

# REMEDIATION OF METALS, BULK EARTHWORKS & SITE REPROFILING



# AT A GLANCE

### Client

Regional Developer and Affordable Housing Provider

#### **Remediation Value**

Circa £600, 000

### Site

Former agricultural land. Naturally elevated lead and arsenic associated with shallow geology. Remediation works, bulk earthworks and extensive site reprofiling were required to provide a suitable platform for the planned development consisting of 38 residential properties.

Figure 1 - Reprofiling works



Figure 2 - Final earthworks formation levels

# CHALLENGES

- Management of traffic entering/exiting site on a busy public highway with a school adjacent to site. Up to 50 loads of material were disposed from site daily.
- Successfully achieving the complex and intricate earthworks formation levels, using a combination of GPS enabled plant and setting out.
- Delivering the works ahead of programme despite periods of prolonged heavy rainfall.
- Maintaining good public relations with neighbours, despite former opposition to the development.

## SUCCESSES

- Development of conceptual site model, waste classification and cut/fill analysis to pre-classify all surplus materials to provide a lump-sum cost to the client.
- Development of earthworks formation model, taking into account construction make-ups below finished floor level.
- Targeted excavation of hazardous and non-hazardous materials unsuitable for retention on site, and subsequent off-site disposal to licensed facilities.
  - Management of ecological constraints such as slow worms and nesting birds.
  - Bulk excavation to earthworks formation level.
  - Placement of clean cover system in rear gardens of contaminated area, in accordance with the approved Remediation Strategy.
  - Placement of site-won suitable material in areas of fill, in accordance with the Specification of Highways Works, Series 600. This included engineered fill beneath roads to achieve an 8% CBR.
  - Submission of Verification Report to regulators to gain discharge of planning conditions.