



# Glow Green

## Bespoke PV Solar Quote

### Customer Details

Name: John Hancock

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Address: Church Farm Main Street, Leicester, LE9 9NL

### Quote Details

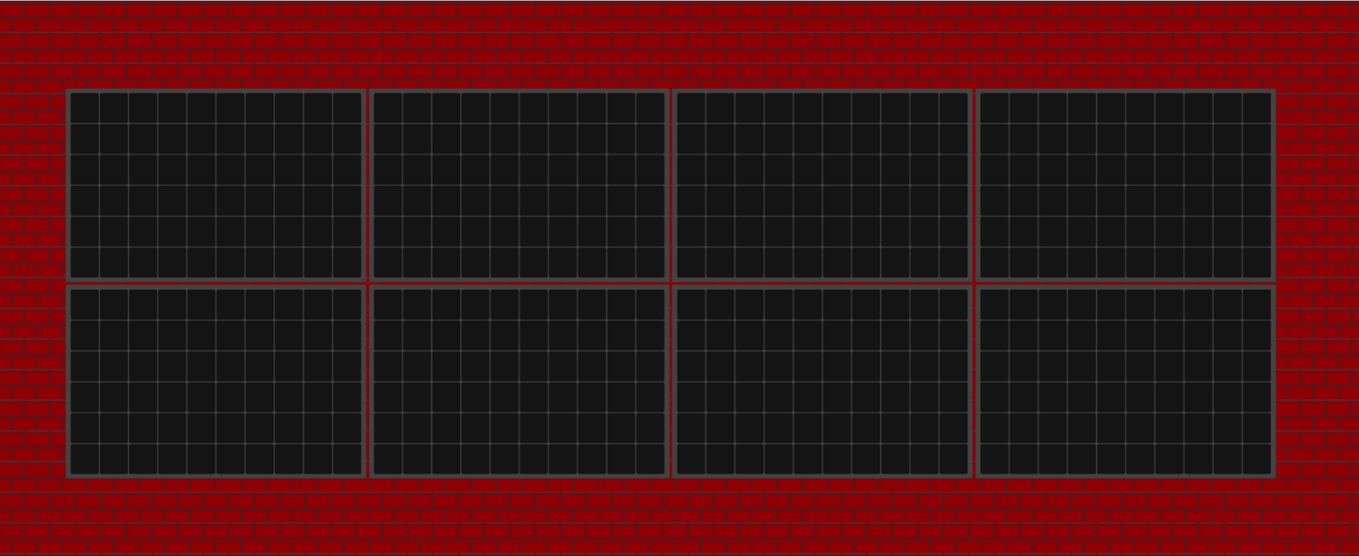
Reference: GG-333733-2

Date: 16th December 2024

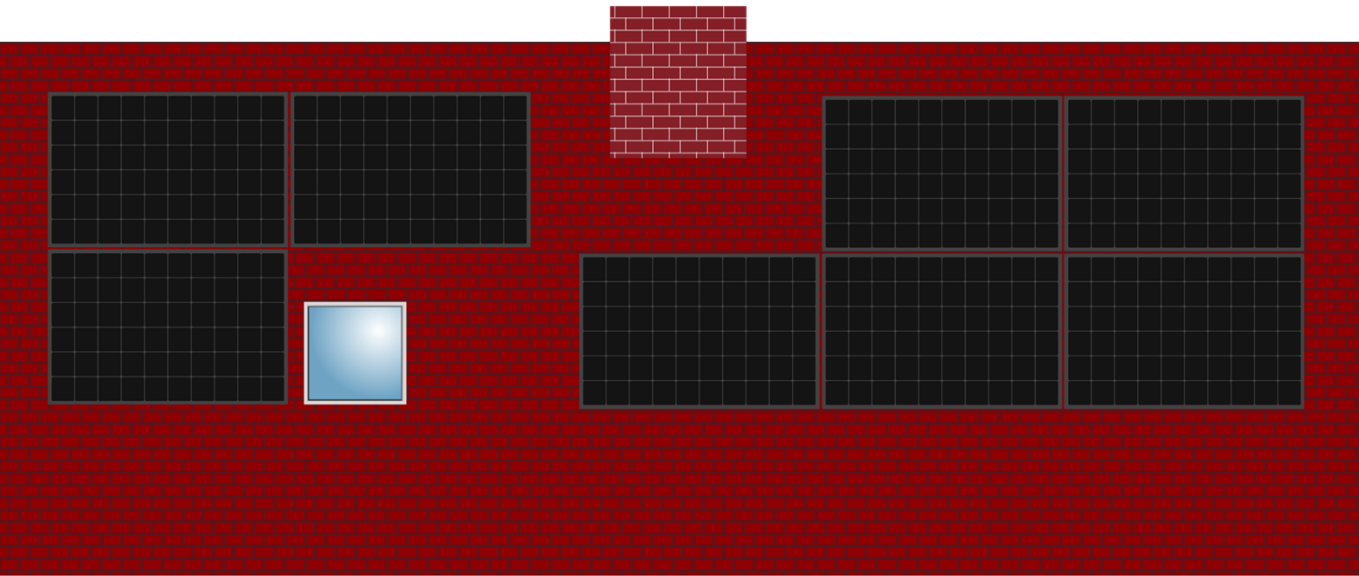
Designer: Matthew Graham

# Roof Layout

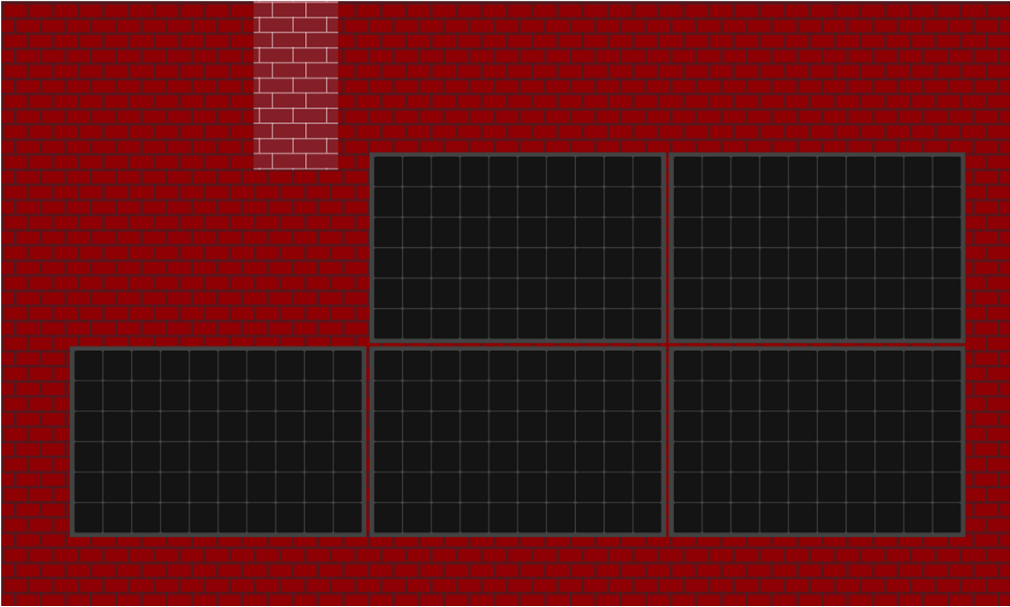
Rear (West) South Roof



Rear (East) South Roof



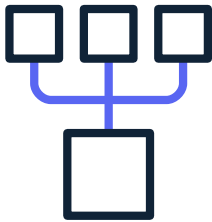
Rear East Roof



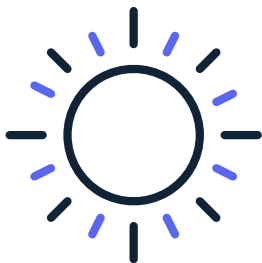
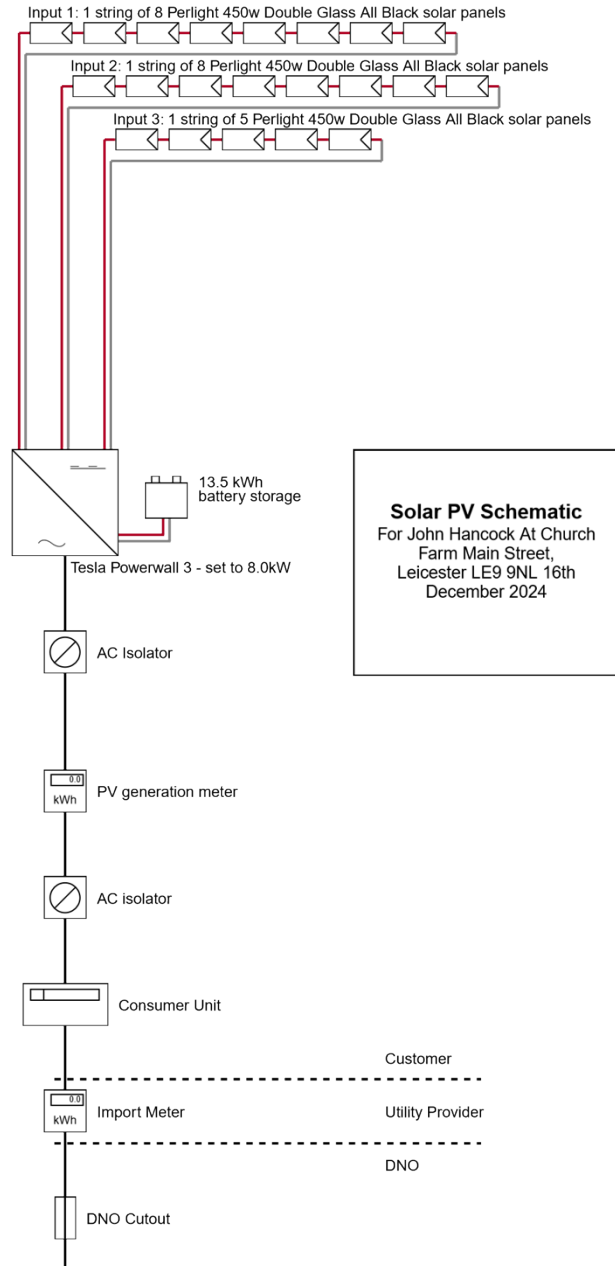
# Component list

| <u>Item</u>                                                                         |                                                  | <u>Quantity</u> |
|-------------------------------------------------------------------------------------|--------------------------------------------------|-----------------|
|    | Perlight 450w Double Glass All Black solar panel | 21              |
|    | Tesla Powerwall 3 - set to 8.0kW inverter        | 1               |
|    | Emlite Hybrid Only Bi-directional Meter ECA2     | 1               |
|    | Label sheet                                      | 1               |
|    | Tigo Retrofit Frame Mounted Optimiser TS4-A-O    | 5               |
|    | Tesla Fittings Pack                              | 1               |
|    | Brass Neutral Bar -7 way- Clip-on - BLUE         | 1               |
|   | 80A 22mm x 58mm CL General Fuse                  | 1               |
|  | 125A MS Modular Fuse Holder                      | 1               |
|  | 100A 22mm x 58mm CL General Fuse                 | 1               |
|  | AC isolator - KN 40A 3-pole                      | 2               |
|  | Powerwall 3 with Gateway                         | 1               |
|  | MC4 4mm Connector Pair                           | 4               |
|  | MC4 6mm Connector Pair                           | 2               |
|  | 100m reel of 4mm2 solar cable                    | 1               |

|                                                                                   |                                        |    |
|-----------------------------------------------------------------------------------|----------------------------------------|----|
|   | 100m reel of 6mm2 solar cable          | 1  |
|  | Fastensol end clamp (30mm black)       | 32 |
|  | Fastensol mid clamp (30mm black)       | 26 |
|  | Fastensol black end cap                | 32 |
|  | Fastensol portrait flat tile roof hook | 82 |
|  | Hookstop protector                     | 82 |
|  | Fastensol rail splice                  | 18 |
|  | Fastensol black rail 3550mm            | 25 |



# Schematic diagram



# Performance Estimate

## Site details

Client

John Hancock

Address

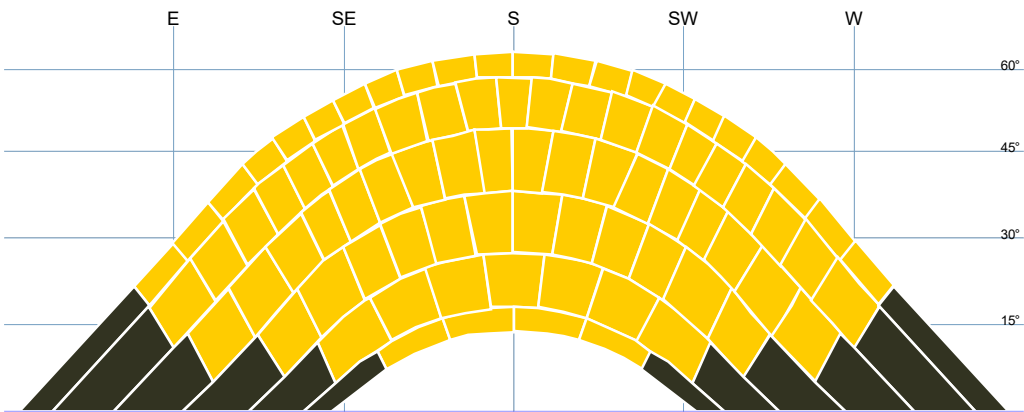
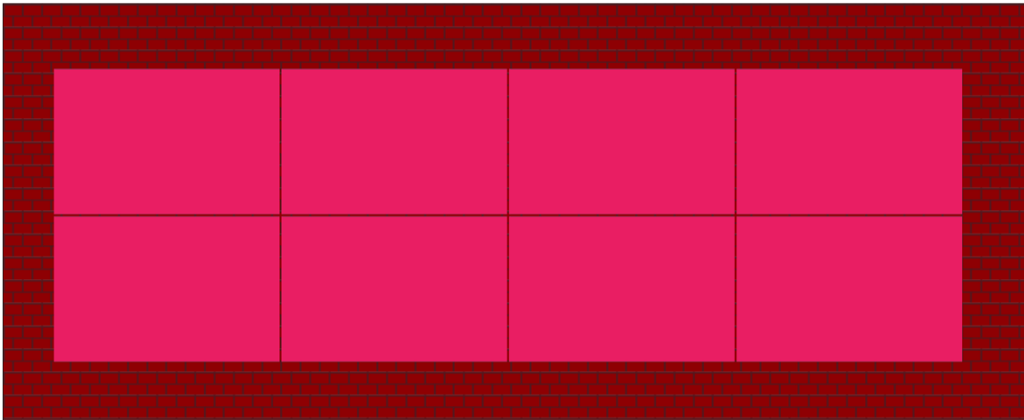
Church Farm Main Street, Leicester

The sunpath diagram shows the arcs of the sky that the sun passes through at different times of the day and year as yellow blocks. The shaded area indicates the horizon as seen from the location of the solar array. Where objects on the horizon are within 10m of the array, an added semi-circle is drawn to represent the increased shading. Blocks of the sky that are shaded by objects on the horizon are coloured red, and a shading factor is calculated from the number of red blocks. The performance of the solar array is calculated by multiplying the size of the array (kWp) by the shading factor (sf) and a site correction factor (kk), taken from tables which take account of the geographical location, orientation and inclination of the array.

# Inverter 1

Tesla Powerwall 3 - set to 8.0kW

## Input 1



### A. Installation data

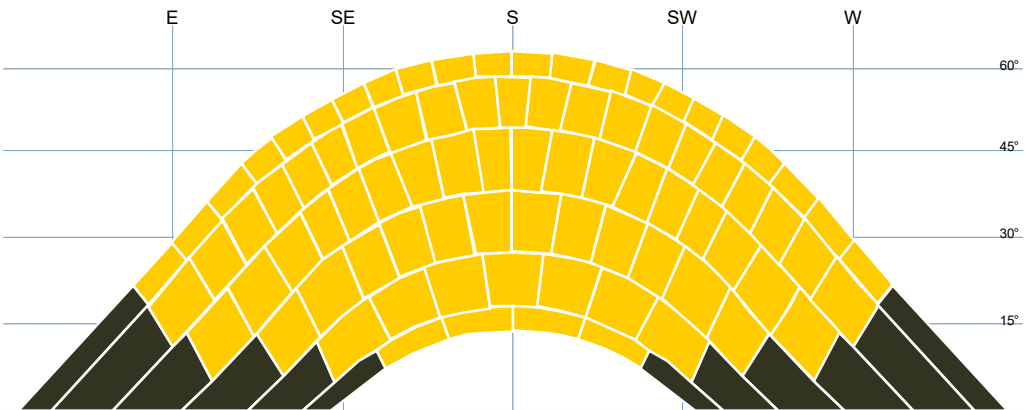
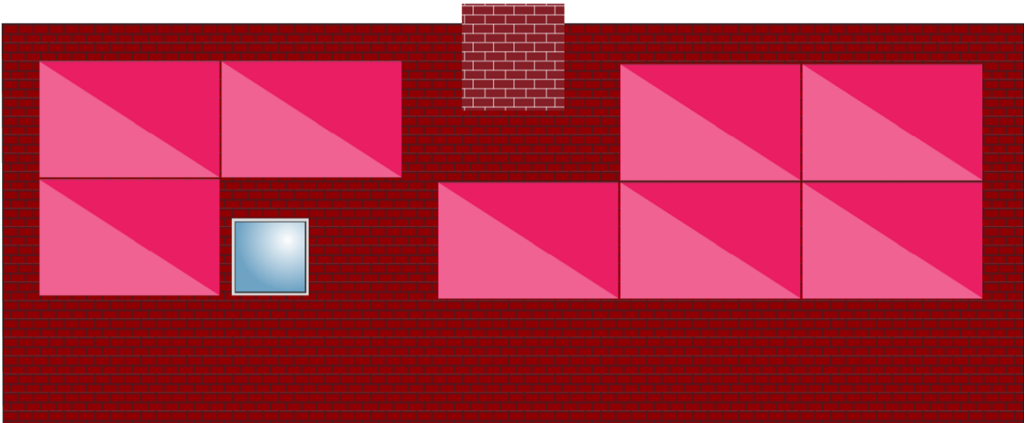
|                                                   |       |     |
|---------------------------------------------------|-------|-----|
| Installed capacity of PV system – kWp (stc)       | 3.600 | kWp |
| Orientation of the PV system – degrees from South | 20    | °   |
| Inclination of system – degrees from horizontal   | 40    | °   |
| Postcode region                                   | 6     |     |



### B. Performance calculations

|                                  |      |         |
|----------------------------------|------|---------|
| kWh/kWp (Kk)                     | 925  | kWh/kWp |
| Shade factor (SF)                | 1.00 |         |
| Estimated output (kWp × Kk × SF) | 3330 | kWh     |

Input 2



A. Installation data

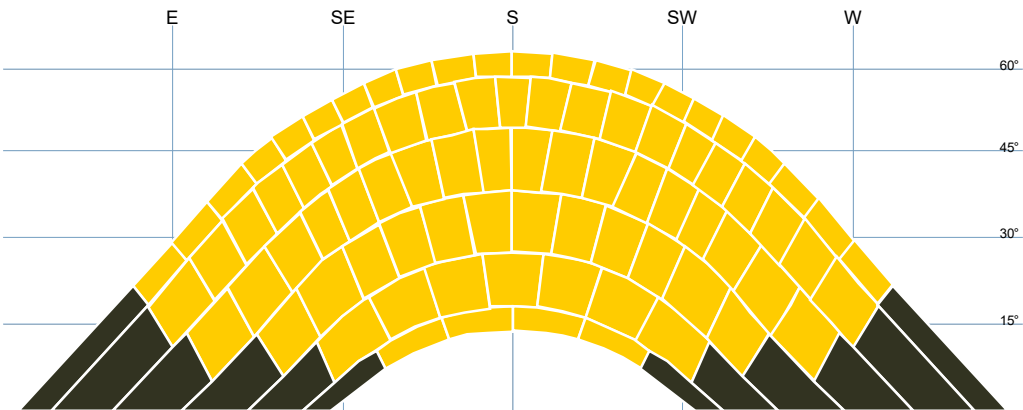
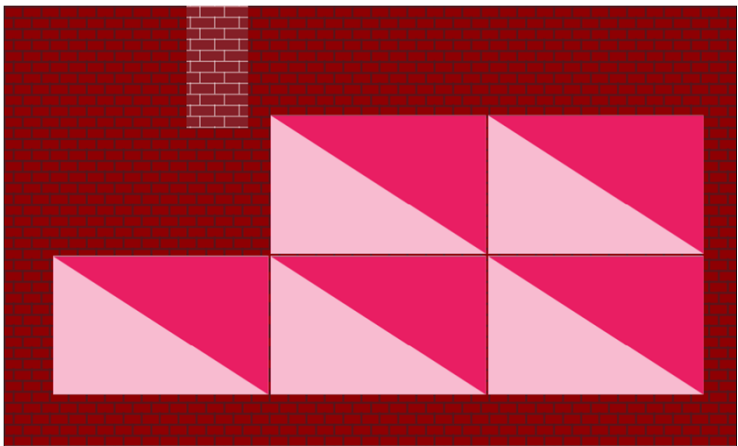
|                                                   |       |     |
|---------------------------------------------------|-------|-----|
| Installed capacity of PV system – kWp (stc)       | 3.600 | kWp |
| Orientation of the PV system – degrees from South | 20    | °   |
| Inclination of system – degrees from horizontal   | 48    | °   |
| Postcode region                                   | 6     |     |



B. Performance calculations

|                                  |      |         |
|----------------------------------|------|---------|
| kWh/kWp (Kk)                     | 915  | kWh/kWp |
| Shade factor (SF)                | 1.00 |         |
| Estimated output (kWp × Kk × SF) | 3294 | kWh     |

Input 3



**A. Installation data**

|                                                   |       |     |
|---------------------------------------------------|-------|-----|
| Installed capacity of PV system – kWp (stc)       | 2.250 | kWp |
| Orientation of the PV system – degrees from South | -35   | °   |
| Inclination of system – degrees from horizontal   | 40    | °   |
| Postcode region                                   | 6     |     |



**B. Performance calculations**

|                                  |      |         |
|----------------------------------|------|---------|
| kWh/kWp (Kk)                     | 902  | kWh/kWp |
| Shade factor (SF)                | 1.00 |         |
| Estimated output (kWp × Kk × SF) | 2030 | kWh     |

# Performance Summary

| A. Installation data                              |                       |     |
|---------------------------------------------------|-----------------------|-----|
| Installed capacity of PV system – kWp (stc)       | 9.45                  | kWp |
| Orientation of the PV system – degrees from South | See individual inputs |     |
| Inclination of system – degrees from horizontal   | See individual inputs |     |
| Postcode region                                   | 6                     |     |
| B. Performance calculations                       |                       |     |
| kWh/kWp (Kk)                                      | See individual inputs |     |
| Shade factor (SF)                                 | See individual inputs |     |
| Estimated output (kWp × Kk × SF)                  | 8654                  | kWh |

**Important Note:** The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure is given as guidance only for the first year of generation. It should not be considered as a guarantee of performance.

This system performance calculation has been undertaken using estimated values for array orientation, inclination or shading. Actual performance may be significantly lower or higher if the characteristics of the installed system vary from the estimated values.