

Tower Hill

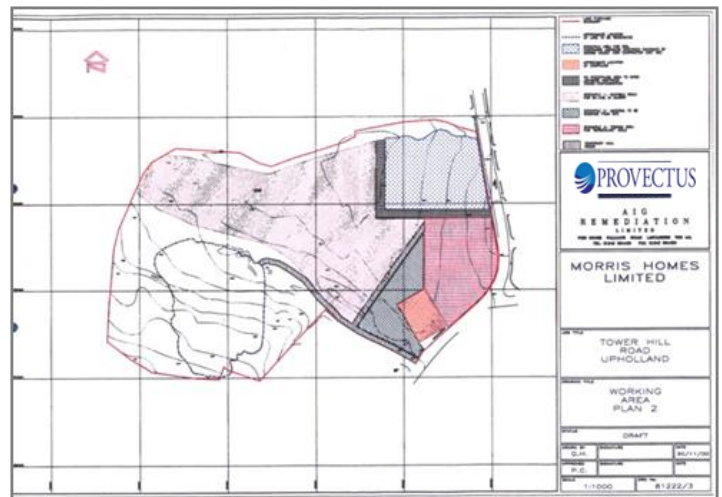
Areas: Upholland, Wigan, Leicestershire
 Former Use: Joinery Works & Quarry
 Client: UK National House Builder
 Value: £34,000

A former infilled quarry was backfilled with “excavated materials” in the late 1960’s, believed to be from earthmoving operations within the Skelmersdale area. However, prior to this time a joinery works that occupied the site is known to have deposited wood waste and chippings into the base of the quarry.

Provectus carried out site investigation studies which found the infilled material to be a mixture of clay with variable organic rich deposits, largely consisting of bands of black clay/silt. The development of the quarry area had been under consideration since 1992. However at this time detected landfill gas concentrations suggested that the site was not developable without the mass excavation and disposal of all the infilled material.

Further study by Provectus however re-visited the infilled quarry area with a view to updating the gas data and examining whether any significant emission rates could be determined. The findings confirmed the previous elevated gas concentrations but determined no significant gas flows thus suggesting that the overall risk was relatively low.

As a result of the findings of this study Provectus carried out a trial in order to assess the feasibility of screening out the biodegradable material and confirmed that the quarry had been infilled in relatively distinct bands and that the materials could be physically separated during excavation. The black, organic rich materials and any other suspect material was removed from site to a licensed landfill or utilised as a topsoil or soil conditioner material, subject to assessment by a suitably qualified consultant. The remaining material will be engineered back into the quarry in controlled layers in order to ensure an



acceptable degree of consolidation and the deficit made up with suitable, clean, imported material.

The entire proposed operation was defined in a Method Statement in advance of the works commencing and discussed and approved with the local authority, the Environment Agency and the NHBC after detailed discussions.

The reclamation proposals were designed to remove the vast majority of the organic rich material that is contained within the infilled quarry, although it was considered that some residual material would remain. The lack of any appreciable gas volume or notable emission rate however was such that the residual risk to future site occupants was considered to be negligible. However, as a precautionary measure AIGC recommended that all plot foundations be constructed with full passive gas prevention measures both on the infilled area and all those which cross a 10m radius from the quarry wall. Remedial works were carried out by Provectus.