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ESB International,
One Dublin Airport Central,
Dublin Airport,
Co. Dublin.

22nd November 2019

Verde Ref: 52458

RE: Recommended Additional Work following completion of a Preliminary Site Assessment Report for Howth Road – Clontarf Road Junction, Clontarf, Dublin 3. (ESB Site Ref: 11 Clontarf – East Wall 38kV).

Dear ██████████,

Verde Environmental Consultants (Verde) have prepared this letter to provide detail in relation to recommended future site investigations and risk assessments proposed for the above site. These proposals follow on from the completion of a Preliminary Site Assessment (PSA) report which identified potential environmental impacts associated with a suspected cable fluid leak from a power cable on the junction of the Howth Road and Clontarf Road, Dublin 3 (ESB Ref: 11 Clontarf – East Wall Road 38kV) in Verde's Report dated 22nd November 2019.

As you are aware the November 2019 PSA report was completed in response to an ESB electricity cable fluid leak, predominantly comprising of linear alkyl benzenes (LAB) mixed with Mineral Oil (MO) with an estimated loss volume of 1,056 litres (l). This was lost to ground at an approximate rate of 42l/month for twenty five months. The leak was reported to have started in July 2013 and was repaired in August 2015. The known leak point (ESB Ref: 11) is located within the centre of the road junction of Howth Road and Clontarf Road next to Fairview Park, which is a residential area along Howth Road and commercial and open parkland along Clontarf Road.

Based on the findings of the site walkover and desk study, consideration of the known cable leak points, identification of contaminants of potential concern (COPC) and their likely fate and transport, a conceptual site model (CSM) was developed. The findings identified that the risk for the majority of the potential pollutant linkages was considered to be low and identified one potential pollutant linkages requiring further investigation and assessment as follows:

- Low/Moderate risk potential for Linear Alkyl Benzene (LAB) and Mineral Oil (MO) contamination in soils and or groundwater to migrate through preferential pathways such as service ducts, then volatilisation and inhalation by nearby residents and other nearby building users.



Proposed Site Investigation

The Low/Moderate Human Health risk is from potential LAB and MO volatilisation from soil, groundwater and LNAPL into soil pore spaces (Vapour Phase in unsaturated soils), upward migration into houses and other properties to indoor air and then inhalation. In order to further develop the CSM and determine required remediation, if any, Verde recommend that slit trenches are excavated at leak point or the downgradient area to examine the potential for contamination migration along preferential pathways including the ESB cable route or other service trenches. This site assessment will allow for visual inspection, soil sampling and also tracing contaminant movement along service trenches and in any service trenches leading towards properties. Monitoring for soil, shallow groundwater and air will be assessed and undertaken as required in order to determine any human health risks.

Additional Precautionary Recommendation

Should the slit trenches identify LAB and MO NAPL next to mains water supply pipes, then drinking water samples should be collected, where access has been permitted, to determine whether LAB and MO has permeated through any plastic pipes to contaminant drinking water. It is envisaged that samples will be collected from the properties closest to the identified NAPL locations. Sampling should be undertaken in accordance with sampling best practice documents such as that produced by the EPA titled "Handbook on implementation for Water Services Authorities for public water supplies".

Revision of Risk Assessment

Following completion of the above scope of work at the Howth Road – Clontarf Road Junction site, Clontarf, Dublin 3 (ESB Ref: 11 Clontarf – East Wall Road 38kV), the results should be used to update the Conceptual Site Model and risk assessment in regard to potential risks to human health, water and ecological receptors. This will determine the necessary next steps such as further investigations and assessments potentially including a Detailed Quantitative Risk Assessment (DQRA) and/or remedial measures/corrective actions required to break the plausible pollutant linkages.

Yours sincerely,


Principal Hydrogeologist


Project Director