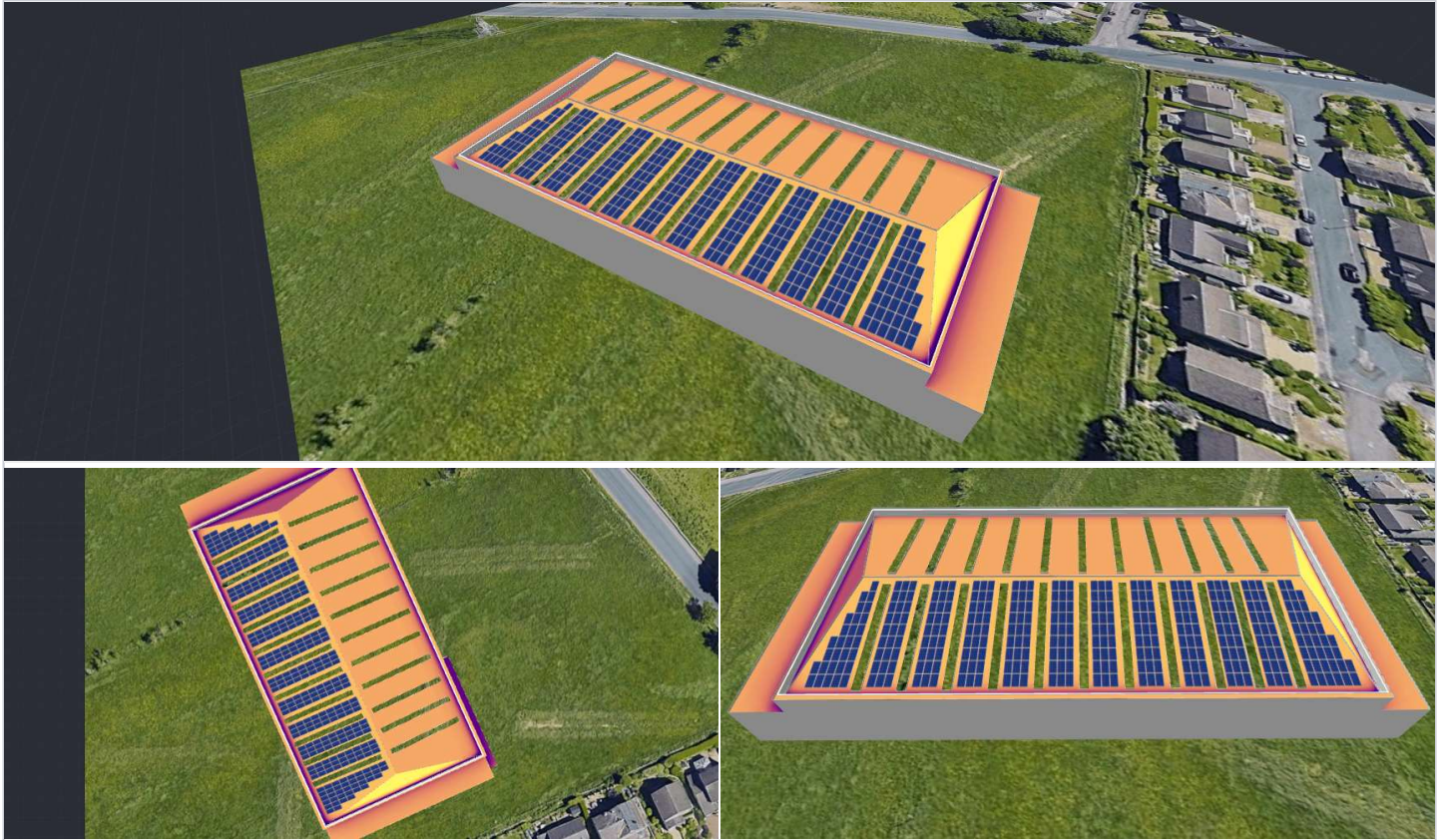


LINDLEY MOOR - NEW SHED

Weatherhill Road 140, Huddersfield, HD3 3QY, United Kingdom | 19 Sept 2023



SYSTEM OVERVIEW

 337 PV modules

 2 Inverters

 174 Optimizers

FINANCIAL OVERVIEW

Net Payments

£ 121,320

Lifetime Bill Savings (NPV)

£ 470,520

System Profit (NPV)

£ 349,200

Internal Return Rate (IRR)

22.24 %

Payback Period

4.6 years

LINDLEY MOOR - NEW SHED

Weatherhill Road 140, Huddersfield, HD3 3QY, United Kingdom | 19 Sept 2023



SIMULATION RESULTS



Installed DC Power
168.50 kWp



Max Achieved AC Power
133.20 kW



Annual Energy Production
136.92 MWh



CO2 Emission Saved (Annually)
26.48 t



Equivalent Trees Planted (Annually)
1,216



Max Achieved DC Power
150.72 kW



DC/AC Oversizing
113%



Max Active AC Power
133.20 kW



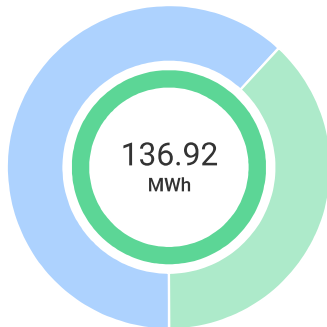
Performance Ratio
90%



Performance Index
813 kWh/kWp

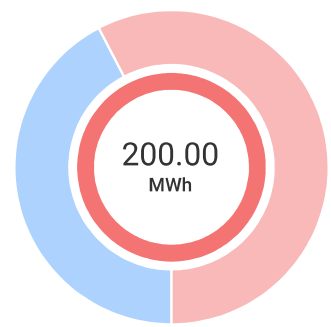
SYSTEM PRODUCTION

- █ Total Production - 100 %
136.92 MWh
- █ Self-consumption - 62 %
84.68 MWh
- █ Export - 38 %
52.24 MWh



CONSUMPTION

- █ Total Consumption - 100 %
200.00 MWh
- █ Self-consumption - 42 %
84.68 MWh
- █ Import - 58 %
115.32 MWh

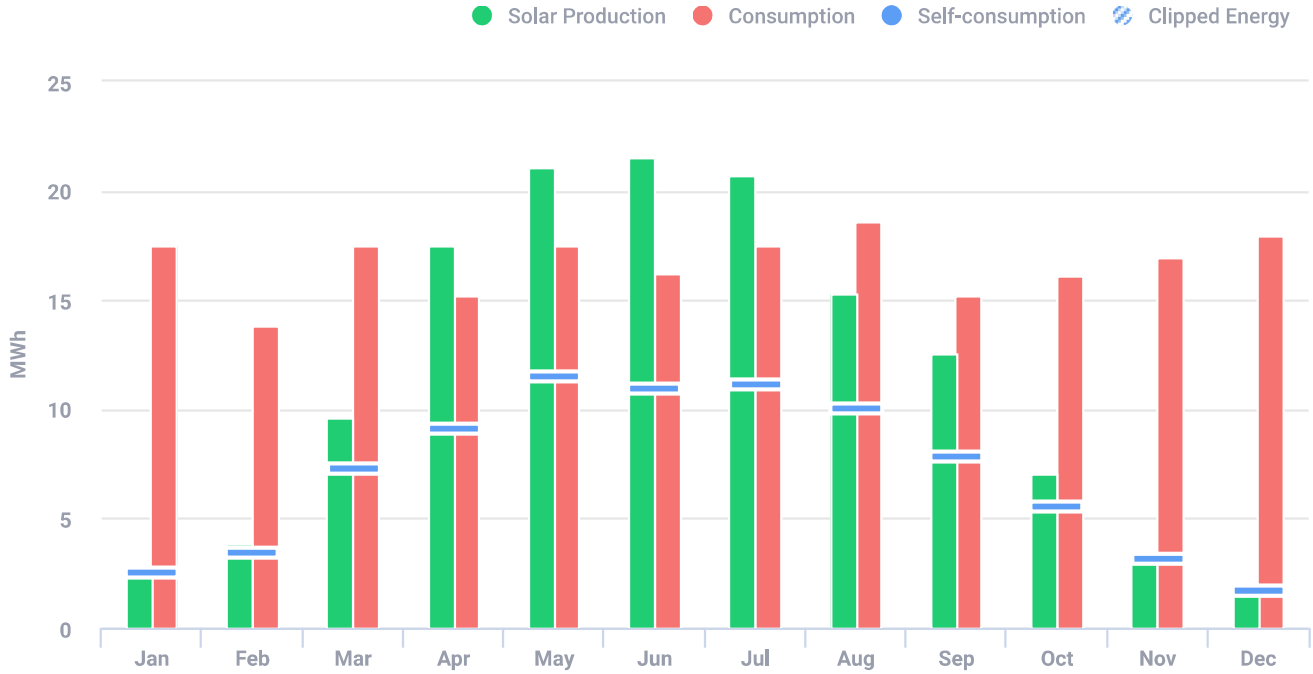


LINDLEY MOOR - NEW SHED

Weatherhill Road 140, Huddersfield, HD3 3QY, United Kingdom | 19 Sept 2023



ESTIMATED MONTHLY ENERGY



Total clipped energy: 0.07%



Month	Solar Production (kWh)	Consumption (kWh)	Self-consumption (kWh)	Clipped Energy (kWh)
Jan	2,567	17,527	2,522	-
Feb	3,879	13,806	3,492	-
Mar	9,652	17,527	7,337	-
Apr	17,512	15,186	9,192	-
May	21,087	17,527	11,527	2
Jun	21,520	16,173	10,954	4
Jul	20,728	17,527	11,147	94
Aug	15,295	18,546	10,093	-
Sep	12,536	15,186	7,891	-
Oct	7,065	16,100	5,632	-
Nov	3,342	16,961	3,170	-
Dec	1,733	17,934	1,724	-

LINDLEY MOOR - NEW SHED

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PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
337	Longi Solar, LR5-66HIH-500M G2 (user-defined)	168.5 kWp			246°	8°
Total: 337		168.5 kWp				

ESTIMATED BILL SAVINGS YEAR 1

Avg. Monthly

Current Monthly Bill	Monthly Bill with SolarEdge	Net Bill Monthly Savings	Bill Offset
£ 5,000.00	£ 2,882.98	£ 2,117.02	42.34 %

Estimated Net Lifetime Bill Savings

£ 470,520

Utility Provider: **Test Rate** | Utility Rate: **30p (0.3 £/kWh)**

LINDLEY MOOR - NEW SHED

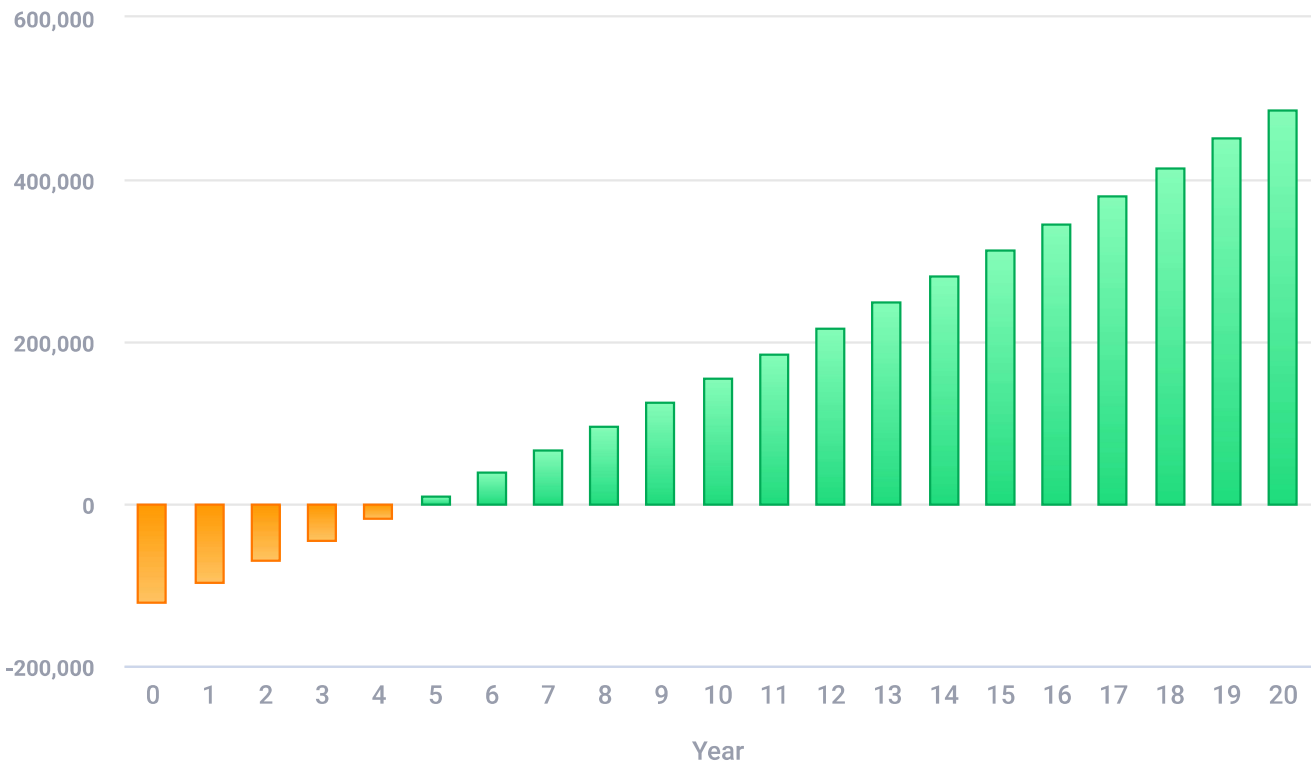
Weatherhill Road 140, Huddersfield, HD3 3QY, United Kingdom | 19 Sept 2023



DETAILED FINANCIAL ANALYSIS

System Price	Maintenance Cost (NPV)	Returns from Incentives (NPV)	Net Payments	Lifetime Bill Savings (NPV)
£ 121,320	£ N/A	£ N/A	£ 121,320	£ 470,520
System Profit (NPV)	Internal Return Rate (IRR)	Return Of Investment (ROI)	Levelized Cost Of Energy (LCOE)	Payback Period
£ 349,200	22.24 %	287.83 %	£/kWh 0.06	4.6 years

Cumulative Cash Flow



YEARLY CASH FLOW

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
0	£ -121,320.00	£ 0.00	£ -121,320.00	£ -121,320.00
1		£ 25,404.20	£ 25,404.20	£ -95,915.80

LINDLEY MOOR - NEW SHED

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YEARLY CASH FLOW (CONTINUED)

# Year	System Price	Net Bill Savings	Annual Cash Flow	Cumulative Cash Flow
2		£ 25,874.28	£ 25,874.28	£ -70,041.52
3		£ 26,352.95	£ 26,352.95	£ -43,688.57
4		£ 26,840.48	£ 26,840.48	£ -16,848.09
5		£ 27,337.03	£ 27,337.03	£ 10,488.94
6		£ 27,842.68	£ 27,842.68	£ 38,331.62
7		£ 28,357.52	£ 28,357.52	£ 66,689.15
8		£ 28,881.63	£ 28,881.63	£ 95,570.78
9		£ 29,415.21	£ 29,415.21	£ 124,985.99
10		£ 29,958.56	£ 29,958.56	£ 154,944.56
11		£ 30,511.81	£ 30,511.81	£ 185,456.37
12		£ 31,074.95	£ 31,074.95	£ 216,531.31
13		£ 31,648.27	£ 31,648.27	£ 248,179.58
14		£ 32,231.96	£ 32,231.96	£ 280,411.54
15		£ 32,826.34	£ 32,826.34	£ 313,237.88
16		£ 33,431.42	£ 33,431.42	£ 346,669.30
17		£ 34,047.46	£ 34,047.46	£ 380,716.76
18		£ 34,674.73	£ 34,674.73	£ 415,391.49
19		£ 35,313.57	£ 35,313.57	£ 450,705.07
20		£ 35,963.97	£ 35,963.97	£ 486,669.03
Total:		£ 607,989.03	£ 486,669.03	

LINDLEY MOOR - NEW SHED

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ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
1 xSE66.6K Manager 77.37kW 116% Oversizing	Center Unit		
	∞ 3 x strings	13 x S1000 (2:1), 1 x S1000 (1:1)	27
	Left Unit		
	∞ 1 x string	16 x S1000 (2:1)	32
	∞ 1 x string	16 x S1000 (2:1), 1 x S1000 (1:1)	33
	∞ 1 x string	13 x S1000 (2:1), 1 x S1000 (1:1)	27
1 xSE66.6K Manager 73.35kW 110% Oversizing	Center Unit		
	∞ 2 x strings	13 x S1000 (2:1), 1 x S1000 (1:1)	27
	∞ 1 x string	14 x S1000 (2:1), 1 x S1000 (1:1)	29
	Left Unit		
	∞ 3 x strings	13 x S1000 (2:1), 1 x S1000 (1:1)	27

LINDLEY MOOR - NEW SHED

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SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	BST (London)
Weather station	Bradford (14.72 km away)
Station altitude	218 m
Station data source	Meteonorm 7.1
Grid	400V L-L, 230V L-N



LOSS FACTORS

Near shading	Enabled
Albedo	0.20
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%