

Infrastructure Type 1 – Solar Photovoltaics (PV)

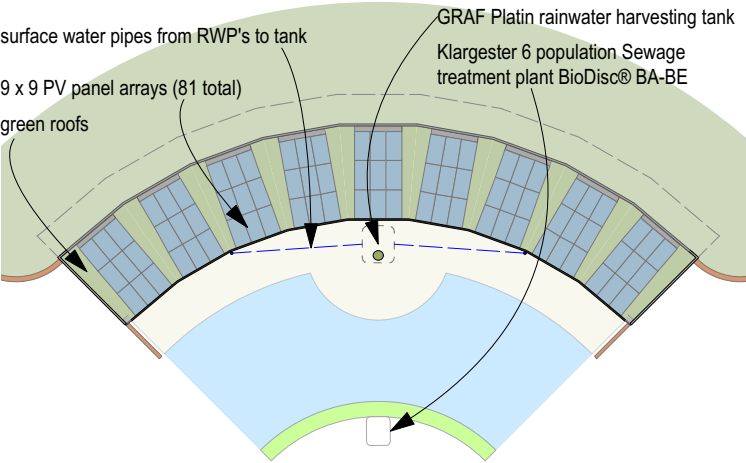
Scale of the proposed installation (prediction)
81 x 400W panels (21.8% efficiency) = 32,400 W peak, 7643 kWh / year input.
Load = 4241 kWh / year - 180% provision

Type of the proposed installation
M10 Series, DM 108H (Sunshine Solar Ltd.) - 400W Solar PV Module MONO - All Black.

Appearance of the proposed installation
The panels are arranged in 9 rectangular segments in a chain with 'green roofs' between tapered in plan to form a crescent facing south. The depth of the green roof is greater than that of the PV arrays so the panels will entirely integrate visually.



view from the southwest above, and roof plan below



Maintenance of the proposed installation
the panels have a 12 year manufacturers warranty. Electrical testing will be undertaken annually

Infrastructure Type 2 – Electrical Vehicle Charging Points

9 no. EVEC VEC01 universal, single-phase 7kW EV chargers. The VEC01 features a Type 2 socket compatible with both Type 1 and Type 2 cables making it suitable for use with all EV and PHEV vehicles (see photo, right).

Modern, discreet wall mounted EV charger compatible with the EVEC charging app via Bluetooth and WiFi connectivity. The easy to use app gives users full control over their EV charging allowing remote scheduling of charging, monitor usage, viewing of charging status and on and off function.

Featuring an IP54 rating, built-in PEN protection, over current protection and residual current protection, VEC01 meets all CE & UKCA requirements and is backed by a 3-year warranty ensuring high standards of reliability and safety.

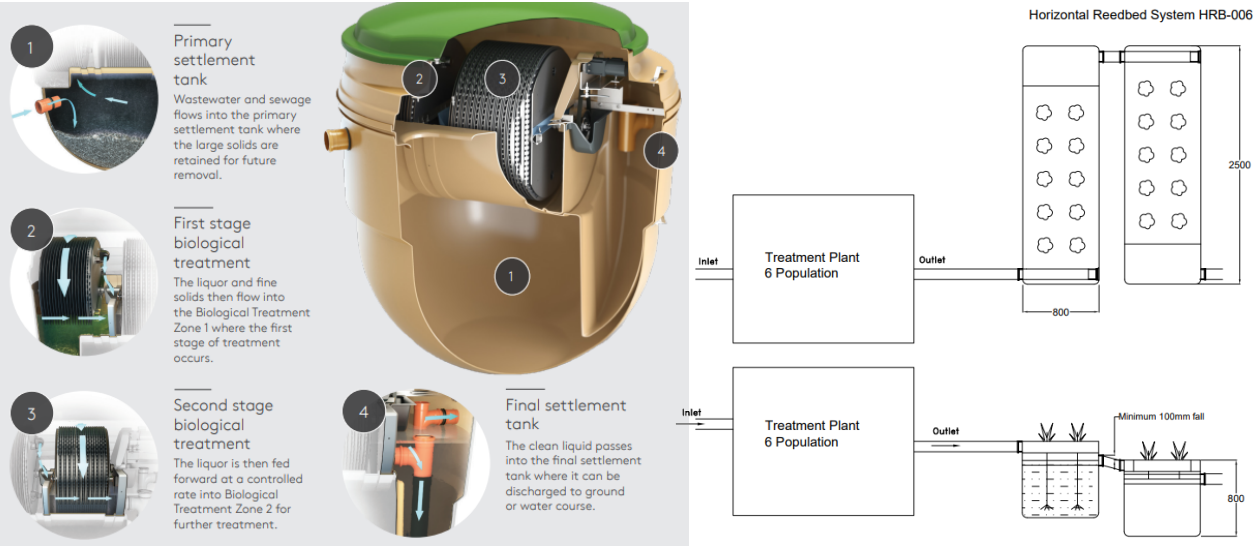
Fixed in pairs to brick pillars 900mm height, 328mm deep and 450mm wide with cable cavity and concrete coping. Each charger measures 300x190x105mm (HxWxD).

Located in car park by site access - see plan below



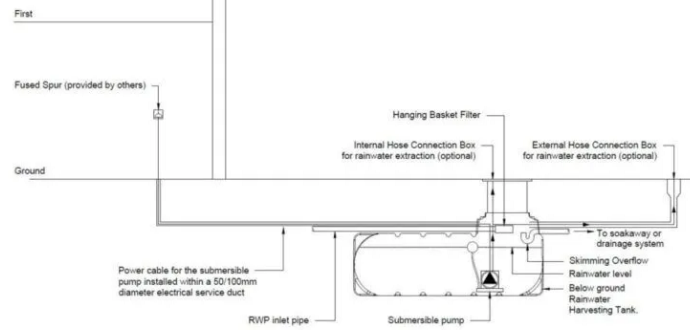
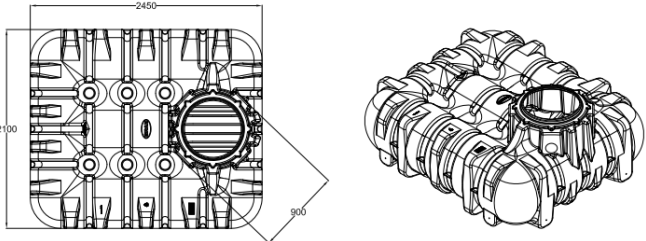
Sewage Treatment PLant

Klargester 6 population Sewage treatment plant BioDisc® BA-BE, to Horizontal Reedbed System HRB-006



Infrastructure Type 3 – Rainwater Harvesting

GRAF Platin 3000 litre flat tank, positioned underneath the patio at the centre of the south elevation. 2 downpipes from south elevation gutter to tank (see plan below left). Pump switched from plant room.



Ground Source Heat Pump

3907 kWh / year predicted heating input, predicted output 12000 kWh approx.
Veissmann Vitocal 300G



PV panels

M10 Series, DM 108H (Sunshine Solar Ltd.) - 400W Solar PV Module MONO - All Black.

ELECTRICAL PARAMETERS @ STC		DM108H 395 - 415				
Max. Power Output	Pmax (Wp)	395	400	405	410	415
Power Tolerance	(%)	0→+3	0→+3	0→+3	0→+3	0→+3
Max. Power Voltage	Vmp (V)	30.32	30.42	30.52	30.62	30.79
Max. Power Current	Imp (A)	13.03	13.15	13.27	13.39	13.48
Open Circuit Voltage	Voc (V)	36.90	36.98	37.06	37.14	37.31
Short Circuit Current	Isc (A)	13.71	13.78	13.85	13.92	14.01
Module Efficiency	(%)	20.23	20.48	20.74	21.00	21.25

ELECTRICAL PARAMETERS @ NMOT		DM108H 395 - 415				
Max. Power Output	Pmax (Wp)	294	298	301	305	309
Max. Power Voltage	Vmp (V)	28.26	28.42	28.56	28.72	28.88
Max. Power Current	Imp (A)	10.40	10.47	10.55	10.62	10.69
Open Circuit Voltage	Voc (V)	34.83	34.90	34.98	35.05	35.21
Short Circuit Current	Isc (A)	11.07	11.13	11.19	11.24	11.32

TEMPERATURE COEFFICIENTS

Temperature Coefficients of Pmax	-0.32%/°C
Temperature Coefficients of Voc	-0.26%/°C
Temperature Coefficients of Isc	+0.054%/°C

MECHANICAL PARAMETERS

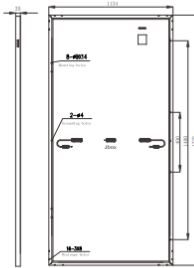
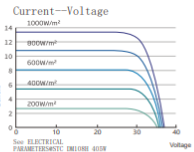
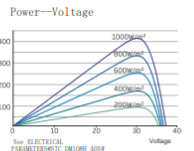
Cell Type	Mono 182 x 91mm
Number of Cells	108pcs 2 x (6x9)
Dimensions (L W D)	1722x1134x30mm
Weight	22
Frame	Anodized Aluminium
Junction Box	Ip68 4mm²/350mm

OPERATING CONDITION

Maximum System Voltage (V)	1500 (DC)
Operating Temperature (°C)	-40→+85
Max. Wind Load / Snow Load (Pa)	2400/5400
Max. Over Current (A)	25 A
Application Class	ClassA
Fire Rating	ClassC
NMOT (°C)	42±3 °C

PACKAGE INFORMATION

Per Pallet	36PCS
40' HQ	936PCS



Dealer Information
Sunshine Solar Ltd
Unit 30, Ashwellthorpe Industrial Estate,
Ashwellthorpe, Norwich, Norfolk NR16 1ER

Client: DaVinci
job: Cider Works Bell Lane TN27 8FS
title: Climate Mitigation Statement
scale: nts date July 2022 dwn. GB
drawing number; **22-20-09** rev.-