

## System Summary

### Physical

#### Roof

**Orientation**0°

**Pitch**35°

#### Location

**Region**East Pennines

#### Array

**Width**5.00 m

**Height**3.00 m

**Surface Area**19.94 m<sup>2</sup>

**Weight**247.44 kg

**WeightM2**12.41 kg

### Panel - Canadian Solar 440W TOPHiKu6 Black Frame with MC4

#### Panel Specifications

**Number required**10

**Rating**440 Wp

**Length**1,722 mm

**Width**1,134 mm

**Voc at STC**39.4 V

**Vmpp at STC**32.4 V

**Imp at STC**13.59 A

**Isc at STC**14.01 A

#### Array Specifications

**Array Power**4,400 Wp

### Inverter - Solis S6 4kW Dual MPPT - Single Phase with DC

#### Phases

**No. of MPPT**2

**Rated AC Power**4,000 W

#### Max DC

**Current**28.00 A

**Voltage**600 V

#### PP Voltage

**Min**90 V

**Max**520 V

### Electrical - Solis S6 4kW Dual MPPT - Single Phase with DC

#### Quantity

**String Quantity**2

**Strings**1 \* (1x5 / 1x5)

**String Voc at -5 °C**211.78 / 211.78 V

**String Vmpp at 70 °C**140.86 / 140.86 V

**String Vmpp at -5 °C**176.09 / 176.09 V

**Input Isc at 70 °C**14.33 A

**Distance to Array**12 m

**Cable Area**4 mm<sup>2</sup>

**Voltage Drop**1.36 %

## PV Performance Estimation

### A. Installation Data - New MCS Calculation

**Installed capacity of PV system - kWp (stc)**4.400 kWp

**Orientation of the PV system - degrees from South**0°

**Inclination of system - degrees from horizontal**35°

**Postcode region**11

### B. Calculation

**kWh/kWp (KK) from table**892 kWh/kWp

**Shade factor (SF)**1.00

Estimated annual output (kWp x KK xSF)3,925 kWh

<b>MCS Wind Loading Calculation</b>	
Wind Zone:	2-TA
Peak Pressure:	746 Pa
Altitude Correction Factor:	None
Topography Correction Factor:	None
Peak Velocity Pressure:	746 Pa
Pressure Coefficient:	-0.5
Wind Pressure:	<b>-504 Pa</b>

*This calculation excludes an additional safety factor.*

<b>Snow Loading Calculation</b>	
Snow Load:	600 Pa
Altitude Correction:	None
Pitch Adjustment:	0.800
Adjusted Snow Load:	<b>480 Pa</b>