



RISK & HAZARD MANAGEMENT

# 014 – Site Condition Report

Saffil Ltd (also known as Unifrax/Alkegen)

Line 4 Permit Variation



Safety Risk



Business Risk



Environment Risk

## Document History

Version	Issue	Date	Notes	Author	Reviewer
1	-	05/05/22	Working draft with client	J. Carroll R. Nibbs	C. Nicholls
2	1	01/07/22	Issue as part of permit application.	J. Carroll R. Nibbs	C. Nicholls R. Ritchie R. Nibbs

## Contents

	Document History .....	1
1	Introduction .....	2
2	Site Condition Report .....	3

# 1 Introduction

---

Please note that this document refers to the site as Unifrax Widnes and to the owning company as Unifrax. Unifrax was the name of the American company that owns Widnes site. A further complexity is added because due to a recent merger, Unifrax has changed its name to Alkegen. So, it is possible in correspondence or discussions that the site may be referred to as Alkegen.

The legal entity that owns the site at Widnes is however called Saffil Ltd and remains so despite the name changes to Unifrax and Alkegen – and it is in this name that the EPR application is made on the accompanying forms.

A Site Condition Report and monitoring proposal has been produced as part of the Planning Environmental Statement and is also submitted as part of the Line 4 Permit Variation. The reference for this document is 'ES Technical Appendix F Ground Conditions Phase 1 Report ref CCG-C-22-12912' undertaken by CC Geotechnical Ltd.

## 2 Site Condition Report Summary

---

The site condition report and proposal submitted to support the EPR permit variation that has been completed as part of the Planning Application is the latest in a considerable number of site investigations and assessments carried out at the Widnes site.

In particular, comprehensive ground condition assessments and investigations were carried out to support the construction of Line 2 (2003/4) and Line 3 (2012/13). Significant historical data has been accumulated and investigations carried out since the 1990s on the site during previous ownership by Imperial Chemical Industries plc.

The primary aim of the Phase I Desk Study was to assess whether the site is likely to be affected by contamination to an extent that it may pose a risk to human health and/or the built environment and/or the wider natural environment or is affected by any other natural or man-made features which may impact on the proposed redevelopment.

Specific tasks undertaken to achieve these objectives were as follows:

- Undertaking of a review of available historical mapping, environmental databases, and Environment Agency data
- Undertaking of a site walkover inspection
- Development of Preliminary Conceptual Model
- Development of a Phase 2 intrusive investigation strategy

Based on the findings from the above process, it is recommended that an intrusive investigation be undertaken.

The Phase II Intrusive Investigation should include for exploratory holes to be sunk through made ground into the underlying natural strata.

The primary objectives of ground investigations are to obtain enough data to reliably ascertain ground conditions on site, and to assess the validity of the potential pollution linkages identified within the Preliminary Conceptual Model above.

Sufficient soil contamination data should be obtained to allow the Preliminary Conceptual Model to be tested and refined by the performance of a quantitative risk assessment.

The ground investigation must also establish soil engineering properties in relation to the selection, design and construction of suitable foundations for the proposed development. To achieve these objectives, using the guidance contained in BS10175: 2011+ A2:2017 "Investigation of Potentially Contaminated Sites - Code of Practice", it is proposed that 10nr boreholes be sunk across the site by light dynamic sampling methods, each to a nominal depth of 5mbgl to assess shallow ground conditions.

The boreholes shall be sited to provide good coverage of the site and include for targeting of the soils to the bunded fuel tank, historic on-site tank locations and the location of the

former chimney. A further 3nr deep boreholes shall be sunk by cable percussion methods and shall advance to terminate at depths of up to 25mbgl or bedrock (if encountered). The proposed exploratory locations are provided on CCG drawing 12912-03 contained in the report. It should be noted that positions may need to be adjusted on site to avoid damage to buried services / infrastructure.

Ground gas and groundwater monitoring standpipes shall be installed within at least 3 of the boreholes, thus enabling a programme of ground gas and groundwater monitoring to be undertaken.

Given the site's low sensitivity (commercial development) and considering the source of gas generation potential to be low, in line with the guidance provided at CIRIA C665, it is proposed that gas monitoring is undertaken on a minimum of 6nr occasions over a period of no less than 2 months.

Groundwater samples recovered from each of the monitoring wells shall be recovered and subjected to the chemical analysis suite outlined above.

Given that the development will provide for industrial end use, contamination data obtained as part of the above recommended intrusive investigation will be assessed against LQM/CIEH S4UL's for Human Health Risk Assessment (2015) (CCG Licence No. S4UL3233), as applicable to the "Commercial/Industrial" land use scenario. Where LQM/CIEH S4UL values have not been established, contaminant concentrations will be considered against the C4SL published by DEFRA, or the EIC/AGS/CL:AIRE Generic Assessment Criteria (GAC) published by CL:AIRE.

Groundwater and/or leachate samples shall be compared against Environment Agency published EQS values and assessed for risk to the surface waters of St Helens Canal.

Should the investigation reveal gross contamination and/or drift deposits of composition or thickness unlikely to afford the underlying sandstone bedrock adequate protection from vertical migration of contamination, then a Controlled Waters risk assessment considering the sandstone aquifer as a receptor of concern shall additionally be undertaken.