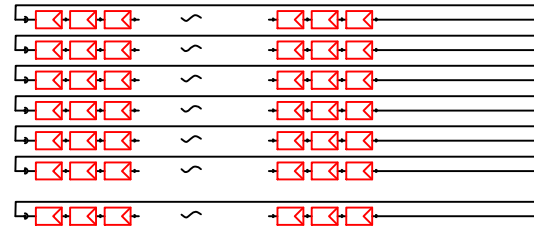


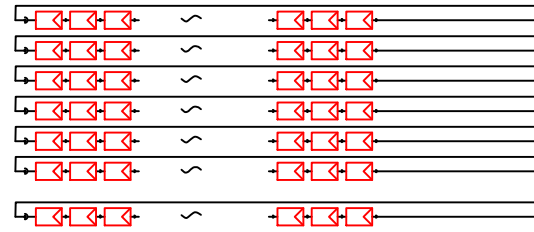
ROOF LEVEL- All Roof Areas

PV Modules: Trina TSM-275PD05
 Total Modules: 388
 System Size: 106.70kWp

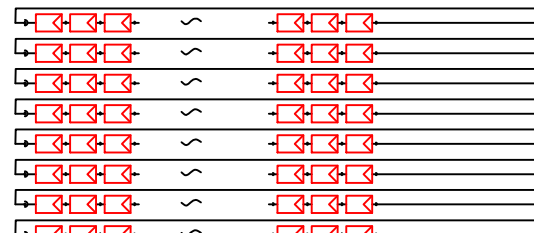
1A1: 1 String of 17 Modules 1A2: 1 String of 17 Modules
 1B1: 1 String of 17 Modules 1B2: 1 String of 17 Modules
 1C1: 1 String of 20 Modules 1C2: 1 String of 20 Modules
 1D1: 1 String of 23 Modules



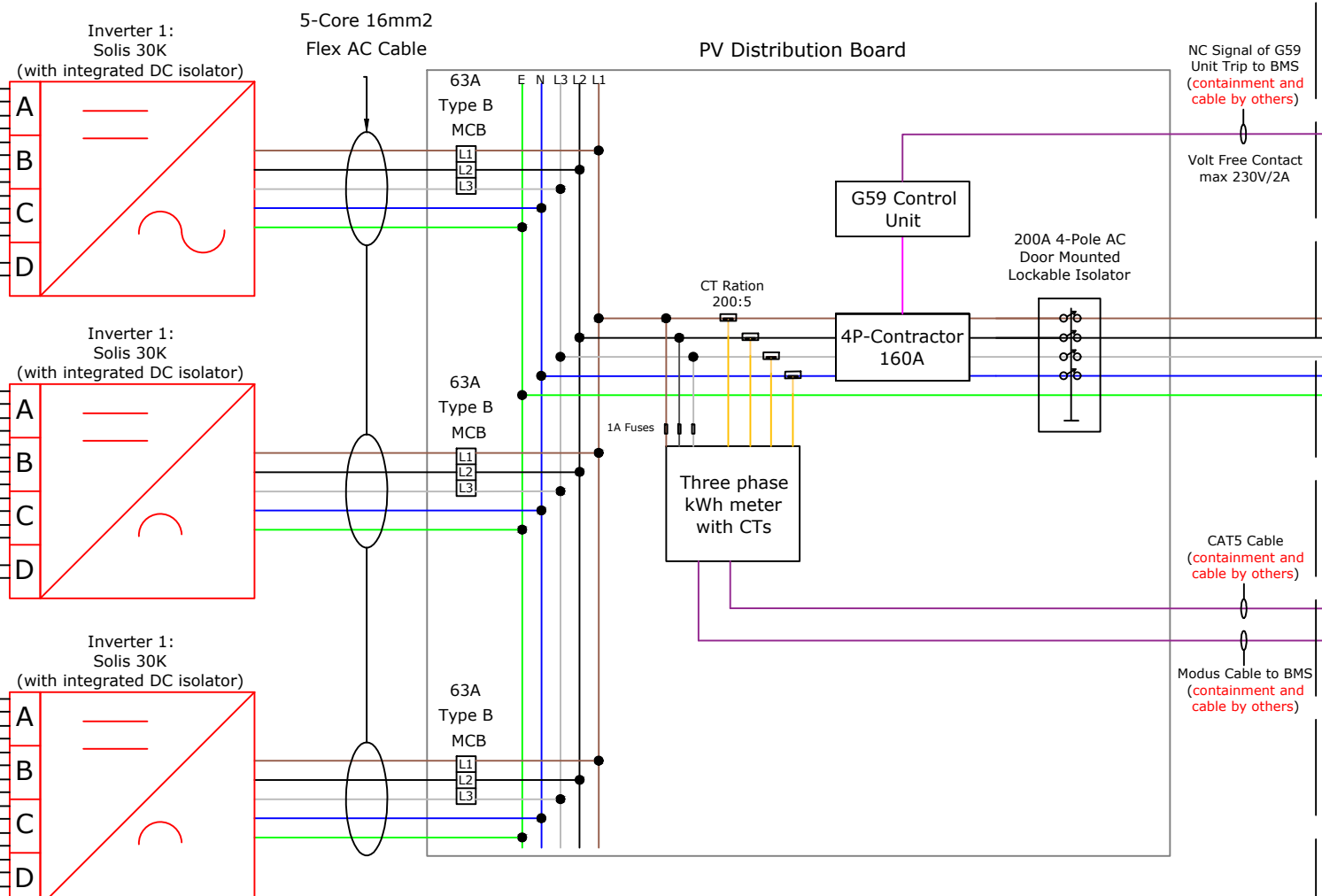
2A1: 1 String of 17 Modules 2A2: 1 String of 17 Modules
 2B1: 1 String of 17 Modules 2B2: 1 String of 17 Modules
 2C1: 1 String of 20 Modules 2C2: 1 String of 20 Modules
 2D1: 1 String of 23 Modules



3A1: 1 String of 16 Modules 3A2: 1 String of 16 Modules
 3B1: 1 String of 16 Modules 3B2: 1 String of 16 Modules
 3C1: 1 String of 16 Modules 3C2: 1 String of 16 Modules
 3D1: 1 String of 15 Modules 3D2: 1 String of 15 Modules

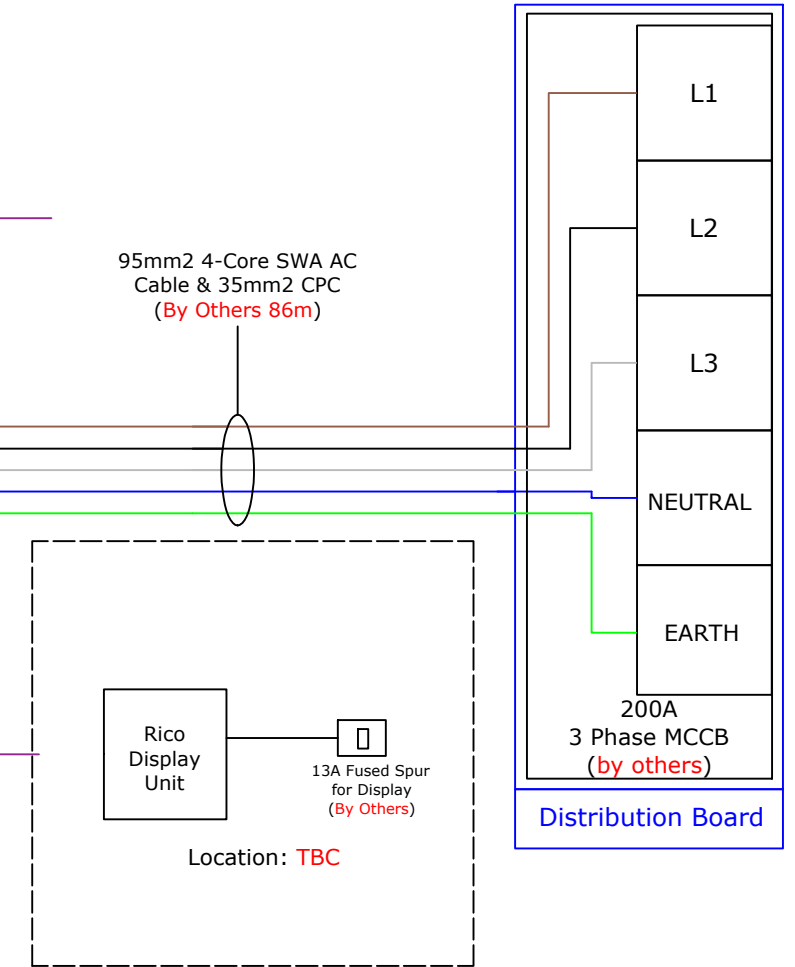


**ROOF 3 UPPER EAST
 (As per roof drawings)**



**PLANT ROOM
 Switchroom**

Connection Point



MPAN: TBC

String	Location	String	Location	String	Location
1A1 & 2	R1S1	2A1 & 2	R1S3	3A1 & 2	R3S1
1B1 & 2	R1S2	2B1 & 2	R1S4	3B1 & 2	R3S2
1C1 & 2	R2S1	2C1 & 2	R2S2	3C1 & 2	R3S3
1D1	R1S5	2D1	R3S5	3D 1 & 2	R3S4

Rev	Description	Dwn	Chck	Date
G	As Built - No changes	AP	LG	04/05/18
F	G59 Relay auxiliary to BMS	AP	LG	09/01/18
E	Supply cable size updated, added Modbus cable	AP	LG	04/01/18
D	String Names & No.s Revised	KP	LG	16/11/17
C	Main supply cable details changed	KP	LG	07/11/17
B	Added external G59 Relay	SP	LG	19/10/17
A	12 Additional Modules Incorporated	KP	LG	11/10/17

Notes

- Trina TSM-275PD05 PV Modules No of modules= 388 Inverters = 3 x Solis-30K
- The PV array will be connected to the LPS or DNO earth by LPS specialist
- The PV array is connected to the distribution network under G59/3 Engineering Recommendation
- Inverters are EA approved for connection to UK grid. They include
 - Over voltage protection stage 1: 262.2 V (1s) stage 2 : 273.7 (0.5s)
 - Under voltage protection stage 1: 200.1 V (2.5s) stage 2 : 184 (0.5s)
 - Over frequency protection stage 1: 51.5 Hz (90s) stage 2 : 52 (0.5s)
 - Under frequency protection stage 1: 47.50 Hz (20s) stage 2 : 47 Hz (0.5s)
 - loss of mains protection (by means of frequency shift)
 - 20s delay from return of mains after fault to start of self initialize procedure.
- Start-up / shut down procedure - it is recommended that the main rotary isolator is used to shut down the system, and is the last switch closed when the system is restarted. Any of the switches can be used at any time to isolate the relevant part of the system, but it is not recommended to operate the DC Isolators is under load.

Note: Recommended AC Voltage Drop is 1% for solar installations to avoid nuisance tripping from the G59/3 protection integrated in the inverter. The maximum limit is 3%. At 2-3% Voltage Drop on the AC side if grid voltage is high there may be nuisance tripping of the G59/3 protection integrated into the inverter. If there is a long cable run, AC cables can be sized for 2% Voltage Drop.



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Project Number: I1604	
Project Name: Maria Fidelis	
Drawing By: Kirstie Potter	Scale: NTS
Checked By: Lefteris Giraleas	Date: 31/07/2017
Drawing Name: PV Electrical Schematic	
Drawing No: I1604-200-01	Rev: G