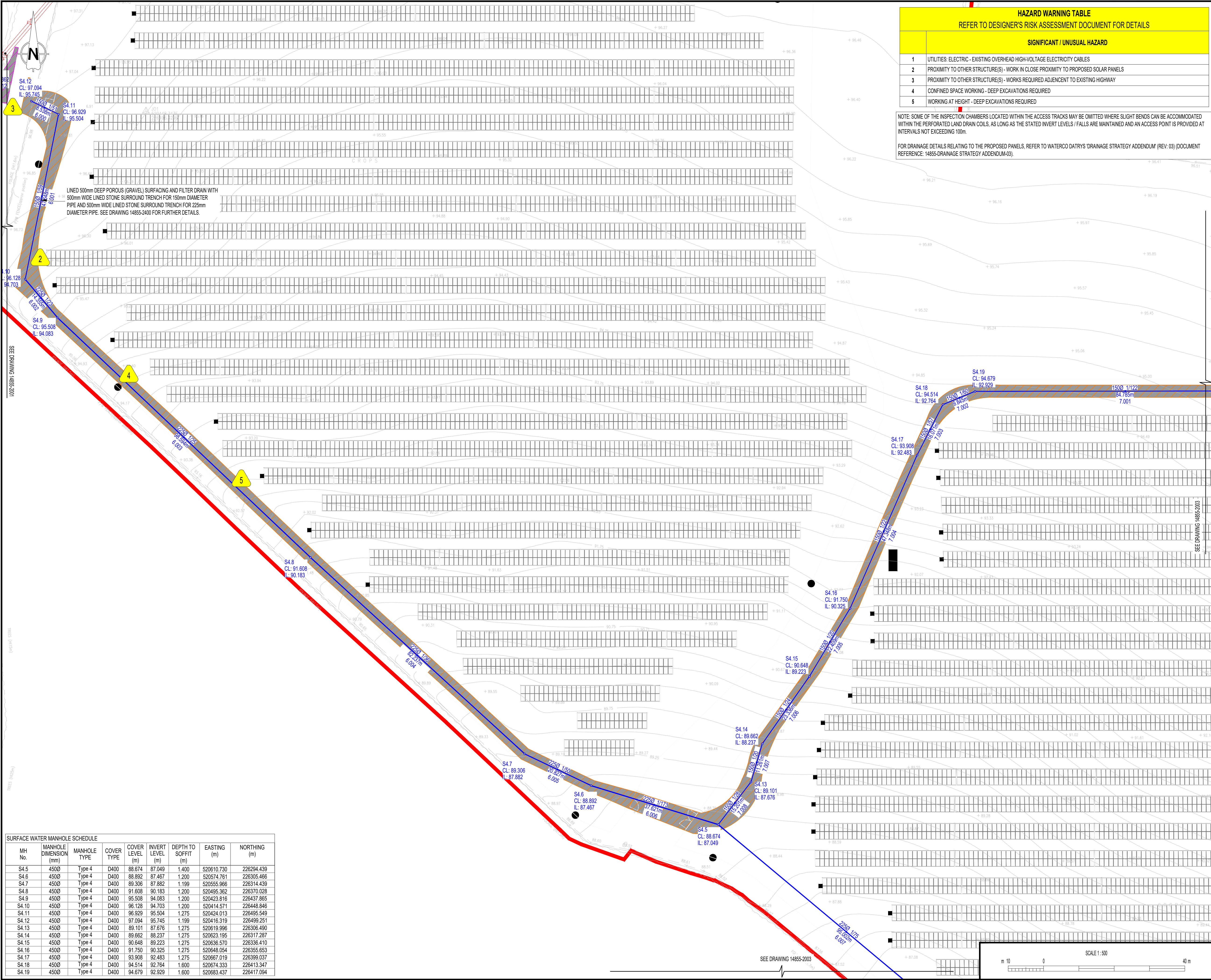
SCHEME

SPERRBERRY HILL SOLAR

TITLE

SURFACE WATER DRAINAGE LAYOUT
SHEET 1 OF 4

ORIGINATOR R.MOORE	CHECKER A.RUSSELL	APPROVER A.CALDWELL
STATUS		
APPROVAL		
SCALE / SHEET SIZE 1:500 / A1		REV R01
DRAWING NUMBER 14855-2001		



HAZARD WARNING TABLE	
REFER TO DESIGNER'S RISK ASSESSMENT DOCUMENT FOR DETAILS	
	SIGNIFICANT / UNUSUAL HAZARD
1	UTILITIES: ELECTRIC - EXISTING OVERHEAD HIGH-VOLTAGE ELECTRICITY CABLES
2	PROXIMITY TO OTHER STRUCTURE(S) - WORK IN CLOSE PROXIMITY TO PROPOSED SOLAR PANELS
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4	CONFINED SPACE WORKING - DEEP EXCAVATIONS REQUIRED
5	WORKING AT HEIGHT - DEEP EXCAVATIONS REQUIRED

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 - PROPOSED FILTER DRAIN WITH UNLINED STONE SURROUND
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REFERENCE CALCULATIONS
14855-DRAINAGE AREA 4-CAUSEWAY FLOW CALCULATION-01

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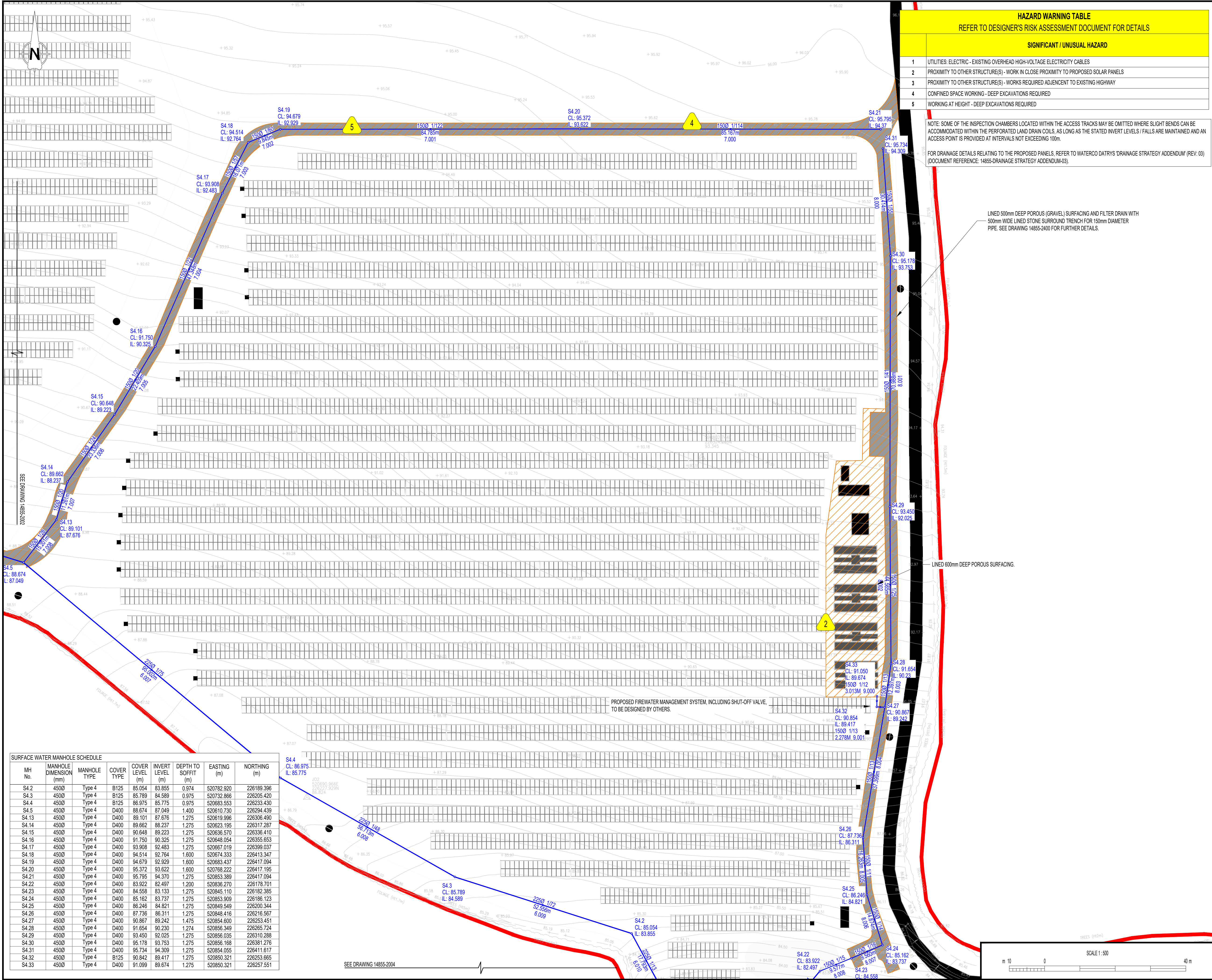
TITLE
SURFACE WATER DRAINAGE LAYOUT SHEET 2 OF 4

ORIGINATOR	CHECKER	APPROVER
R.MOORE	A.RUSSELL	A.CALDWELL

STATUS
APPROVAL

SCALE / SHEET SIZE	REV
1:500 / A1	R01

DRAWING NUMBER
14855-2002



SURFACE WATER MANHOLE SCHEDULE							
MH No.	MANHOLE DIMENSION (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)
S4.2	4500	Type 4	B125	85.054	83.855	0.974	520782.920
S4.3	4500	Type 4	B125	85.789	84.589	0.975	520732.866
S4.4	4500	Type 4	B125	86.975	85.775	0.975	520683.553
S4.5	4500	Type 4	D400	88.674	87.049	1.400	520610.730
S4.13	4500	Type 4	D400	89.101	87.676	1.275	520619.996
S4.14	4500	Type 4	D400	89.662	88.237	1.275	520623.195
S4.15	4500	Type 4	D400	90.648	89.223	1.275	520636.570
S4.16	4500	Type 4	D400	91.750	90.325	1.275	520649.054
S4.17	4500	Type 4	D400	93.908	92.483	1.275	520667.019
S4.18	4500	Type 4	D400	94.514	92.764	1.600	520674.333
S4.19	4500	Type 4	D400	94.679	92.929	1.600	520683.437
S4.20	4500	Type 4	D400	95.372	93.622	1.600	520768.222
S4.21	4500	Type 4	D400	95.795	94.370	1.275	520853.389
S4.22	4500	Type 4	D400	83.922	82.497	1.200	520836.270
S4.23	4500	Type 4	D400	84.558	83.133	1.275	520845.110
S4.24	4500	Type 4	D400	85.162	83.737	1.275	520853.909
S4.25	4500	Type 4	D400	86.246	84.821	1.275	520849.549
S4.26	4500	Type 4	D400	87.736	86.311	1.275	520848.416
S4.27	4500	Type 4	D400	90.867	89.242	1.475	520854.600
S4.28	4500	Type 4	D400	91.654	90.230	1.274	520856.349
S4.29	4500	Type 4	D400	93.450	92.025	1.275	520856.035
S4.30	4500	Type 4	D400	95.178	93.753	1.275	520856.188
S4.31	4500	Type 4	D400	95.734	94.309	1.275	520854.055
S4.32	4500	Type 4	B125	90.842	89.417	1.275	520850.321
S4.33	4500	Type 4	D400	91.099	89.674	1.275	520850.321

HAZARD WARNING TABLE	
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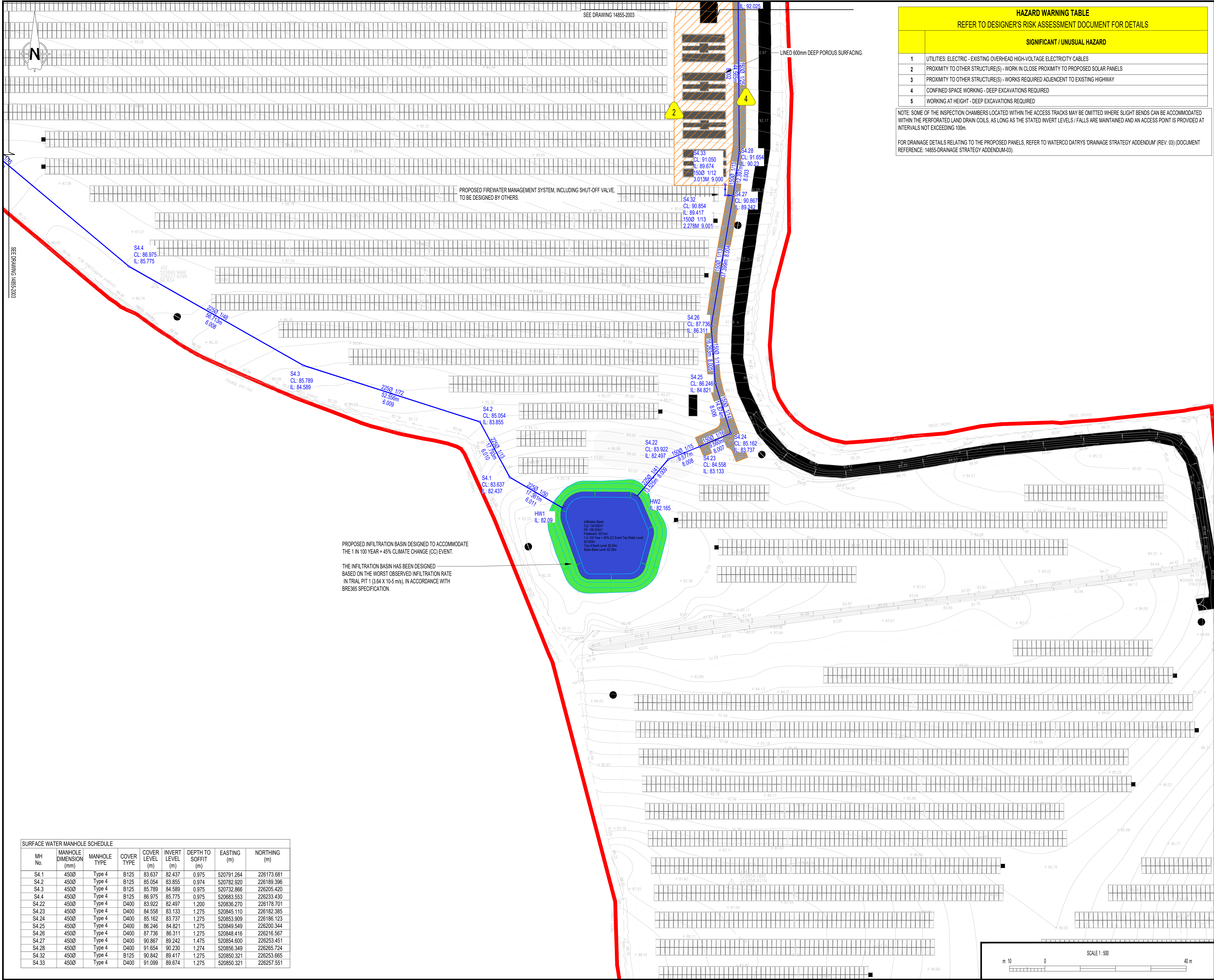
TITLE
**SURFACE WATER DRAINAGE LAYOUT
SHEET 3 OF 4**

ORIGINATOR R.MOORE	CHECKER A.RUSSELL	APPROVER A.CALDWELL
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STATUS
APPROVAL

SCALE / SHEET SIZE 1:500 / A1	REV R01
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DRAWING NUMBER
14855-2003



HAZARD WARNING TABLE	
REFER TO DESIGNER'S RISK ASSESSMENT DOCUMENT FOR DETAILS	
SIGNIFICANT / UNUSUAL HAZARD	
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- PROPOSED FILTER DRAIN WITH UNLINED STONE SURROUND
- PROPOSED FILTER DRAIN WITH LINED STONE SURROUND
- PROPOSED SURFACE WATER INSPECTION CHAMBER
- PROPOSED UNLINED POROUS (GRAVEL) SURFACING
- PROPOSED LINED POROUS (GRAVEL) SURFACING
- AREAS OF RESIDUAL EXTRAORDINARY / UNEXPECTED HAZARD. SEE DESIGNER'S RISK ASSESSMENT.

REFERENCE CALCULATIONS	
14855-DRAINAGE AREA 4-CAUSEWAY FLOW CALCULATION-01	

SITE LOCATION	
GRID REFERENCE:	520640, 226399
SITE ADDRESS:	LAND SOUTH OF SPERRBERRY HILL, ST IPPOLYTS, HERTFORDSHIRE, SG4 7NZ

CAUTION: THE MANAGEMENT AND DESIGN OF ANY AND ALL TEMPORARY WORKS REQUIRED TO EXECUTE THIS DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR.

R01	08/07/26	FIRST ISSUE	RM	AR	AC
REV	DATE	DESCRIPTION	ORG	CHK	APP

CLIENT					
AXIS P.E.D LTD					

PRINCIPAL DESIGNER					
AXIS P.E.D LTD					

Waterco

Waterco Ltd., Eden Court,
Lon Parcw Business Park, Ruthin LL15 1NJ

tel (+44) 1824 702220
www.waterco.co.uk

SCHEME					
SPERRBERRY HILL SOLAR					

TITLE					
SURFACE WATER DRAINAGE LAYOUT SHEET 4 OF 4					

ORIGINATOR	CHECKER	APPROVER
R.MOORE	A.RUSSELL	A.CALDWELL

STATUS		
APPROVAL		

SCALE / SHEET SIZE	REV
1:500 / A1	R01

DRAWING NUMBER	14855-2004
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SURFACE WATER MANHOLE SCHEDULE							
MH No.	MANHOLE DIMENSION (mm)	MANHOLE TYPE	COVER TYPE	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH TO SOFFIT (m)	EASTING (m)
S4.1	4500	Type 4	B125	83.637	82.437	0.975	520791.264
S4.2	4500	Type 4	B125	85.054	83.855	0.974	520782.920
S4.3	4500	Type 4	B125	85.789	84.589	0.975	520732.866
S4.4	4500	Type 4	B125	86.975	85.775	0.975	520683.553
S4.22	4500	Type 4	D400	83.922	82.497	1.200	520836.270
S4.23	4500	Type 4	D400	84.558	83.133	1.275	520845.110
S4.24	4500	Type 4	D400	85.162	83.737	1.275	520853.909
S4.25	4500	Type 4	D400	86.246	84.821	1.275	520849.549
S4.26	4500	Type 4	D400	87.736	86.311	1.275	520848.416
S4.27	4500	Type 4	D400	90.867	89.242	1.475	520854.600
S4.28	4500	Type 4	D400	91.654	90.230	1.274	520856.349
S4.32	4500	Type 4	B125	90.842	89.417	1.275	520850.321
S4.33	4500	Type 4	D400	91.099	89.674	1.275	520850.321

Appendix D – SuDS Maintenance Schedules

Operation and Maintenance Requirements for Infiltration Basins

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Remove litter and debris	Monthly
	Cut grass-for landscaped areas and access routes	Monthly (during growing season), or as required
	Cut grass - meadow grass in and around basin	Half yearly (spring - before nesting season, and autumn)
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
Occasional maintenance	Reseed- areas of poor vegetation growth	As required
	Prune and trim any trees and remove cuttings	As required
	Remove sediment from pre-treatment system when 50% full	As required
Remedial actions	Repair erosion or other damage by reseeding or re-turfing	As required
	Realignment of rip-rap	As required
	Repair/rehabilitation of inlets, outlets and overflows	As required
	Rehabilitate infiltration surface using scarifying and spiking techniques if performance deteriorates	As required
	Relevel uneven surfaces and reinstate design levels	As required
Monitoring	Inspect inlets, outlets and overflows for blockages, and clear if required	Monthly
	Inspect banksides, structures, pipework etc for evidence of physical damage	Monthly
	Inspect inlets and pre-treatment systems for silt accumulation; establish appropriate silt removal frequencies	Half yearly
	Inspect infiltration surfaces for compaction and ponding	Monthly

Ref. Table 13.2 CIRIA C753 'The SuDS Manual'

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :

Operation and Maintenance Requirements for Permeable Paving

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment
Occasional maintenance	Stabilise and move contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level or the paving	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Inspect for evidence of poor operation and / or weed growth – if required, take remedial action	Three-monthly, 48hr after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Ref. Table 20.15, CIRIA C753 'The SuDS Manual'

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :

Operation and Maintenance Requirements for Filter Drains

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Remove litter (including leaf litter) and debris from filter drain surface, access chambers and pre-treatment devices	Monthly (or as required)
	Inspect filter drain surface, inlet / outlet pipework and control systems for blockages, clogging, standing water and structural damage	Monthly
	Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation, and establish appropriate silt removal frequencies	Six monthly
	Remove sediment from pre-treatment devices	Six monthly, or as required
Occasional maintenance	Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (e.g. NJUG, 2007 or BS 3998:2010)	As required
	At locations with high pollution loads, remove surface geotextile and replace, and wash or replace overlying filter medium	Five yearly, or as required
	Clear perforated pipework of blockages	As required

Ref. Table 16.1, CIRIA C753 'The SuDS Manual'

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :

Operation and Maintenance Requirements for Piped Drainage Systems

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. Take remedial action if required.	Monthly (at start, then half yearly)
	Debris removal from catchment surface	Monthly
	Visual inspection of up/downstream chambers to assess if pipe length is draining down correctly and/or is blocked. Assess if there is any build up of silt in chamber sump.	Monthly (at start, then half yearly) & after large storm events
	Removal of accumulated silt from silt trap and catchpit sumps.	As required
Occasional Maintenance	CCTV Survey to confirm condition of pipework, identify any repairs/replacement works and action as required.	Following Poor Performance.
Remedial actions	Repair/rehabilitation of inlets/outlets.	As required

The maintenance requirements detailed above are to be undertaken by the site owner.

Name :

Position :

Date :

Signed on behalf of the site owner :
