GOLDER

24 April 2020 Project No. 19126590.L65.A.2

ESB Networks
Engineering and Major Projects
One Dublin Airport Central
Dublin Airport
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RE ESB SITE 65 KV PEMBROKE TO RINGSEND 38KV CABLE FLUID LOSS: RECOMMENDATIONS

To whom it may concern

ESB Engineering and Major Projects (ESB) commissioned Golder Associates Ireland Limited (Golder) to complete a Preliminary Site *Assessment* (PSA) for historical loss of fluid from a high voltage (38 kV) cable run located between Pembroke and Ringsend, Dublin ('Site 65') (hereafter referred to as the 'Site').

The PSA was produced in-line with current EPA guidance (*Guidance on the management of contaminated land*, 2013). The findings of the PSA were presented in our report reference 19126590.65.A.2 dated 24 April 2020.

The PSA identified potential pollutant linkages which in Golder's professional opinion requires further investigation and assessment. A summary of our findings for this Site and the recommendations required to assess these findings are presented below.

Summary of Findings and Recommendations

Potential pollutant linkages have been identified that could impact human health and/or controlled waters receptors as follows:

- There is a potential high risk that groundwater in the bedrock aquifer could be impacted if the Till thickness is not significant enough to provide protection from migration of contaminants;
- There is a potential moderate risk that LAB may have migrated towards the River Liffey;
- There is a potential moderate risk that residents in basement apartments close to the spill area could be exposed to vapours.

Golder recommends:

- An intrusive investigation, initially focussed on the area surrounding the initial leak location and expanding the investigation area systematically to vertically and laterally delineate a potential contamination plume if required with a focus on the cable run.

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We recommend a limited Site investigation in the area of the spill to ensure that Linear Alkyl Benzene (LAB) has not significantly migrated along existing cable runs and/or along preferential pathways towards human health receptors or at depth to the underlying aquifer.

As with all such work, the Site investigation should be an iterative staged process. The Site investigation will also provide information on the Till thickness, in order to refine the understanding of potential risk to groundwater. The lateral and vertical distribution of the contamination close to source area will be assessed. The preliminary site assessment should be reviewed and updated to evaluate the residual potential risks identified after the investigation is completed (as per EPA guidance).

If at this stage it is assessed that viable pollutant linkages remain along the cable run, for example if lateral migration of contaminated perched groundwater or free-phase fluid is observed, then a survey of private buildings to determine if they contain basements may be undertaken.

Golder is happy to assist with the scoping of such an investigation if needed.

Yours sincerely,

Golder Associates Ireland Limited

[redacted]
Senior Hydrogeologist

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Geo Environmental Director

EMcA/TM/mb