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**ESB Networks**

Engineering and Major Projects  
 One Dublin Airport Central  
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**RE ESB SITE 20 – BEDFORD ROW TO SHERIFF STREET 38 KV CABLE OIL 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 Bedford Row and Sheriff Street, Dublin ('Site 20') (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 19126590.604/A.4 dated 6 January 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 to the River Liffey adjacent to the spill that mineral oil may have impacted the River;
- There is a potential moderate risk to groundwater if the till thickness is not significant enough to provide protection from migrating contaminants; and
- There is a potential moderate risk that residents or workers in basements close to the spill area could be exposed to vapours.

## Summary of Findings and Recommendations

Golder recommends:

- Targeted monitoring of the River Liffey to confirm the presence of specific chemical markers (i.e. LAB and mineral oil); and
- 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 alongside the River Liffey.

The Golder recommendations above should be considered in turn with targeted sampling of the River Liffey at the point closest to the leak for mineral oil and LAB a first priority. The aim of this monitoring is to identify if the receptor has been directly impacted.

The results of the River Liffey Monitoring Should be completed prior to progressing intrusive investigations.

A limited Site investigation in the area of the spill to ensure that Linear Alkyl Benzene (LAB) and/or mineral oil has not significantly migrated along existing cable runs and/or along preferential pathways towards human health receptors and the River Liffey should then be considered. However it makes sense to complete the sampling of the River Liffey in the first instance to check if this receptor has been impacted prior to considering intrusive investigations.

As with all such work, a 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 the 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**

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