



ADDENDUM

REPORT	OMEGA ZONE 8	FROM	Andrew Moore, WSP
DATE	21 February 2020	Rev01	CONFIDENTIALITY Public
SUBJECT	Omega Zone 8A and 8B – Ground Gas Assessment		

1. INTRODUCTION

WSP UK Ltd (WSP) was instructed by Omega Warrington Limited (OWL) to update the ground gas risk assessment following completion of the monitoring programme on a parcel of land referred to as Zones 8A and 8B of the Omega South development area (henceforth referred to as 'the site').

This report forms an Addendum to the main WSP Ground Investigation Report as referenced below, which should be consulted for further details:

- Omega South Zone 8A and 8B Ground Investigation Report and Remediation Strategy (ref: 70062937/11482) dated December 2019.

The gas risk assessment forms part of a wider investigation at the site (as detailed within the Ground Investigation Report) to identify potential geotechnical and environmental constraints and opportunities associated with the planned development of the site for the proposed commercial end use.

2. POTENTIAL POLLUTANT LINKAGES

A conceptual site model is presented within the GIR (WSP, December 2019). With respect to ground gas, the following contaminant linkages are potentially viable at the site:

- 1 Inhalation of ground gases by future site users and construction and maintenance workers; and
- 2 Accumulation of ground gases and generation of explosive atmosphere.

3. GROUND GAS INVESTIGATION

Six ground gas monitoring visits have been undertaken between 29 October 2019 and 21 January 2020 in accordance within the recommendations within guidance CIRIA C665¹ – six monitoring visits over two months for a low sensitivity, low gas generation potential site.

Groundwater depths were gauged and ground gas concentrations and flow rates were measured using an infra-red gas analyser (GFM435). Initial and steady concentrations of methane (CH₄) carbon dioxide (CO₂) and oxygen (O₂) and trace gases (including carbon monoxide, hydrogen sulphide) were recorded along with initial and steady gas flow rates. Atmospheric pressure was also noted.

4. FINDINGS

Atmospheric pressure during the monitoring varied between 1037 (Round 6) and 988 (Round 3). Regional barometric pressure was falling during Round 1, Round 3, Round 5 and Round 6 considered to represent worst case conditions and rising during Round 2 and Round 4. The results for the gas monitoring to data are attached and summarised in Table 4.1 below.

¹ CIRIA C665, Assessing risks posed by hazardous ground gases to buildings, 2007.