Section				Subsection	From (km point)	To (km point)	Depth of installation	Additional cover	Total soil coverage	Point-ID	Thermal resistivity [K.m/W]	Remarks
							m	m	m			
Onshore route												
1.1	**Landstation**			On Landstation (From air insulated cable terminations to HDD entry points)	0	0,04						
									1,2	507	**0,8 (2,3)**	Soil at cable level may dry-out. Thermal resistivity of dried-out soil is max. 2,3 K.m/W. For cable buried directly into the ground, critical temperature (Tcrit) of the outer sheath above which soil drying-out occurs, is 51 °C. Contractor shall determine thickness of dried out layer and impact of this layer on ampacity
1.2	**HDD 3**				0,04	0,48						
				Entry point at land station					2	MB16	0,5	For HDD 3 the soil at the deepest point is the most decisive for the cable design. This case is marked orange and shall be taken into account in the ampacity calculations. Thermal resistivity values are for soil only. HDD liner (duct) and liner filling medium (water) shall be taken into account in the ampacity calculations of Contractor. Therefore, soil coverage is measured from top of duct. HDPE duct thermal resistivity shall be considered to be 3.5 Km/W
				450 m from land joint					8,4	MB16	0,6	
				Deepest point, 190 m from land joint					**27**	MB16	**0,6**	
				15 m from land joint					4,5	MB15	0,7	
				Entry point at land joint					2	MB15	0,7	
1.3	**Joint land-land**				0,48	0,52						
									1,2	412	**1,0 (2,7)**	Soil at cable level may dry-out. Thermal resistivity of dried-out soil is max. 2,7 K.m/W. For cable buried directly into the ground, critical temperature (Tcrit) of the outer sheath above which soil drying-out occurs, is 55 °C. Contractor shall determine thickness of dried out layer and impact of this layer on ampacity. Backfilling with soil replacement is allowed up till 4,5m-mv given a construction permit acquired for works deeper than 60 cm below ground level following alignment on the interface between Contractor and Civil works contractor.
1.4	**HDD 2**				0,52	1,79						
				HDD end land joint					1,5	MB14	0,65	For HDD 2 the soil at the clay layer, deepest point and transition joint end are the most decisive for the cable design. These three cases are marked orange and shall be taken into account in the ampacity calculations. Thermal resistivity values are for soil only. HDD liner (duct) and liner filling medium (water) shall be taken into account in the ampacity calculations of Contractor. Therefore, soil coverage is measured from top of duct. HDPE duct thermal resistivity shall be considered to be 3.5 Km/W. Soil up to 2,5 m below groundlevel may dry-out. Thermal resistivity of dried-out soil is max. 2,6 K.m/W. At the lowest depth of 2,5 m, critical temperature (Tcrit) of the duct above which soil drying-out occurs, is 53 °C. Contractor shall determine thickness of dried out layer and impact of this layer on ampacity. Backfilling with soil replacement is allowed up till 4,5m-mv given a construction permit acquired by the Contractor for works deeper than 60 cm below ground level.
				Dunes					5,5	MB14	0,7	
				Dunes, clay layer at NAP-19 m to 21 m, land joint side					27	MB14	**0,7**	
				Dunes, deepest point: duct at NAP-30 m and highest dune top at NAP+24 m					54	MB12	**0,5**	
				Dunes, clay layer at NAP- 19 m to 21 m, transition joint side					35	MB05	0,65	
				Dunes					5	MB05	0,5	
				HDD end transition joint					2,5	MB05	**0,8 (2,6)**	
1.5	**Transition joint**				1,79	1,84						
									1,2	MB04 - 1	**0,9 (2,6)**	Soil at cable level may dry-out. Thermal resistivity of dried-out soil is max. 2,6 K.m/W. For cable buried directly into the ground, critical temperature (Tcrit) of the outer sheath above which soil drying-out occurs, is 50 °C. Contractor shall determine thickness of dried out layer and impact of this layer on ampacity. Backfilling with soil replacement is allowed up till 4,5m-mv given a construction permit acquired by the Contractor for works deeper than 60 cm below ground level.
2.1	**HDD 1**				0	0,79						
				Entry point near transition joint	0	0,025			2,5	MB04 - 1	**0,8 (2,6)**	Points which are decisive for cable design have been determined along the HDD route based on specified survey locations. These are marked orange and these **four** cases shall be taken into account in the ampacity calculations. Soil up to 2,5 m below groundlevel may dry-out. Thermal resistivity of dried-out soil is max. 2,6 K.m/W. At the lowest depth of 2,5 m, critical temperature (Tcrit) of the duct above which soil drying-out occurs, is 53 °C. Contractor shall determine thickness of dried out layer and impact of this layer on ampacity. Backfilling with soil replacement is allowed up till 4,5m-mv given a construction permit acquired by the Contractor for works deeper than 60 cm below ground level. Tender shall take air in the duct into account at land side from ground level up to NAP level. This means that for both cases MB04 - 1 and MB04 - 2 air in duct has to be assumed. For other two cases (MB04 -3 and MB03 - 1), water in duct has to be assumed. Thermal resistivity values are for soil only. HDD liner (duct) and liner filling medium (water) shall be taken into account in the ampacity calculations of Contractor. Therefore, soil coverage is measured from top of duct. HDPE duct thermal resistivity shall be considered to be 3.5 Km/W
				Entry point near transition joint					4,5	MB04 - 2	**0,7**	
				Clay layer at NAP -16 m to NAP -21 m	0,1	0,14			25	MB04 - 3	**0,7**	
				Point with largest soil coverage	0,44	0,47			50	MB03 - 1	**0,5**	
				Clay layer at NAP -17 m to NAP -23 m	0,66	0,69			23	MB01 - 2	**0,7**	
				Exit point beach at NAP - 5 m	0,7	0,79			7	MB01 - 1	**0,6**	

Section				From (transition line*)	To (transition line*)	Depth of installation	Additional cover	Total soil coverage	Point-ID	Easting	Nording	Thermal resistivity [K.m/W]	Remarks
						m	m	m					

*See for the location of transition lines the map as included in the last page of this Annex and to Annex AT006 of E7 Site data

Beach and nearshore borehole locations

2.2	**Beach**			**KP 0 in the RPL**	**Baseline LAT 0 m**								This section "Beach" shall be assessed on a soil thermal resistivity of 0,60 K.m/W and soil coverage of 10 m.
						5	5	10	BH_80 - CPT_80 - TRT_10	607170.6	5815969.4	0,50	
						5	5	10	BH_79 - CPT_79	607136.8	5815936.0	0,50	
						5	5	10	BH_78 - CPT_78	607108.0	5815918.8	0,50	
						5	5	10	BH_77 - CPT_77 - TRT_77	607067.8	5815894.6	0,50	
						5	5	10	BH_76 - CPT_76	607037.5	5815901.2	0,60	
						5	5	10	BH_75 - CPT_75	606993.7	5815910.4	0,60	

2.3	**Near shore**			**Baseline LAT 0 m**	**"3 km border"**								This section "Near shore" shall be assessed on a soil thermal resistivity of 0,50 K.m/W and soil coverage of 8 m.
						5	3	8	VC_74 - CPT_74 - TRT_09	606.655,00	5.815.946,00	0,50	
						5	3	8	VC_73 - CPT_73	605.974,28	5.816.074,50	0,50	
						5	3	8	VC_72 - CPT_72 - TRT_08	605.208,89	5.816.422,02	0,50	
						5	3	8	VC_71 - CPT_71	604.508,61	5.816.601,75	0,50	
						5	3	8	VC_01 - CPT_01	604.070,00	5.817.346,00	0,50	

Section	Subsection		From (transition line*)	To (transition line*)	Depth of installation	Additional cover	Total soil coverage	Point-ID	Easting	Nording	Thermal resistivity [K.m/W]	Remarks
					m	m	m					
Offshore borehole locations												
3	General coastal zone											
		Coastal traffic zone as per RBBD	**"3 km border"**	**Western border coastal traffic zone RBBD**	1	0,5	1,5	VC_02 - CPT_02	603495,79	5817801,44	0,50	This section "General coastal zone" shall be assessed on a soil thermal resistivity of 0,6 K.m/W and soil coverage of 1,5 m. Layers of PEAT have been found but layers are relatively small and have only minor influence on overall thermal resistivity.
					1	0,5	1,5	VC_03 - CPT_03	603370,17	5818351,23	0,60	
		Coastal zone	Western border coastal traffic zone RBBD	Eastern border Sand Wave area	1	0,5	1,5	VC_04 - CPT_04	602164,39	5819837,48	0,50	
					1	0,5	1,5	VC_05 - CPT_05	601889,58	5820328,37	0,50	
					1	0,5	1,5	VC_06 - CPT_06	600872,58	5820614,07	0,50	
					1	0,5	1,5	VC_07 - CPT_07	600346,97	5821014,47	0,50	
					1	0,5	1,5	VC_08 - CPT_08-GRA	599013,99	5821291,98	0,60	
					1	0,5	1,5	VC_09 - CPT_09 - TR1	598433,69	5821992,91	0,50	
					1	0,5	1,5	VC_10 - CPT_10	596741,86	5824022,90	0,50	
					1	0,5	1,5	VC_11 - CPT_11	596306,24	5824233,20	0,50	
					1	0,5	1,5	VC_12 - CPT_12	595687,09	5825288,50	0,50	
					1	0,5	1,5	VC_13 - CPT_13	595138,99	5825633,78	0,50	
					1	0,5	1,5	VC_14 - CPT_14	594442,92	5826761,28	0,50	
					1	0,5	1,5	VC_15 - CPT_15 - GR	593635,02	5827375,14	0,50	
					1	0,5	1,5	VC_16 - CPT_16	593225,14	5828140,04	0,50	
					1	0,5	1,5	VC_17 - CPT_17	592380,95	5828795,95	0,50	
					1	0,5	1,5	VC_18 - CPT_18	591777,68	5829778,83	0,50	
					1	0,5	1,5	VC_19 - CPT_19 - TR1	591045,26	5830309,23	0,50	
					1	0,5	1,5	VC_20 - CPT_20 - GR	590554,18	5831164,07	0,60	
					1	0,5	1,5	VC_21 - CPT_21	589878,61	5831628,39	0,60	
4	Sand wave area 1, east of TSS		**Eastern border Sand Wave area**	**Eastern border TSS and 500 m TSS buffer**								
					1	2,5	3,5	VC_22 - CPT_22	589311,35	5831948,09	0,60	
					1	2,5	3,5	VC_23 - CPT_23	588051,70	5831628,52	0,50	This section "Sand wave area 1, east of TSS" shall be assessed on a soil thermal resistivity of 0,6 K.m/W and soil coverage of 3,5 m. Layers of PEAT have been found but layers are relatively small and have only minor influence on overall thermal resistivity.
					1	2,5	3,5	VC_24 - CPT_24	586794,88	5831711,00	0,50	
					1	2,5	3,5	VC_25 - CPT_25	586025,03	5831437,57	0,50	
					1	2,5	3,5	VC_26 - CPT_26	584808,02	5831523,80	0,50	
					1	2,5	3,5	VC_27 - CPT_27	583436,04	5831193,65	0,50	
					1	2,5	3,5	VC_28 - CPT_28 - TR1	582934,92	5831347,32	0,50	
					1	2,5	3,5	VC_29 - CPT_29	581520,98	5831013,21	0,60	
					1	2,5	3,5	VC_30 - CPT_30 - TR1	581007,85	5831165,76	0,60	
					1	2,5	3,5	VC_31 - CPT_31	579178,32	5830792,49	0,50	
					1	2,5	3,5	VC_32 - CPT_32	578620,02	5830940,79	0,50	
					1	2,5	3,5	VC_33 - CPT_33	577444,44	5830585,58	0,50	
					1	2,5	3,5	VC_34 - CPT_34	577065,33	5830794,32	0,50	
					1	2,5	3,5	VC_35 - CPT_35	575651,08	5830319,86	0,50	
					1	2,5	3,5	VC_36 - CPT_36	574653,27	5830511,43	0,50	
5	Sand waves 2 & lane 3											
		Sand waves area 2, inside TSS	**Eastern border TSS and 500 m TSS buffer**	**Eastern border mixed N and S bound traffic RBBD**	1,5	5,5	7,0	VC_37 - CPT_37	573902,66	5830182,19	0,50	This section "Sand waves area 2, inside TSS" shall be assessed on a soil thermal resistivity of 0,5 K.m/W and soil coverage of 7,0 m.
					1,5	5,5	7,0	VC_38 - CPT_38	573287,92	5830095,01	0,50	
					1,5	5,5	7,0	VC_39 - CPT_39	572797,64	5830206,16	0,50	
					1,5	5,5	7,0	VC_40 - CPT_40 - TR1	571706,43	5829867,20	0,50	
					1,5	5,5	7,0	VC_41 - CPT_41 - GR	570711,53	5829963,45	0,50	
					1,5	5,5	7,0	VC_42 - CPT_42	569635,59	5829572,46	0,50	
					1,5	5,5	7,0	VC_43 - CPT_43	568731,01	5829755,29	0,50	
					1,5	5,5	7,0	VC_44 - CPT_44 - GR	568244,24	5829511,47	0,50	
					1,5	5,5	7,0	VC_45 - CPT_45	566365,60	5829730,37	0,50	
					1,5	5,5	7,0	VC_46 - CPT_46	565899,52	5829485,24	0,50	
					1,5	5,5	7,0	VC_47 - CPT_47 - TR1	562606,94	5829871,72	0,50	
		Border shipping Lane 3 Mixed N +S bound as per RBBD	Eastern border mixed N and S bound traffic RBBD	Western border TSS and 500m TSS buffer	1,5	5,5	7,0	VC_48 - CPT_48	561813,01	5829657,53	0,50	
					1,5	5,5	7,0	VC_49 - CPT_49 - GR	560977,68	5829820,84	0,50	
					1,5	5,5	7,0	VC_50 - CPT_50	560435,74	5829595,85	0,50	
					1,5	5,5	7,0	VC_51 - CPT_51	558959,64	5830157,48	0,50	
					1,5	5,5	7,0	VC_52 - CPT_52	558418,40	5829706,34	0,50	
6	Sand waves area 3&4											
		Sand waves area 3, west of TSS	Western border TSS and 500m TSS buffer	Border 500m buffer HKWB offshore wind area	1	6,5	7,5	VC_53 - CPT_53	557584,65	5830115,55	0,50	
					1	6,5	7,5	VC_54 - CPT_54 - GR	555907,77	5830024,05	0,50	This section "Sand wave area 3 & 4" shall be assessed on a soil thermal resistivity of 0,5 K.m/W and soil coverage of 7,5 m.
		Sand waves area 4, Offshore Wind Farm area HKWB	Border 500m buffer HKWB offshore wind area	Platform HKWB location provided in RPL	1	6,5	7,5	VC_55 - CPT_55	555231,02	5829699,45	0,50	
					1	6,5	7,5	VC_56 - CPT_56 - GR	553858,40	5829828,22	0,50	
					1	6,5	7,5	VC_57 - CPT_57	552815,73	5829575,66	0,50	
					1	6,5	7,5	VC_58 - CPT_58	552383,67	5829950,72	0,50	
					1	6,5	7,5	VC_59 - CPT_59 - GR	551858,25	5829413,75	0,50	
					1	6,5	7,5	VC_60 - CPT_60	551237,72	5829863,59	0,50	
					1	6,5	7,5	VC_61 - CPT_61	550823,64	5829513,25	0,50	
					1	6,5	7,5	VC_62 - CPT_62	550088,88	5829841,96	0,50	