XLINKS' MOROCCO-UK POWER PROJECT

Environmental Statement

Volume 1, Appendix 3.3: Offshore Crossing Schedule

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Prepared by:

APEM

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Xlinks 1 Limited

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Glossary

Term	Meaning
Bipole	A Bipole system is an electrical transmission system that comprises two Direct Current conductors of opposite polarity.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Offshore HVDC Cable Corridor	The proposed corridor within which the onshore High Voltage Direct Current (HVDC) Cables would be located.
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and road upgrade works.

Acronyms

Acronym	Meaning
ES	Environmental Statement
OOS	Out of Service / historic assets
HVDC	High Voltage Direct Current

1 OFFSHORE CROSSING SCHEDULE

1.1 Introduction

1.1.1 This document forms Volume 1, Appendix 3.3: Offshore Crossing Schedule of the Environmental Statement (ES) prepared for the United Kingdom (UK) elements of Xlinks' Morocco UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to as the 'Proposed Development, which is the focus of the ES. The ES presents the findings of the Environmental Impact Assessment process for the Proposed Development.

1.1.2 The purpose of this Offshore Crossing Schedule is to provide a schedule of the known third-party assets along the Offshore HVDC Cable Corridor, noting their status and location.

1.1.3 Forty-seven cables cross the Offshore Cable Corridor, as detailed in **Table 1**. Of these:

- 19 are operational (or in installation) fibre-optic telecommunications cables;
- 1 is a planned power cable;
- 5 are out of service (OOS) fibre-optic telecommunications cables;
- 1 is a historic OOS co-axial telecommunications cable; and
- 21 are historic OOS telegraph cables.

In-Service Cable Crossings

1.1.4 The need to cross in-service, or operational, infrastructure will necessitate the use of cable protection, as the Proposed Development will cross over the top of the existing (and planned) subsea cables. The Applicant is engaging with all the asset owners and discussions are ongoing with regards to crossing agreements.

1.1.5 There are 20 active or planned cable crossings, the locations of which are shown on **Volume 1, Figure 3.10** of the ES, and set out in **Table 1**.

- There are 18 planned crossings of active fibre optic cables (15 cables but three are crossed twice);
- one crossing of a fibre optic cable where installation is currently under way; and
- one crossing of a planned power cable.

1.1.6 Thus, 20 in-service assets x 2 bipoles = 40 in-service asset crossing structures in total.

Out of Service Cables

1.1.7 There are also 27 OOS (or historic) cables that cross the Offshore Cable Corridor. These include a number of historic telegraph cables, most of which are over 100 years old, typically now the responsibility of the national telecoms company. A short section of the OOS cables will be removed where possible. Removal conversations with all OOS asset owners are ongoing with the intention of agreeing OOS agreements with them. The ES Project Description (Volume 1,

Chapter 3:Project Description of the ES) and assessments of potential environmental impact, assume up to 5 of the OOS cables will require crossings (5 OOS cables x 2 bipoles = 10 OOS cable crossing protection structures in total).

Crossing design

1.1.8 The Project Description is set out in Volume 1, Chapter 3 of the ES.

1.1.9 The Offshore Cable Corridor has a nominal width of 500 m extending up to 1,500 m at some crossing locations to provide the Proposed Development cables with sufficient space to cross the existing assets as close to 90 degrees as possible (to reduce the footprint of the crossing on the seabed).

1.1.10 All crossings would be in line with industry standard (and may include concrete mattresses and/or shallow rock berms).

Table 1 : Offshore Crossing Schedule (UK waters)

Crossing ID	Easting	Northing	Asset Name	Owner	Status	Type
2	322938.5	5623934.2	2-Africa West	META	Installation underway	Fibre-Optic Cable
8	341742.9	5646818.7	Apollo North	Vodafone	Operational	Fibre-Optic Cable
79	309844.1	5615259.1	GLO-1	Globacom Limited	Operational	Fibre-Optic Cable
80	333232.8	5636464.2	Grace Hopper	Google	Operational	Fibre-Optic Cable
84	358113.2	5656674.2	Ireland-UK Crossing	Lumen	Operational	Fibre-Optic Cable
159	289916	5606349.7	TAT 11	Vodafone	OOS (historic)	Fibre-Optic Cable
166	323938.3	5625152.5	TAT 14	BT	OOS (historic)	Fibre-Optic Cable
173	302663.6	5612049.2	TAT 8	BT	OOS (historic)	Fibre-Optic Cable
193	341778.7	5646862.3	VSNL Atlantic South	Tata Communications Ltd	Operational	Fibre-Optic Cable
194	397463.9	5662357.4	VSNL Atlantic South	Tata Communications Ltd	Operational	Fibre-Optic Cable
197	336139	5640000.6	VSNL Western Europe (UK-Spain)	Tata Communications Ltd	Operational	Fibre-Optic Cable
198	398428.6	5660464.8	VSNL Western Europe (UK-Spain)	Tata Communications Ltd	Operational	Fibre-Optic Cable
201	329866.7	5632367.9	Yellow	Lumen	Operational	Fibre-Optic Cable
6	677963.5	5586337.9	Amitie	Meta, Microsoft, Aquacomms, Orange and Vodafone (ASN)	Operational	Fibre-Optic Cable
9	665487.2	5438463.1	Apollo South	Vodafone	Operational	Fibre-Optic Cable
15	640968.2	5506684.5	ATLANTIC CROSSING	Lumen	Operational	Fibre-Optic Cable
51	696985	5596794.0	CELTIC	BT	OOS (historic)	Fibre-Optic Cable)
57	689864.3	5592891.1	EIG	Vodafone	Operational	Fibre-Optic Cable
64	703711.7	5600481.0	ESAT 1	BT	Operational	Fibre-Optic Cable
70	654952.5	5561436.3	FLAG Atlantic North	Global Cloud Xchange	Operational	Fibre-Optic Cable
73	650654.8	5468506.8	FLAG seg A	Vodafone	Operational	Fibre-Optic Cable
83	708768.2	5603252.5	Ireland-UK Crossing	Lumen	Operational	Fibre-Optic Cable
90	641923.3	5489846.1	Le Havre-Waterville No1	Commercial cable company	OOS (historic)	Telegraph Cable
91	641229.8	5508344.6	Le Havre-Waterville No2	Likely to be BT	OOS (historic)	Telegraph Cable
115	664756.7	5439942.7	Porthcurno-Carcavelos No2	Likely to be BT	OOS (historic)	Telegraph Cable
116	664433.9	5440596.6	Porthcurno-Carcavelos No2	Likely to be BT	OOS (historic)	Telegraph Cable
117	640054.7	5499422.4	Porthcurno-Fayal No1	Likely to be BT	OOS (historic)	Telegraph Cable
118	640560.4	5504096.9	Porthcurno-Fayal No1	Likely to be BT	OOS (historic)	Telegraph Cable
119	642040.5	5489245.3	Porthcurno-Fayal No2	Likely to be BT	OOS (historic)	Telegraph Cable
123	658105.3	5453415.4	Porthcurno-Gibraltar No3	Virgin Media	OOS (historic)	Telegraph Cable
124	654442.1	5460835.5	Porthcurno-Gibraltar No3	Virgin Media	OOS (historic)	Telegraph Cable
128	669658	5430015.0	Porthcurno-Gibraltar No4	Likely to be BT	OOS (historic)	Telegraph Cable
129	650198	5469432.2	Porthcurno-Gibraltar No4	Likely to be BT	OOS (historic)	Telegraph Cable
130	644299.4	5527820.8	Porthcurno-Harbour Grace	Likely to be BT	OOS (historic)	Telegraph Cable
131	647897.2	5474092.5	Porthcurno-Madeira	Likely to be BT	OOS (historic)	Telegraph Cable
144	664235.2	5574777.1	Sennen Cove-Bay Roberts No1	Western Union	OOS (historic)	Telegraph Cable
145	655164.5	5562004.4	Sennen Cove-Bay Roberts No2	Western Union	OOS (historic)	Telegraph Cable
146	673783.2	5582817.6	Sennen Cove-Bay Roberts No3	Western Union	OOS (historic)	Telegraph Cable

Crossing ID	Easting	Northing	Asset Name	Owner	Status	Type
147	648187.2	5543305.3	Sennen Cove-Bay Roberts No4	Western Union	OOS (historic)	Telegraph Cable
148	679792.6	5587370.6	Sennen Cove-Valentia No1	Western Union	OOS (historic)	Telegraph Cable
149	651906.9	5553274.2	Sennen Cove-Valentia No3	Western Union	OOS (historic)	Telegraph Cable
150	658037.7	5569558.2	Sennen Cove-Valentia No3	Western Union	OOS (historic)	Telegraph Cable
158	642433.1	5487233.2	TAT 11	Vodafone	OOS (historic)	Fibre-Optic Cable
160	652832.9	5555755.9	TAT 12	BT	Operational	Fibre-Optic Cable
172	654947.9	5459811.0	TAT 7	BT	OOS (historic)	Co-Axial Cable
192	657824.9	5569134.4	Valentia-Le Havre	Western Union	OOS (historic)	Telegraph Cable
205	646035.4	5537538.7	Celtic Interconnector	EIRGRID	Planned	Power