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GRIDLINK INTERCONNECTOR

Scoping Report for a Marine Environmental Appraisal - Addendum 1

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Scoping Report for a Marine Environmental Appraisal - Addendum 1

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1. INTRODUCTION

GridLink Interconnector Limited submitted a request for a Scoping Opinion through the Marine Case Management System on 16 August 2018 with respect to the contents and scope of an Environmental Appraisal for the GridLink interconnector: case reference ENQ/2018/00159. This Report is an Addendum to 'Scoping Report for a Marine Environmental Appraisal' (ref P2114_R4493_Rev2) which was included in the Scoping request.

GridLink's original proposal for the shore crossing to bring the proposed subsea high voltage direct current (HVDC) cables to the converter station site was to use Horizontal Directional Drilling (HDD) from Damhead Creek below the intertidal mudflats (a feature of the Medway Estuary and Marshes Special Protection Area [SPA] / Ramsar / Site of Special Scientific Interest [SSSI]), sea defence bund and Scottish Power's nature conservation area to arrive directly at the converter station site.

However, further engineering studies have identified a potential alternative approach using trenching across a narrow section of the intertidal mudflats to cross the shoreline at an existing small quay approximately 200m to the south of the original HDD proposal. This alternative does not require any crossing of the sea defence bund or Scottish Power nature conservation area.

All of the other aspects of the project are unaffected by the alternative proposal for the shore crossing, including the subsea cable route and installation, and the converter station design and operations.

Therefore, GridLink proposes to retain both options to be assessed in the marine environmental appraisal to determine the most suitable solution:

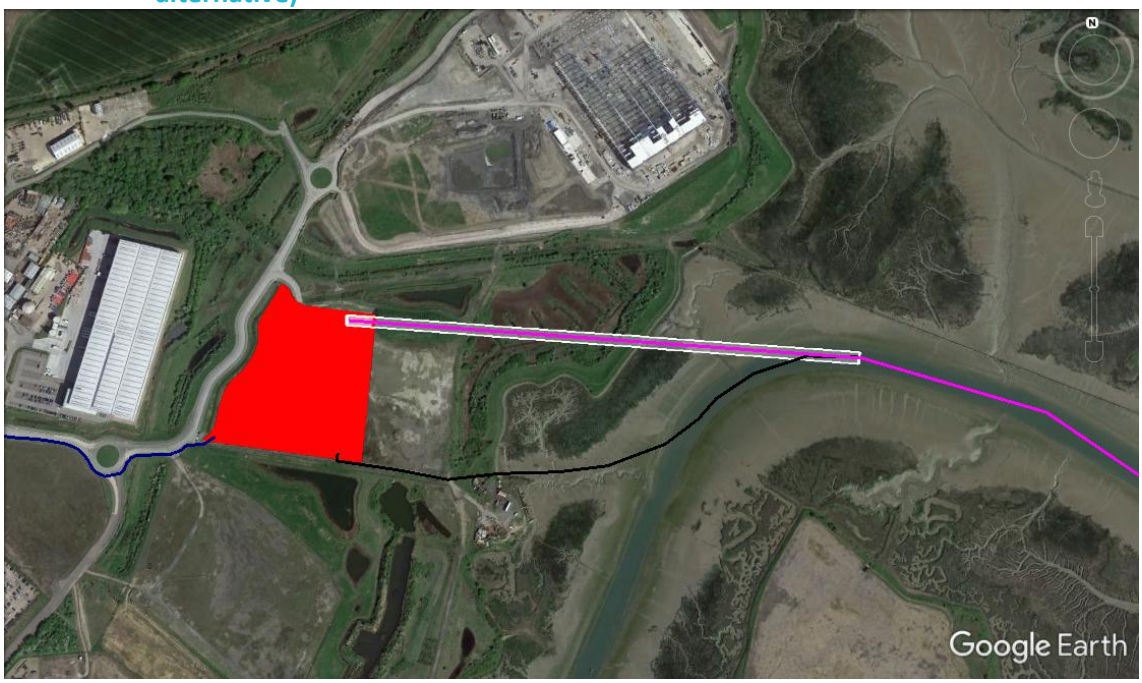
- Base case: Horizontal Directional Drilling (HDD) from Damhead Creek under the shoreline to emerge at the north-eastern boundary of the converter station site; and
- Alternative: Trench installation from Damhead Creek to the shoreline at existing quay with onshore trenching from the shoreline to the south-eastern boundary of the converter station site.

This addendum provides operational details of the alternative crossing; and determines if the scoping in and out of environmental pressures proposed in the original Scoping Report is still valid.

2. PROJECT DESCRIPTION – ALTERNTIVE SHORE CROSSING

The alternative shore crossing has been proposed based on the shortest practicable crossing of the Medway Estuary and Marshes SPA, Ramsar and SSSI, at a location where the area is already affected by historical and continuing commercial operations of the existing quay. The base case and alternative shore crossings are shown in Figure 2-1.

Figure 2-1 Base case and alternative shore crossings (white = base case; black = alternative)



A summary of the key characteristics of the base case and alternative shore crossings is provided in Table 2-1.

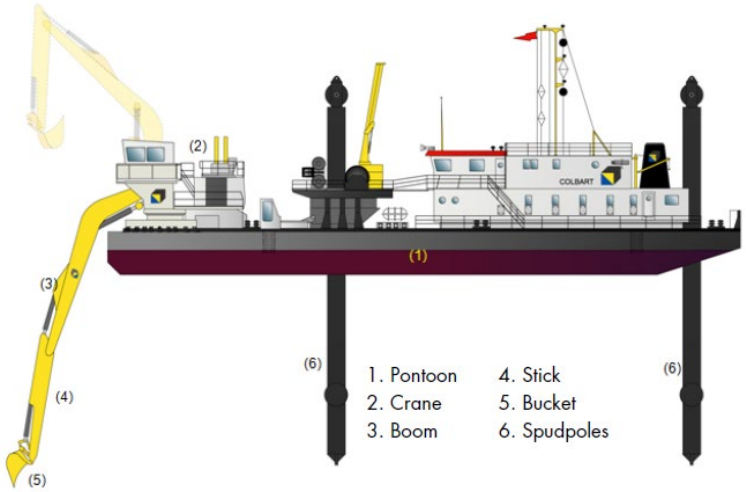
Table 2-1 Table 1: Base case and alternative shore crossings

Parameter	Base Case HDD	Alternative Trench Installation
Shore crossing cable length	700 m HDD	300 m Damhead Creek seabed trench 230 m intertidal trench 240 m onshore trench
Crossing of protected sites: Medway Estuary and Marshes SPA, SAC and SSSI	200 m by HDD	230 m by temporary trenching
HDD drilling rig/jack-up barge	Yes, located at end of HDD in Damhead Creek	Not required
HDD construction site	Yes, located at converter station site	Not required
Back-hoe dredger barge	Not required	Yes, traversing cable route along Damhead Creek
Back-hoe trencher	Not required	Yes, traversing cable route from shoreline to converter station site
Construction period	2-3 months	3-4 weeks

A description of the method for HDD is provided in the 'Scoping Report for a Marine Environmental Appraisal'.

For the alternative of trench installation, a back-hoe dredger (BHD) will be used comprising a hydraulic excavator placed on a barge (or pontoon), as illustrated in Figure 2-2.

Figure 2-2 Illustrations of a typical back-hoe dredger



The BHD is equipped with spud poles (also called spud legs) which enable the BHD to maintain a fixed position and absorb any forces associated with the dredging activities. The spud poles are equipped with a sheave block on both sides to enable the BHD to lift itself just out of the water to provide a stable working platform, and the aft (back) spud pole is equipped with a spud carrier which enables the pontoon to move forwards and backwards when the two front spuds are lifted.

The BHD is a cycling process, whereby the bucket mounted at the end of the stick will dig the soil from the seabed and lift it to the surface for temporary storage barge or side-casting depending on the process used for installation of the bundled cables into the trench. The excavated material will be re-used to reinstate the trench once the bundled cables and any protective layer has been laid. The BHD will be positioned parallel to the trench such that the stored or side-casted material can be reached and placed back into the trench. Upon finishing a section within the reach of the excavator, the BHD will move to the next location along the cable route and repeat the operation.

Prior to excavation of the trench, a survey using digital cameras and/or video equipment will be carried out to record the condition of the seabed and following excavation to ensure that the ground is reinstated to an equivalent standard following the works.

3. ENVIRONMENTAL IMPACT ASSESSMENT

Scoping Report for a Marine Environmental Appraisal includes an assessment of significance of each potential pressure resulting from the Proposed Development. Pressures from trenching the cable were considered in this assessment and therefore the conclusions drawn in the scoping report still stand. However, it should be noted that trenching installation at the landfall opposed to HDD installation will minimise visual disturbance to bird species in the Medway Estuary and Marshes SPA, Ramsar and SSSI by reducing the amount of time works will be carried out in Damhead Creek (trenching takes 3-4 weeks, whilst HDD installation can take 2-3 months).

GridLink intends to make a decision on the shore crossing technique based on the results of the environmental assessment together with further feasibility studies and the agreement of land-owners. Therefore, the inclusion of the alternative shore crossing in the scoping opinion is requested to ensure that the environmental studies carried out by GridLink are appropriate to inform the final decision based on the two available options.