Current ratings are based on manufacturers data adjusted to meet the following standard figures;

Air Temperature	25° C
Ground Temperature	15° C
Soil Thermal Resistivity	1.2° C m/W

Site:	**Alveston**
Size (MW):	**20**
Site Voltage (kV)	**11**
Worst Case PF:	**0.95**
Prepared By:	**M Potter**
Date Created:	**01/05/2017**
Current Rev:	**C**

matrix Professional Services

Circuit Ref	Cable Reference / Type	Voltage	A - End Name	B - End Name	Section Length (m)	Conductor Size (mm^2)	Conductor Type	Load Profile	Installation Method	Sheath Bonding Method	Current Capacity (A)	No. of Circuits in Group	Circuit Centres (m)	Group De-Rating Factor (ENA P17)	Group Corrected Rated Current (A)	Depth of Burial (m)	Derating Factors for Given Depth	Actual Available Cable Current Capacity (A)	Circuit MVA Load	Load Current (A)	Spare Capacity (A)	Conductor Short Circuit Rating 1 sec (kA)	Screen Short Circuit Rating 1 sec (kA)	Core AC Resistance (Ω/km)	Full Load Losses (kW)	
HV01A	11kV SCWU 70M 0414 BS7870	Voltage_11kV	CB01	MAIN TRANSFORMER	25	300	CU	Continuous	Direct Laid	Fully Bonded	580	2 Circuits	0.6	0.98	568.40	0.8 or less	1.00	568.40	10.00	524.86	43.54	42.90	9.70	0.08	0.1530217	(3.75MVA)
HV01B	11kV SCWU 70M 0414 BS7870	Voltage_11kV	CB01	MAIN TRANSFORMER	25	300	CU	Continuous	Direct Laid	Fully Bonded	580	2 Circuits	0.6	0.98	568.40	0.8 or less	1.00	568.40	10.00	524.86	43.54	42.90	9.70	0.08	0.1530217	(3.75MVA)
HV02	11kV SCWU 70M 0414 BS7870	Voltage_11kV	CB01	WTG 1	500	300	CU	Continuous	Ducted	Fully Bonded	485	1 Circuit	0 (for 1 circuit)	1	485.00	1.25	0.95	460.75	7.50	393.65	67.10	42.90	9.70	0.08	6.12086782	
HV04	NKT H5 P730.901 R00 Triplex, XLPE-AL-ST 11 kV +82AL-screen	Voltage_11kV	WTG 1	WTG 2	350	300	AL	Continuous	Ducted	Fully Bonded	418.2	2 Circuits	0.45	0.98	368.85	1.25	0.95	350.41	5.00	262.43	87.98	28.30	11.70	0.10	2.43457302	
HV05	NKT H5 P730.901 R00 Triplex, XLPE-AL-ST 11 kV +82AL-screen	Voltage_11kV	WTG 2	WTG 3	350	300	AL	Continuous	Ducted	Fully Bonded	418.2	2 Circuits	0.45	0.98	368.85	1.25	0.95	350.41	2.50	131.22	219.19	28.30	11.70	0.10	0.60864326	

Total Full Load Losses	9.47012749
Percentage of Site MW Rating (WTG ONLY)	0.13%