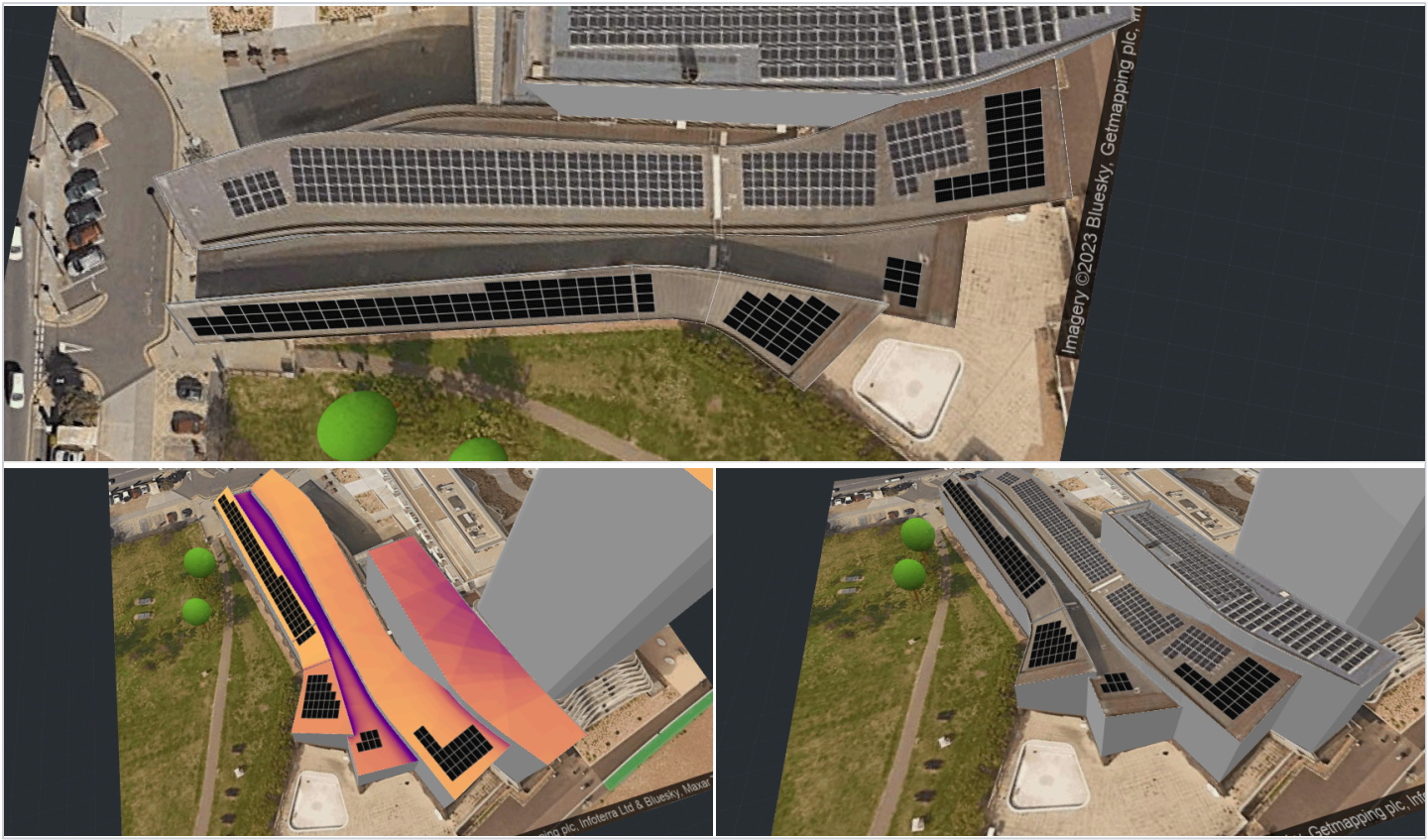
SPLASHPOINT LEISURE CENTRE, WORTHING

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SYSTEM OVERVIEW

148 PV modules | 2 Inverters | 76 Optimizers

FINANCIAL OVERVIEW

Net Payments	Lifetime Bill Savings (NPV)	System Profit (NPV)	Internal Return Rate (IRR)	Payback Period
£ 79,271	£ 413,521	£ 334,250	25.28 %	4.1 years

SIMULATION RESULTS

Installed DC Power	Max Achieved AC Power	Annual Energy Production	CO2 Emission Saved (Annually)	Equivalent Trees Planted (Annually)
64.38 kWp	55.64 kW	63.38 MWh	12.26 t	563

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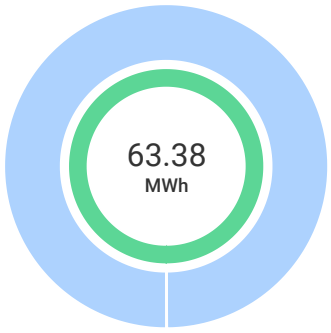
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SYSTEM PRODUCTION

Total Production - 100 %
63.38 MWh

Self-consumption - 100 %
63.33 MWh

Export - 0 %
48.80 kWh

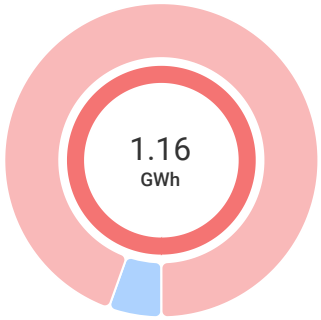


CONSUMPTION

Total Consumption - 100 %
1.16 GWh

Self-consumption - 5 %
63.33 MWh

Import - 95 %
1.09 GWh



ESTIMATED MONTHLY ENERGY



Total clipped energy: 0.03%

PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
78	Longi Solar, LR5-54HTH-435M Explorer (user-defined)	33.9 kWp			251°	30°
7	Longi Solar, LR5-54HTH-435M Explorer (user-defined)	3 kWp			78°	10°

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PV MODULES (CONTINUED)

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
4	Longi Solar, LR5-54HTH-435M Explorer (user-defined)	1.7 kWp			255°	28°
30	Longi Solar, LR5-54HTH-435M Explorer (user-defined)	13.1 kWp			258°	11°
29	Longi Solar, LR5-54HTH-435M Explorer (user-defined)	12.6 kWp			281°	26°
Total: 148		64.4 kWp				

ESTIMATED BILL SAVINGS YEAR 1

Annual

Current Annual Bill	Annual Bill with SolarEdge	Net Bill Annual Savings	Bill Offset
£ 345,096.90	£ 326,220.78	£ 18,876.12	5.47 %

Estimated Net Lifetime Bill Savings

£ 413,521

Utility Provider: **UKPN** | Utility Rate: **Splashpoint, Worthing (0.298 £/kWh)**

SPLASHPOINT LEISURE CENTRE, WORTHING

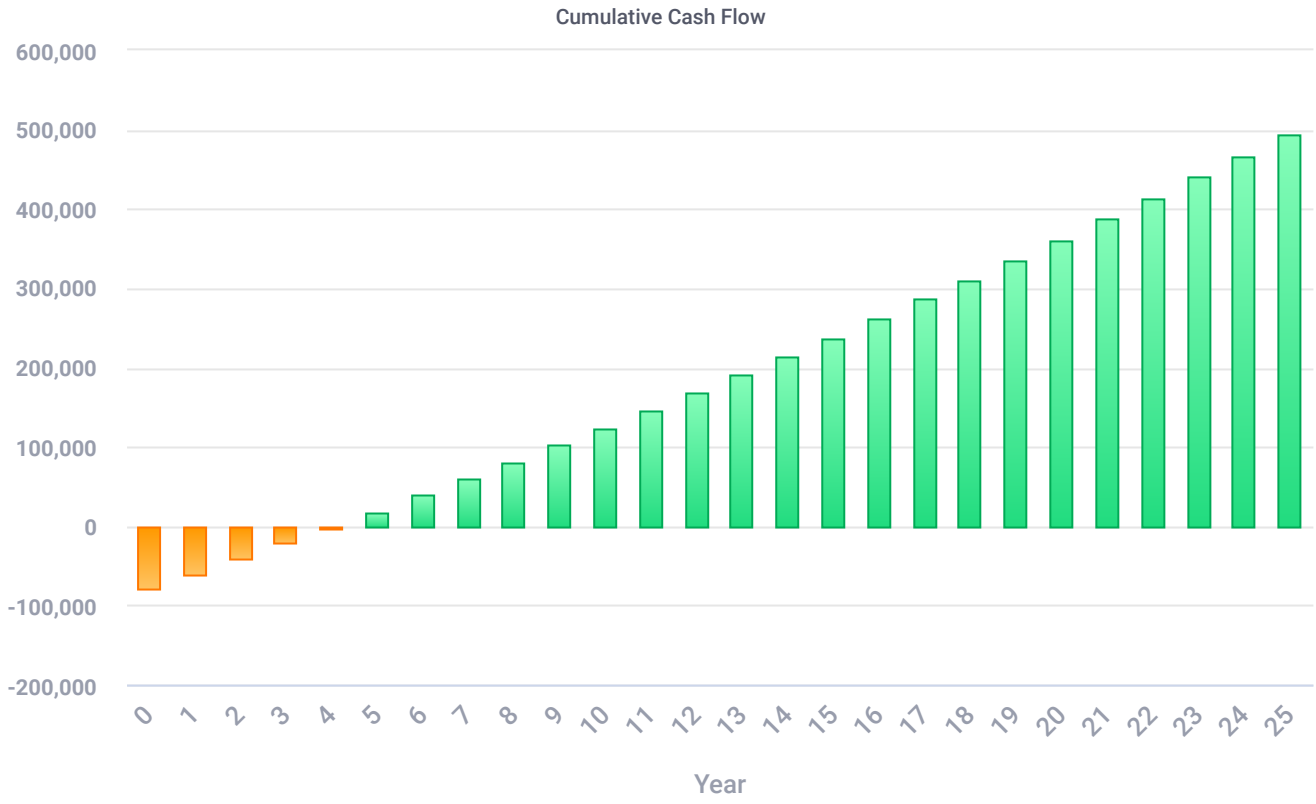
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DETAILED FINANCIAL ANALYSIS

System Price	Maintenance Cost (NPV)	Returns from Incentives (NPV)	Net Payments	Lifetime Bill Savings (NPV)
£ 79,271	£ N/A	£ N/A	£ 79,271	£ 413,521

System Profit (NPV)	Internal Return Rate (IRR)	Return Of Investment (ROI)	Levelized Cost Of Energy (LCOE)	Payback Period
£ 334,250	25.28 %	421.66 %	£/kWh 0.073	4.1 years



YEARLY CASH FLOW

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
0	£ -79,270.62	£ 0.00	£ -79,270.62	£ -79,270.62
1		£ 18,876.12	£ 18,876.12	£ -60,394.50

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YEARLY CASH FLOW (CONTINUED)

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
2		£ 19,176.66	£ 19,176.66	£ -41,217.84
3		£ 19,481.94	£ 19,481.94	£ -21,735.90
4		£ 19,792.09	£ 19,792.09	£ -1,943.82
5		£ 20,107.16	£ 20,107.16	£ 18,163.35
6		£ 20,427.26	£ 20,427.26	£ 38,590.61
7		£ 20,752.45	£ 20,752.45	£ 59,343.06
8		£ 21,082.82	£ 21,082.82	£ 80,425.87
9		£ 21,418.44	£ 21,418.44	£ 101,844.31
10		£ 21,759.41	£ 21,759.41	£ 123,603.72
11		£ 22,105.80	£ 22,105.80	£ 145,709.52
12		£ 22,457.71	£ 22,457.71	£ 168,167.22
13		£ 22,815.21	£ 22,815.21	£ 190,982.44
14		£ 23,178.41	£ 23,178.41	£ 214,160.85
15		£ 23,547.39	£ 23,547.39	£ 237,708.24
16		£ 23,922.24	£ 23,922.24	£ 261,630.47
17		£ 24,303.05	£ 24,303.05	£ 285,933.53
18		£ 24,689.93	£ 24,689.93	£ 310,623.46
19		£ 25,082.96	£ 25,082.96	£ 335,706.42
20		£ 25,482.25	£ 25,482.25	£ 361,188.68
21		£ 25,887.90	£ 25,887.90	£ 387,076.57
22		£ 26,300.00	£ 26,300.00	£ 413,376.57
23		£ 26,718.66	£ 26,718.66	£ 440,095.23
24		£ 27,143.98	£ 27,143.98	£ 467,239.21
25		£ 27,576.07	£ 27,576.07	£ 494,815.28
Total:		£ 574,085.90	£ 494,815.28	

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BILL OF MATERIALS (BOM)

Items	Part Number	Quantity
SE30K		2
S1000		76
LR5-54HTH-435M Explorer		148

ELECTRICAL DESIGN

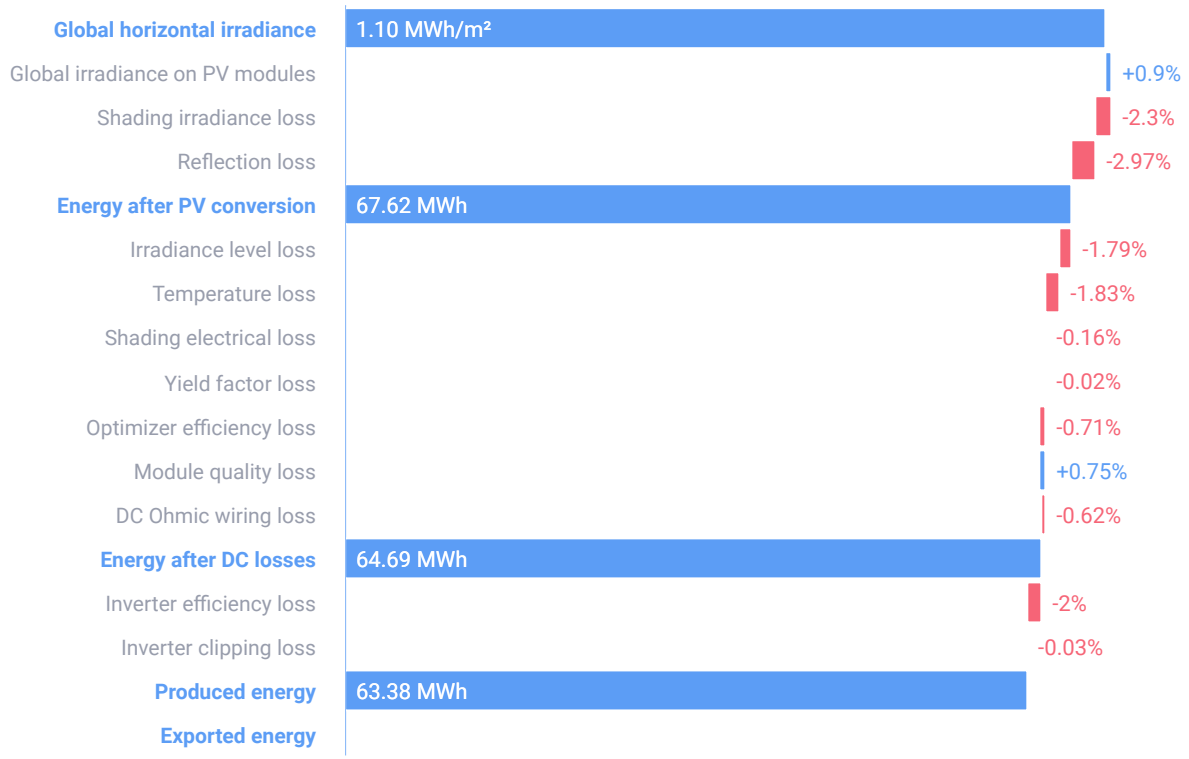
Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
1 xSE30K 34.01kW | 113% Oversizing	2 x strings	20 x S1000 (2:1), 1 x S1000 (1:1)	41
1 xSE30K 25.28kW | 84% Oversizing	1 x string	18 x S1000 (2:1), 1 x S1000 (1:1)	37
	1 x string	14 x S1000 (2:1), 1 x S1000 (1:1)	29

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SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS

LOCATION & GRID

Time zone	BST (London)
Weather station	Worthing (2.02 km away)
Station altitude	2 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 Uc (const) Flush mount	20
Thermal loss factor Uc (const) Tilted	29
LID loss factor	0%
System unavailability	0%