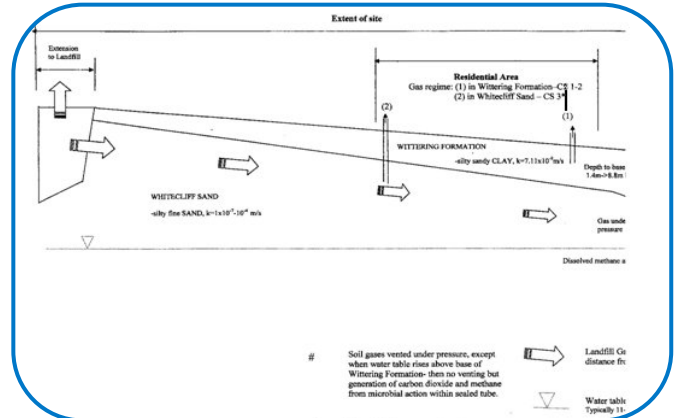


White Tree Farm, Fair Oak, Southampton

Our Services

- Gas Risk Assessment
- Gas Protection Strategy



Gas Risk Assessment and Protection

A development of 45 houses was planned on a 3.75-acre site close to a landfill. To comply with Local Authority planning conditions, **CGL** was commissioned to establish in detail the prevailing gas regime, provide a risk assessment and design gas protection measures, based on data provided by others.

The model developed from the data gathered indicated that gas was confined within the underlying sand by a mantle of clay and migration occurred primarily through the sand. However falling ground levels, increasing thickness of the clay mantle and fluctuations in groundwater levels resulted in the gas being 'funnelled' under pressure in the sand below the area to the south of the development. In this area extremely high gas flows were recorded when the clay mantle was pierced. In addition, water levels occasionally rose sufficiently to seal the monitoring wells,

creating anaerobic conditions and false readings.

To provide protection against the possibility of the clay mantle being punctured during the development and effectively to eliminate the gas risk, we advised that robust gas protection measures for the houses be provided by a passive gas protection system:

- confirmation of a minimum thickness of clay mantle between the base of the foundations and the underlying sand
- gas proof membranes
- passively vented under floor voids.

This system is being supported long term by regular gas monitoring to confirm the behavior of the gas below the site and provide warning should the gas regime change significantly.

Client: Barratt Southampton