

10 Approach to Gas Risk Assessment

10.1 Ground Model and Gassing Potential

The gassing potential of the site has been assessed following the approach set out in the Ground Gas Handbook⁵. In making the assessment of gassing potential, consideration is given to the site history and ground conditions information available which is summarised below.

The site is a former landfill that is recorded to have accepted inert waste until the early 1980s. A review of trial hole logs suggests that non-inert (domestic waste) has also been used to fill the former sand pit. Made ground/fill materials are recorded to circa 10m within the landfill. Table 3.1 of the Gas Handbook states that inert landfill sites have a low gas generation potential and pose a low/moderate level of risk to on site development. Municipal landfill sites that received waste from mid 1960's to early 1990s have a moderate to very high gas potential and pose a moderate to very high level of risk for on site development.

Taking into consideration the available information it is qualitatively considered that the site falls between these two source types and as such that that the site has a Moderate to High gas generation potential and as such qualitatively poses a Moderate to High level of risk to onsite development.

Noting the local geology (Folkestone Formation sands) the risk from lateral migration is also considered to be **Moderate to High**.

10.2 Well Spacing & Monitoring Data Review

10.2.1 Well Spacing Suitability

The site covers an area of 3.5ha, of which the former pit is thought to cover an area some 1.5ha. CIRIA Guidance⁶ states that the number and spacing of monitoring wells required for any site 'should be based on an informed judgement and the need to provide robust data for assessment and design' and that the assessment of required well spacing should be site specific. The spacing of wells will also be dependent on the location and number of potential gas sources and likely receptors. Noting that the site includes properties thought to be constructed adjacent to areas of landfill and properties directly over landfill wells should be installed both within and outside of the filled area. The Guidance states that where there are no specific areas to target, for example where there is consistent stratum below a site, then

⁵Wilson S, Card G & Haines S. Ground Gas Handbook 2007

⁶ Wilson S, Oliver S, Mallett H, Hutchings H & Card G. CIRIA C659 Assessing risks posed by hazardous ground gases to buildings 2007