

Disused Landfill Investigation and Remediation – at Tolcis, Nr Axminster

Tolcis Landfill site, a redundant waste disposal site, was reviewed in preparation for its final restoration. Initial study indicated potential for landfill gas and leachate migration, with existing residential and farm properties nearby. Devon County Council commissioned David Roche GeoConsulting to provide advice based on investigation, risk assessment and options for mitigation and remediation, and various investigations, siteworks, assessments and reports were prepared.



Investigation

Borehole investigations were carried out to confirm the nature and depth of the landfill wastes and the geology below and around the site, and some were also used to install monitoring wells for landfill gas and groundwater monitoring within and remote from the former tip area. The phased investigation approach was designed to consider source-pathway-receptor methodology.

Assessment

Results of the investigations including the monitoring of standpipes confirmed some migration of landfill gas beyond the landfill boundary and indicated that leachate problems were confined to the on site leachate collection facilities.

Remediation of Leachate Facilities

Leachate collection facilities were inspected by physical investigations and the facilities refurbishment included removal of deposits, cutting of vegetation and constructing new security fences.



Mitigation of Landfill Gas Migration

Landfill gas monitoring wells were installed along the perimeter of the landfill where off-site gas migration had been detected. Passive gas ventilation wells were then installed within the landfill involving construction of rows of large diameter boreholes with a rotary barrel auger.



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