



Remediation and earthworks on a former landfill site

Nottingham

Client: Linden Homes
Value: £1.1m
Site area: 66,000m²
Timeframe: 16 weeks
End use: 171 new homes

Challenge

Linden Homes acquired this former landfill site to help meet council plans to build more than 2,500 homes by 2028.

The site was primarily filled with pulverised fuel ash (PFA) from a nearby coal fire power station, with isolated areas of landfill waste. The southern part of the site was bound by a former municipal landfill site, producing significant levels of landfill gas.

McAuliffe was given a 16-week timeframe to complete the project, adhering to strict environmental and waste disposal requirements and providing ground gas mitigation.

Further challenges included:

- Design and build of a bespoke gas barrier to prevent gas migration from the adjacent site
- Maintaining an operational footpath and cycleway which dissected the site
- Separate remediation and early handover of council-retained land
- Pre-treatment and segregation of materials in accordance with the MMP
- Early phased handover to enable on-site piling activities

Solution

We carried out site investigations and risk assessments, designing and agreeing a comprehensive Remediation Method Statement (RMS) and Validation Plan.

This included our in-house 340m gas curtain design, to prevent lateral gas migration from the adjacent site.

Our team carried out additional on-site investigations to determine the best location for the proposed gas curtain, which was aligned to the on-site topography and location of the adjacent landfill waste.

Using our intelligent plant, we moved large volumes of materials in accordance with the MMP. This included preparing each individual plot to its specific finished floor level, complete with piling mat.

6F2 was produced and supplemented with external sources to complete the piling mats. As part of the volumetric appraisal, we value engineered on-site levels to provide void space below the clean cover for all on-site construction arisings. These would otherwise have gone to landfill.

Tree clearance and licensed badger works were undertaken in line with Natural England requirements.

RESULTS

- Saved circa £300k and avoided more than 1,100 lorry movements
- Design, build and installation of a 340-metre bespoke virtual gas curtain
- Build-ready site delivered in 16 weeks, with 5-week sectional completion and sign-off by regulators