Fig A. *Excerpt of Proposed Site plan*

SITE LOCATION & CONTEXT

Berhills Farm lies on Berhills Lane near Seend, with farmland adjacent to the property on all sides.

A 10.8KWp ground-mounted domestic solar array has been proposed north of the existing farmhouse and within an adjacent field which is also within the overall agricultural curtilage of the farm.

Please see appendices 3 & 4 for details of the proposed panels & ground mounts, which will be arranged in 2no arrays of 12 modules each.

LOW VISUAL IMPACT

The proposed solar panels are black with no bright edging, which will assist with minimising their visual impact. They will be mounted on a series of ground-based racks, with each rack comprising two rows of 12 panels mounted in portrait style. When mounted at 30 degrees, the maximum height of each rack will be around 2.15m.

The two rows of solar arrays will be located in the south-west corner of the field that sits immediately to the north & east of the farmhouse, facing due south to maximise solar generation. As the field is some distance back from the nearest main road and, as there are various mature trees and a mature hedgerow adjacent to the development site, the solar array will be completely hidden to passing as well as any publicly-accessible vantage point.

To protect the PV array from livestock, a post and wire stock fence would be formed around the array; a further line of hawthorn hedging would be planted inside the stock fence to provide further visual screening for the PVs without causing any overshadowing on the panels themselves. Please see accompanying proposed plan (dwg 304-3-110) for the detailed layout of the hedging and fencing.

New cabling would be run from the array to the house via a newly-excavated trench within the existing soft landscaping; this would be returned to its current state once the cable was installed.

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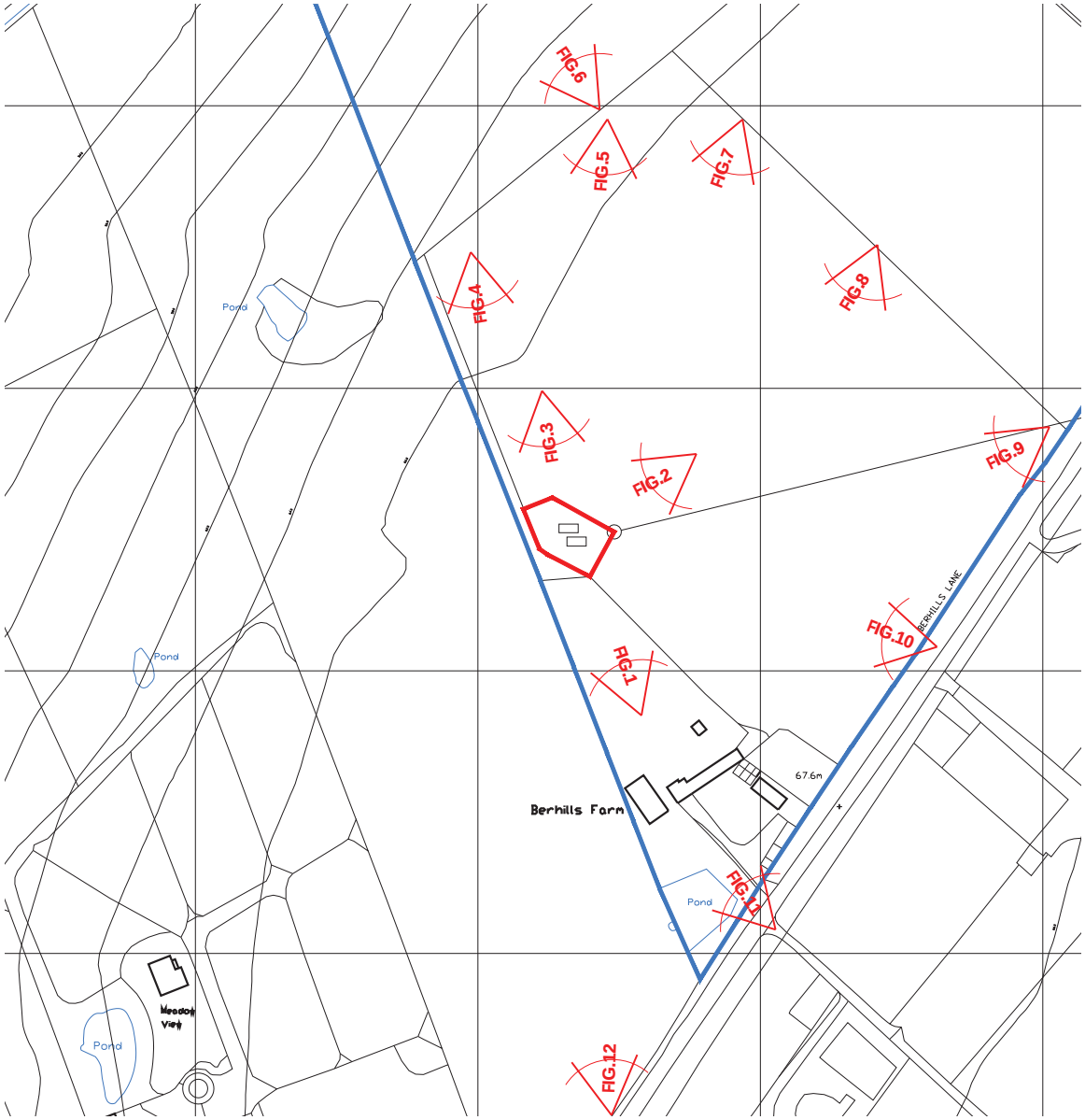

Fig B. *Excerpt of Proposed Site plan showing positions of photographs on subsequent pages*

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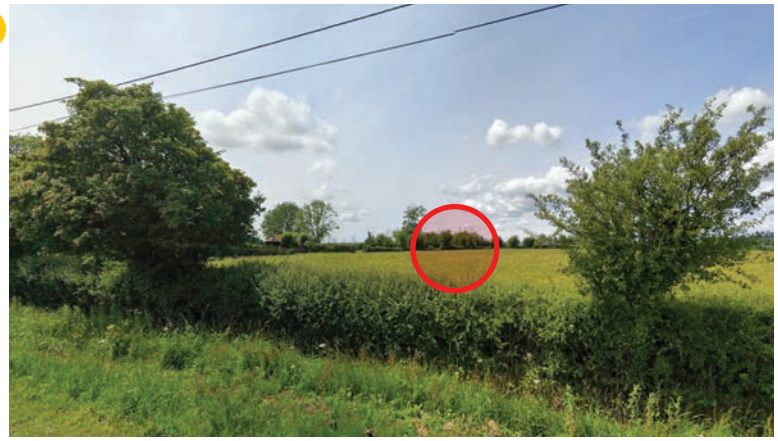

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JA SOLAR | DEEP BLUE 4.0 Pro

Version No. : Global-EN-20230921A

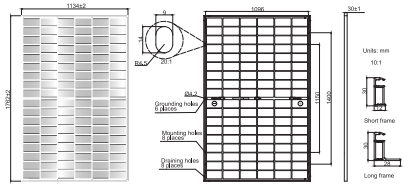
455W LB Series

JA SOLAR | DEEP BLUE 4.0 Pro

www.jasolar.com
Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.

455W

430-455 JAM54D41 LB Series



Remark: customized frame color and cable length available upon request

Cell	Mono-16BB
Weight	22kg
Dimensions	1762±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm² (IEC), 12 AWG(UL)
No. of cells	108(6×18)
Junction Box	IP68, 3 diodes
Connector	QC 4.10-35\1/ MC4-EVO2A
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Front Glass/Back Glass	1.6mm/1.6mm
Packaging Configuration	36pcs/Pallet, 936pcs/40HQ Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM54D41 -430/LB	JAM54D41 -435/LB	JAM54D41 -440/LB	JAM54D41 -445/LB	JAM54D41 -450/LB	JAM54D41 -455/LB
Rated Maximum Power(Pmax) [W]	430	435	440	445	450	455
Open Circuit Voltage(Voc) [V]	38.50	38.70	38.90	39.10	39.30	39.50
Maximum Power Voltage(Vmp) [V]	32.12	32.29	32.47	32.65	32.82	33.00
Short Circuit Current(Isc) [A]	14.14	14.23	14.31	14.40	14.48	14.56
Maximum Power Current(Imp) [A]	13.39	13.47	13.55	13.63	13.71	13.79
Module Efficiency [%]	21.5	21.8	22.0	22.3	22.5	22.8
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α_Isc)	+0.046%/℃					
Temperature Coefficient of Voc(β_Voc)	-0.260%/℃					
Temperature Coefficient of Pmax(γ_Pmp)	-0.300%/℃					
STC	Irradiance 1000W/m², cell temperature 25℃, AM1.5G					

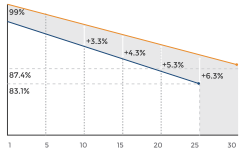
ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

TYPE	JAM54D41 -430/LB	JAM54D41 -435/LB	JAM54D41 -440/LB	JAM54D41 -445/LB	JAM54D41 -450/LB	JAM54D41 -455/LB
Rated Max Power(Pmax) [W]	464	470	475	481	486	491
Open Circuit Voltage(Voc) [V]	38.50	38.70	38.90	39.10	39.30	39.50
Max Power Voltage(Vmp) [V]	32.11	32.29	32.47	32.65	32.82	32.99
Short Circuit Current(Isc) [A]	15.27	15.36	15.46	15.55	15.64	15.73
Max Power Current(Imp) [A]	14.46	14.55	14.63	14.72	14.81	14.89
Irradiation Ratio (rear/front)	10%					

*Bifaciality=Pmax,rear/Rated Pmax,front

Superior Warranty

1% 1st-year Degradation
0.4% Annual Degradation Over 30 years



- n-type Bifacial Double Glass Module Linear Performance Warranty
- Standard Module Linear Performance Warranty

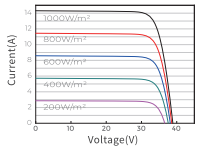
*Subject to the terms and conditions contained in the Limited Warranty Statement.
Also this 25-year limited product warranty is available only for products installed and operating on residential rooftops in certain regions.

OPERATING CONDITIONS

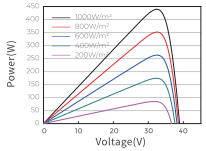
Maximum System Voltage	1500V DC
Operating Temperature	-40℃~+85℃
Maximum Series Fuse Rating	30A
Maximum Static Load,Front	5400Pa(112 lb/ft²)
Maximum Static Load,Back	2400Pa(50 lb/ft²)
NOCT	45±2℃
Bifaciality*	80%±10%
Fire Performance	UL Type 38

CHARACTERISTICS

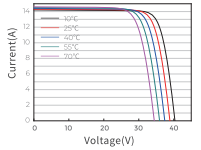
Current-Voltage Curve JAM54D41-440/LB



Power-Voltage Curve JAM54D41-440/LB



Current-Voltage Curve JAM54D41-440/LB



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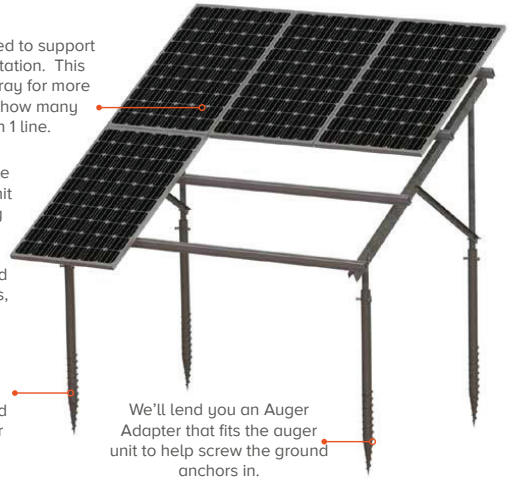
PARK TEGRA **GROUND ANCHOR**

Our standard structure is designed to support 2 modules high in portrait orientation. This allows more space within the array for more modules. There isn't a limit to how many modules can be installed in 1 line.

We recommend hiring a 2.5 tonne cylinder head hydraulic auger unit with reverse option for installing the ground anchors.

Sometimes the ground may need more pressure applying. For this, a 4-5 tonne auger unit is more suited.

Screws into ground with a high clay content, making it a fast and popular solution, particularly for small to medium sized projects.



We'll lend you an Auger Adapter that fits the auger unit to help screw the ground anchors in.

9.77kg/m²
Weight

Portrait
Module orientation

30°
Standard module angle

Aluminium, stainless & galvanised steel (EN ISO 1461)
Material

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V042018

SUNFIXINGS
CONNECTING TO THE FUTURE

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