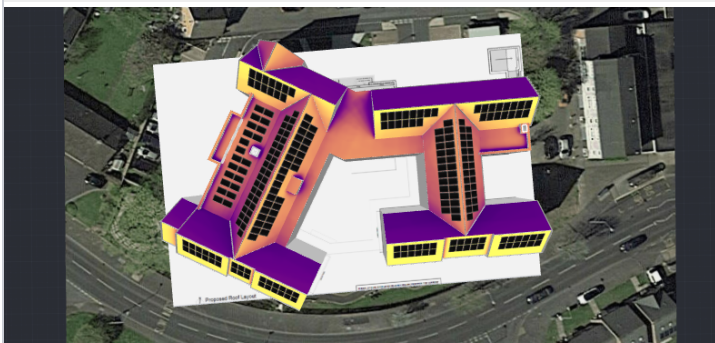
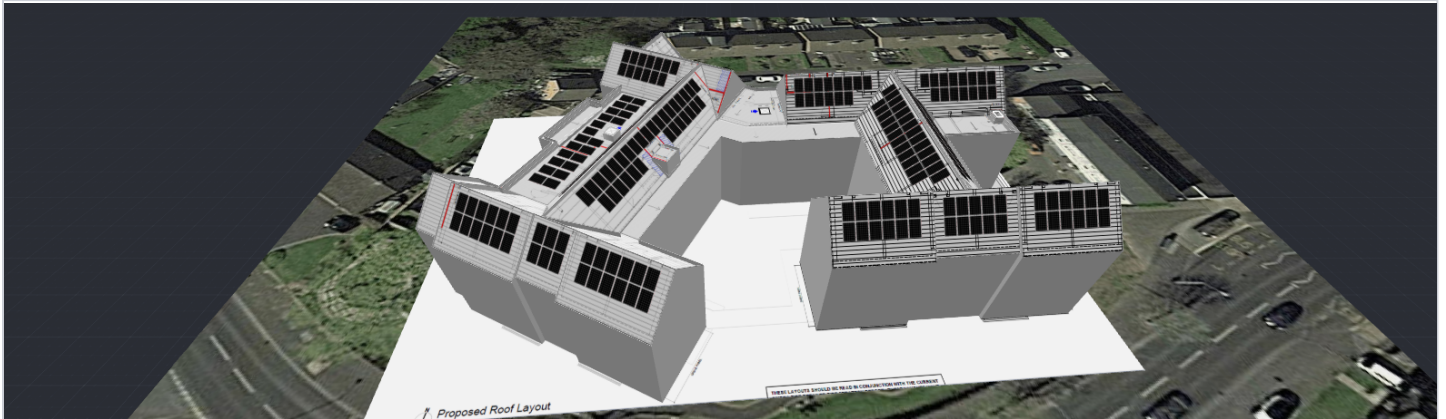


WOODSIDE CARE VILLAGE (DRAWING)

Spinney Hill 67, Warwick, CV34 5SL, United Kingdom | 21 Nov 2023



SYSTEM OVERVIEW

 248 PV modules

 2 Inverters

 126 Optimizers

SIMULATION RESULTS



Installed DC Power

107.88 kWp



Max Achieved AC Power

83.30 kW



Annual Energy Production

92.61 MWh



CO2 Emission Saved (Annually)

17.91 t



Equivalent Trees Planted (Annually)

823



Max Achieved DC Power

87.71 kW



DC/AC Oversizing

105%



Max Active AC Power

83.30 kW



Performance Ratio

86%



Performance Index

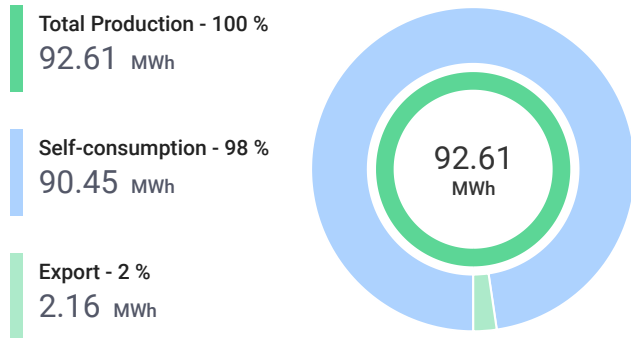
858 kWh/kWp

WOODSIDE CARE VILLAGE (DRAWING)

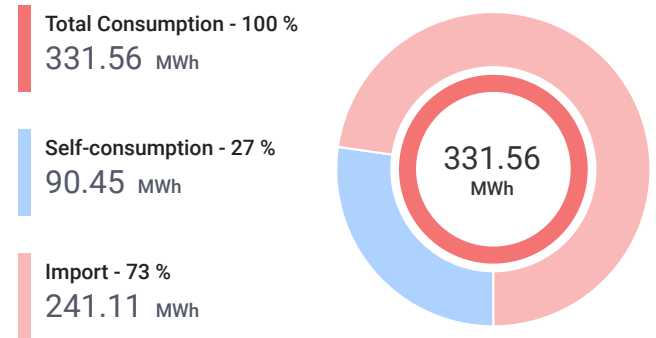
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SYSTEM PRODUCTION



CONSUMPTION

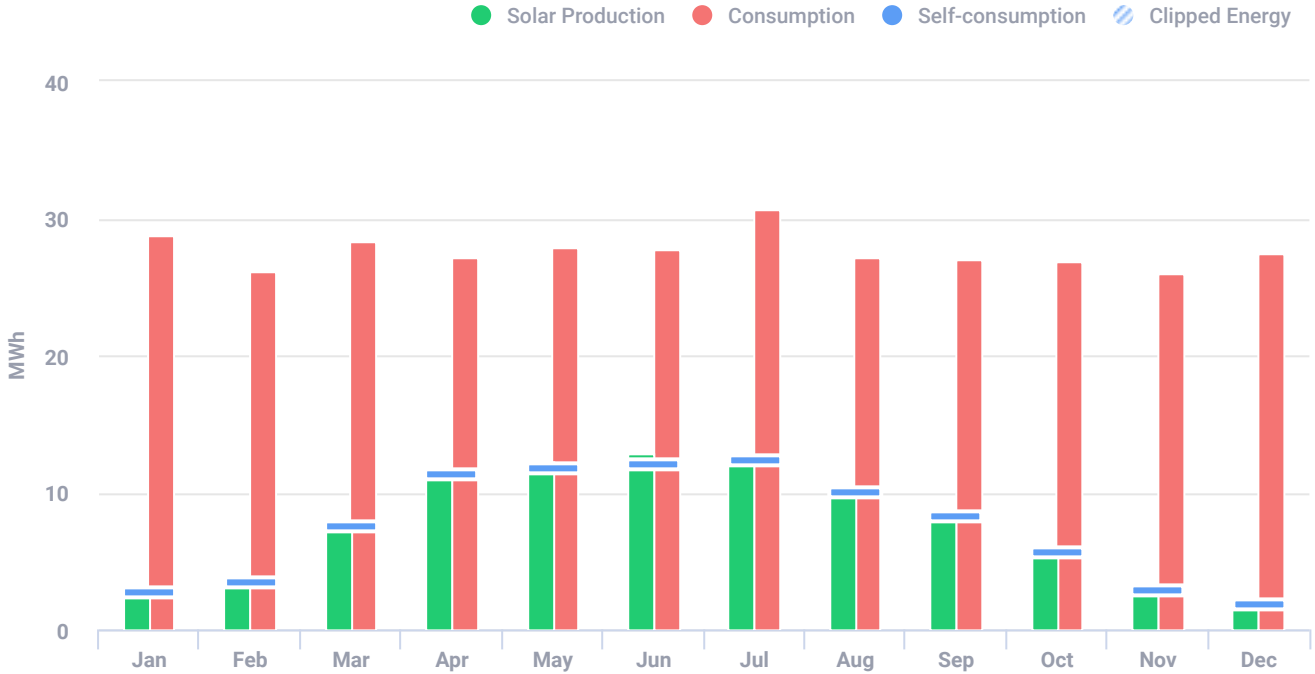


WOODSIDE CARE VILLAGE (DRAWING)

Spinney Hill 67, Warwick, CV34 5SL, United Kingdom | 21 Nov 2023



ESTIMATED MONTHLY ENERGY



Total clipped energy: 0.08%

Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	2,762	28,806	2,762	-
Feb	3,487	26,157	3,468	-
Mar	7,638	28,366	7,532	-
Apr	11,597	27,199	11,390	2
May	12,310	27,927	11,805	10
Jun	12,900	27,768	12,147	54
Jul	12,640	30,697	12,431	1
Aug	10,268	27,185	10,049	3
Sep	8,431	27,057	8,314	-
Oct	5,719	26,874	5,697	-
Nov	2,936	26,057	2,936	-
Dec	1,919	27,467	1,919	-

PV MODULES

























# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
10	Longi Solar, LR5-54HTH-435M Scientists	4.4 kWp			176°	45°

WOODSIDE CARE VILLAGE (DRAWING)

Spinney Hill 67, Warwick, CV34 5SL, United Kingdom | 21 Nov 2023



PV MODULES (CONTINUED)

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
6	Longi Solar, LR5-54HTH-435M Scientists	2.6 kWp			206°	45°
12	Longi Solar, LR5-54HTH-435M Scientists	5.2 kWp			206°	45°
15	Longi Solar, LR5-54HTH-435M Scientists	6.5 kWp			176°	45°
32	Longi Solar, LR5-54HTH-435M Scientists	13.9 kWp			116°	45°
26	Longi Solar, LR5-54HTH-435M Scientists	11.3 kWp			266°	42°
36	Longi Solar, LR5-54HTH-435M Scientists	15.7 kWp			296°	45°
12	Longi Solar, LR5-54HTH-435M Scientists	5.2 kWp			176°	45°
12	Longi Solar, LR5-54HTH-435M Scientists	5.2 kWp			206°	45°
22	Longi Solar, LR5-54HTH-435M Scientists	9.6 kWp			206°	10°
13	Longi Solar, LR5-54HTH-435M Scientists	5.7 kWp			206°	45°
26	Longi Solar, LR5-54HTH-435M Scientists	11.3 kWp			176°	45°
26	Longi Solar, LR5-54HTH-435M Scientists	11.3 kWp			86°	42°
Total:	248	107.9 kWp				

WOODSIDE CARE VILLAGE (DRAWING)

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BILL OF MATERIALS (BOM)

Items	Part Number	Quantity	Price (£)	Total (£)
SE50K Manager		1	0.00	0.00
SE33.3K		1	0.00	0.00
S1000 SenceConnect, 1.3m input lead, single 4.7m output lead (+)	S1000-1GMXMBT	126		
LR5-54HTH-435M Scientists		248		

ELECTRICAL DESIGN

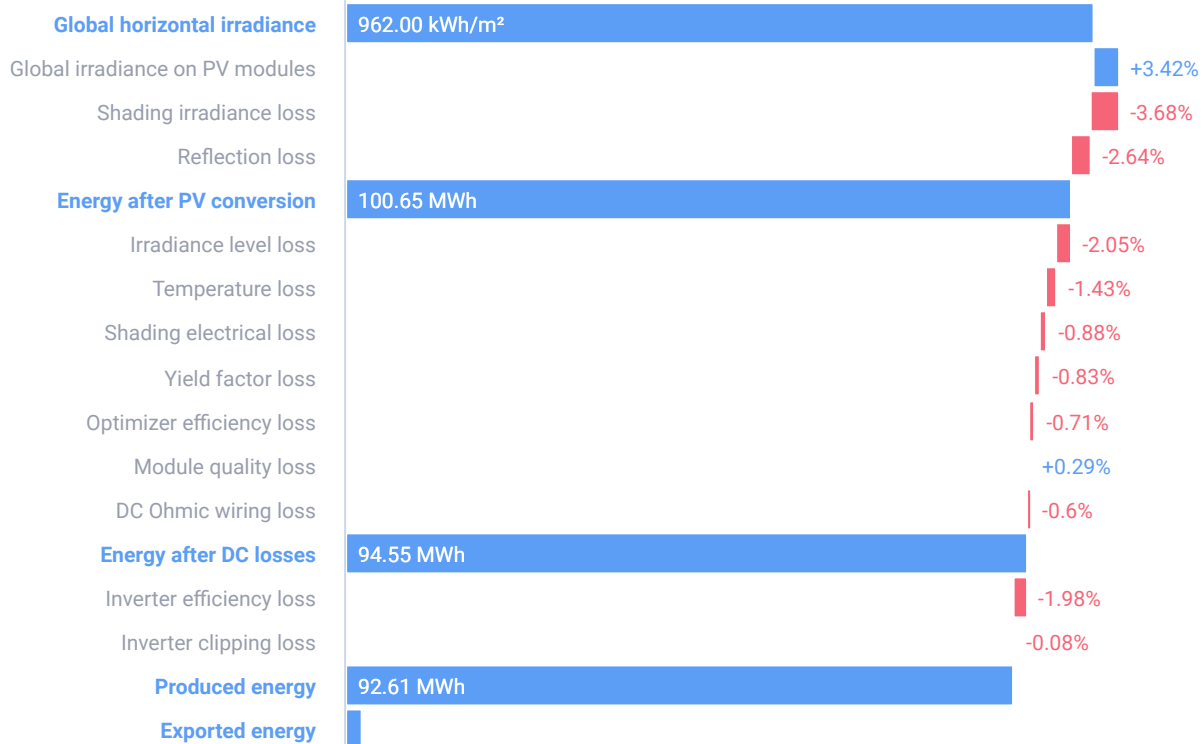
Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
1 x SE50K Manager 45.98kW 92% Oversizing	Center Unit		
	∞ 1 x string	16 x S1000 (2:1)	32
	∞ 1 x string	18 x S1000 (2:1)	36
	Left Unit		
	∞ 1 x string	17 x S1000 (2:1), 1 x S1000 (1:1)	35
	∞ 1 x string	15 x S1000 (2:1)	30
1 x SE33.3K 41.73kW 125% Oversizing	∞ 1 x string	14 x S1000 (2:1)	28
	∞ 3 x strings	14 x S1000 (2:1), 1 x S1000 (1:1)	29

WOODSIDE CARE VILLAGE (DRAWING)

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SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT (London)
Weather station	Warwick (1.12 km away)
Station altitude	48 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N



LOSS FACTORS

Near shading	Enabled
Albedo	0.20
Bi-Facial Albedo	0.30
Soiling/Snow	0%
Incidence angle modifier (IAM), ASHRAE b0 param.	0.05
Thermal loss factor U _c (const) Flush mount	20
Thermal loss factor U _c (const) Tilted	29
LID loss factor	0%
System unavailability	0%