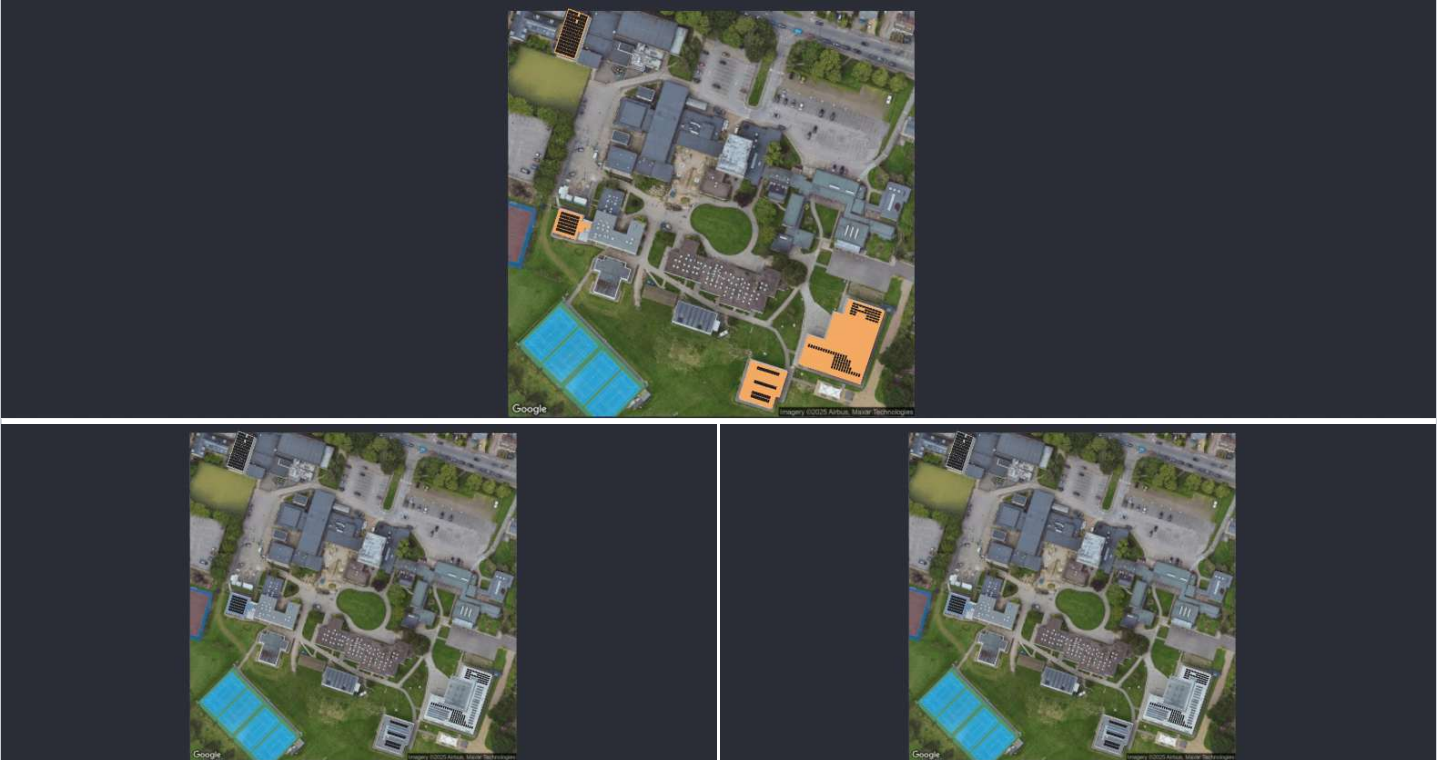


ST CRISPINS 6TH FORM & SPORTS HALL

London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



SYSTEM OVERVIEW

 319 PV modules

 4 Inverters

 160 Optimizers

SIMULATION RESULTS



Installed DC Power

159.39 kWp



Max Achieved AC Power

121.30 kW



Annual Usable Solar Production

145.21 MWh



Annual CO₂ Emission Saved

28.08 t



Annual Equivalent Trees Planted

1,290



Max Achieved DC Power

143.62 kW



DC/AC Oversizing

116 %



Max Active AC Power

123.30 kW



Performance Ratio

90 %



Annual Specific Production

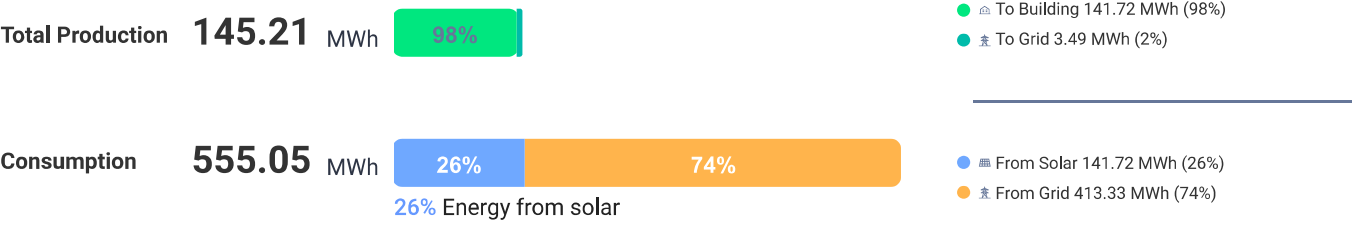
911 kWh/kWp

ST CRISPINS 6TH FORM & SPORTS HALL

London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



ANNUAL CONSUMPTION AND PRODUCTION RESULTS

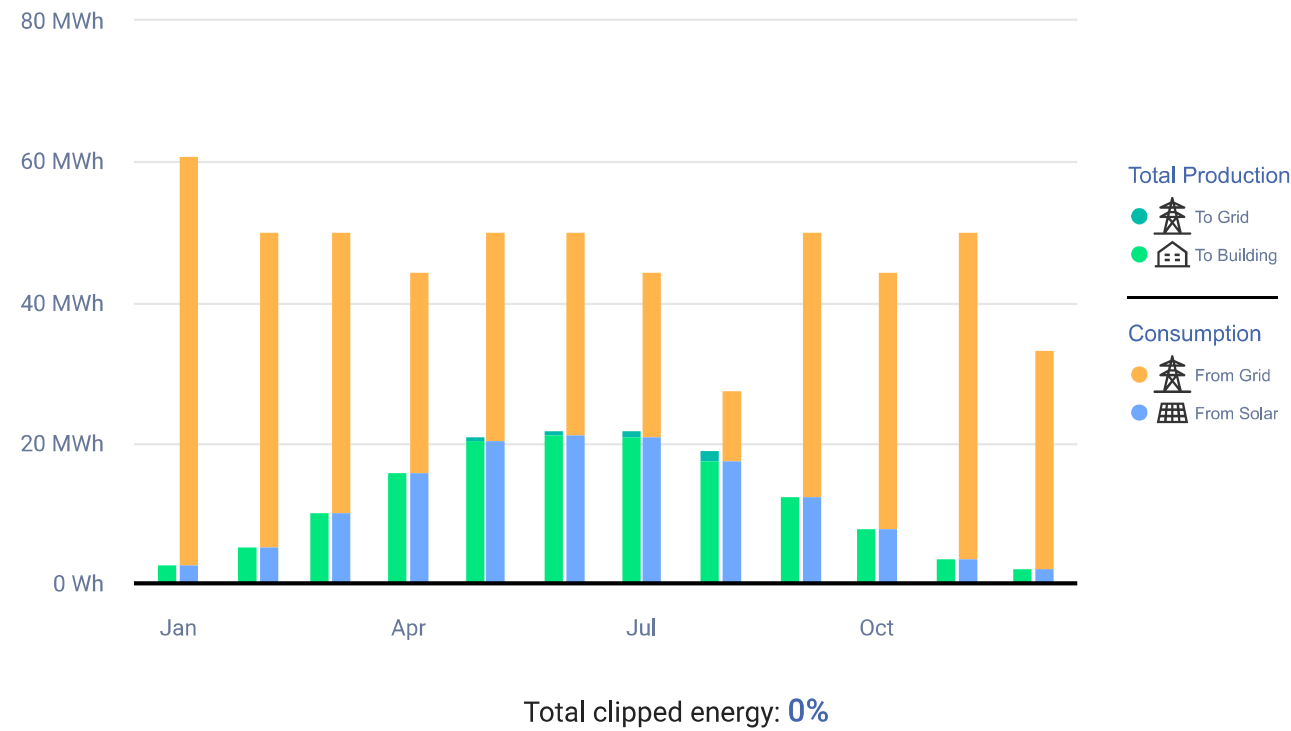


ST CRISPINS 6TH FORM & SPORTS HALL

London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



ESTIMATED MONTHLY ENERGY



Month	Production (kWh)	To Home (kWh)	To Grid (kWh)	Consumption (kWh)	From PV (kWh)	From Grid (kWh)
Jan	2,841	2,841	-	61,010	2,841	58,169
Feb	5,296	5,296	-	49,990	5,296	44,694
Mar	10,381	10,381	-	49,990	10,381	39,609
Apr	15,955	15,836	119	44,400	15,836	28,564
May	21,135	20,601	534	49,990	20,601	29,389
Jun	21,892	21,218	674	49,990	21,218	28,772
Jul	21,905	21,136	770	44,400	21,136	23,264
Aug	19,184	17,789	1,394	27,700	17,789	9,911
Sep	12,661	12,661	-	49,990	12,661	37,329
Oct	8,045	8,045	-	44,300	8,045	36,255
Nov	3,719	3,719	-	49,990	3,719	46,271
Dec	2,193	2,193	-	33,300	2,193	31,107

ST CRISPINS 6TH FORM & SPORTS HALL

London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



PV MODULES

# Module	Model	Peak power	Racking type	Orientation	Azimuth	Tilt
30	Trina Solar Energy, TSM-455NEG9R.28 (Vertex S+)	13.7 kWp			287°	10°
30	Trina Solar Energy, TSM-455NEG9R.28 (Vertex S+)	13.7 kWp			107°	10°
22	Trina Solar Energy, TSM-510NEG18R.28 (Vertex S+) (user-defined)	11.2 kWp			108°	10°
50	Trina Solar Energy, TSM-510NEG18R.28 (Vertex S+) (user-defined)	25.5 kWp			108°	10°
37	Trina Solar Energy, TSM-510NEG18R.28 (Vertex S+) (user-defined)	18.9 kWp			199°	10°
128	Trina Solar Energy, TSM-510NEG18R.28 (Vertex S+) (user-defined)	65.3 kWp			109°	5°
22	Trina Solar Energy, TSM-510NEG18R.28 (Vertex S+) (user-defined)	11.2 kWp			288°	10°
Total:	319	159.4 kWp				

BILL OF MATERIALS (BOM)

Items	Part Number	Quantity
SE33.3K Glands, DC safety unit with switch, Rapid Shutdown,DC SPD, 25A DC string fuse - Limited Stock	SE30K-RW00IBNZ4	1
SE50K Synergy Manager Three Phase Inverter with Synergy Technology, Manager, 50kW, MC4 connectors, DC Safety Switch and DC SPD	SE50K-RW00IBNQ4	1
SE20K Three Phase Inverter, 20kW, DC SPD	SE20K-RW00IBNM4	2

ST CRISPINS 6TH FORM & SPORTS HALL

London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



BILL OF MATERIALS (BOM) (CONTINUED)

Items	Part Number	Quantity	
 S1000 SenceConnect, 1.3m input lead, single 4.7m output lead (+) (Long)	S1000-1GMXMBT	138	
 S1400 (verify waiver conditions)		22	
 TSM-455NEG9R.28 (Vertex S+)		60	
 TSM-510NEG18R.28 (Vertex S+)		259	
 SolarEdge Smart Meter with G100	SE-WND-3Y400-MB-K2	1	1PH/3PH 230/400V, Energy Meter with Modbus Connection, DIN-Rail

ELECTRICAL DESIGN

Inverters & Storage	Strings per inverter	Optimizers per string	PV modules per string
 1 xSE50K Synergy ManagerCenter Unit 59.01kW 118% Oversizing	∞ 2 x strings	 16 x S1000 (2:1)	 32
	Left Unit		
	∞ 2 x strings	 16 x S1000 (2:1)	 32
 1 xSE33.3K 40.99kW 123% Oversizing	∞ 2 x strings	 15 x S1000 (2:1)	 30
	∞ 1 x string	 13 x S1000 (2:1), 1 x S1000 (1:1)	 27
 1 xSE20K 23.94kW 120% Oversizing	∞ 2 x strings	 15 x S1000 (2:1)	 30
 1 xSE20K 19.67kW 98% Oversizing	∞ 1 x string	 22 x S1400 (verify waiver conditions) (2:1)	 44

ST CRISPINS 6TH FORM & SPORTS HALL
London Road, Wokingham, RG40 1SS, United Kingdom | Feb 11, 2026



SYSTEM LOSS DIAGRAM



SIMULATION PARAMETERS



LOCATION & GRID

Time zone	GMT (London)
Weather station	Bracknell (4 km away)
Station altitude	73 m
Station data source	Meteonorm 8.2
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%