

## Berry Edge, Former Consett Steelworks – Reclamation, Infrastructure & Plot Sub-structureworks – Phase 1 (Page 1 of 4)

### Scope of Works

The 'Berry Edge' scheme involves reclamation and development of part of the Former Consett Steelworks Site for the construction of 321 houses and associated infrastructure.

Phase 1 of the scheme required the reclamation of 50% of the total site area, the second and final phase to be carried out at a future date.

Site investigation identified the presence of 'hot spots' of contamination and massive reinforced concrete foundations, which were the relic foundations of the former 'billet mill' on the steelworks. The works were carried out in accordance with a detailed remediation strategy, produced by Absolute Civil Engineering Ltd (ACE Ltd) & Shadbolt Environmental LLP which had been assessed and approved by the required regulators (ie: Durham County Council, Environment Agency).

The contract was procured on a 'Design & Construct' format whereby ACE Ltd employed the services of Shadbolt Consulting to carry out the infrastructure and plot foundation design to the requirements of Durham County Council and NHBC accordingly.

### Client

**Project Genesis  
Ltd / Barratt  
Developments**

### Value

**£3.95 million**

### Year

**2010 - 2011**





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Made ground (primarily consisting of steel slag) and relic foundations were excavated to depths up to 5 metres. Underground service tunnels and foundations were broken out and excavated, and any hot spots of contamination were duly tested, treated or removed from site under controlled conditions to a licensed disposal facility.

Made ground on site had to be uplifted, screened, crushed and re-engineered to make up levels on the site. The 'processed materials were re-deposited and underwent compaction to an 'end-product' specification.

A strict quality regime was adopted on site which included regular chemical (soils) analysis as well as in-situ and laboratory testing to ensure compliance with the parameters set out in the approved remediation strategy.

ACE Ltd engaged the services of a certified 'Geo-environmental Engineer (Shadbolt Environmental LLP) who were resident on site to visually inspect the works, co-ordinate physical and chemical sampling and analysis and to give advice and instruction on environmental matters generally.

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The reclamation scheme was immediately adjacent to an existing residential development so dust suppression and continuous environmental monitoring were essential. This also involved regular liaison with the council authority and local residents to keep them informed regarding the works.

As construction of the re-engineered platform progressed, a clay cover / capping layer some 600mm thick was imported and spread in accordance with the reclamation strategy.

Following completion of the Reclamation Phase, off site sewers up to 600mm diameter and 5 metres deep, as well as on site roads & sewers were constructed to facilitate the follow on housing development.

The scheme also involved the design and construction of the first phase (70 units) of housing and external works. This required the construction of reinforced 'raft' foundations across the site as well as associated services, public footpaths, driveways and external paving, gardens etc.

Absolute Civil Engineering Ltd were appointed as Principal Contractor to Project Genesis Ltd, with a phased 'handover' to Barratt Developments as sections of the site were completed.

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### Principle activities included:

- Excavation and re-engineering of circa 180,000 m<sup>3</sup> of made ground and circa 20,000 m<sup>3</sup> of relic foundations across the site to depths up to 5 metres.
- Processing (Crushing / Screening) of materials to render acceptable for re-use as engineered fill.
- Treatment and/or controlled disposal of ground contamination.
- Intensive soils testing and analysis to detailed strategy / specification.
- Construction of re-engineered platform for the purposes of housing & infrastructure development.
- Production of 'validation report' upon partial and final completion of the works.
- Construction of off-site sewers up to 675mm diameter (depths up to 5 metres).
- Installation of circa 1,000 metres of storm water and foul water sewers on site to adoptable standards.
- Construction of circa 3,500 square metres of estate roads to adoptable standards.
- Design & Construction of phase 1 plot sub-structure – 70 plots (reinforced raft foundations), plot drainage, and external works (footpaths, services ducts, chambers, drives, gardens).

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