

CASE STUDY:

nationalgrid

Hempstead Gasworks, Bristol Road, Gloucester

Background

The Hempstead gasworks in Gloucester operated from the early 1860s until it was decommissioned in the early 1970s. The remediation, started in 2011, represented the largest site remediated by National Grid that year.



During its history, the gasworks was redeveloped several times in line with emerging technologies. From the 1950s until closure it was used as an experimental site to test several different methods of gas production. This meant that the site had much more underground structures to remove compared with a more ordinary gasworks.

Since closure the site had been in a derelict condition for approximately 15 years. The site is one of the largest former gasworks in the UK and is located in a predominately industrial area close to the Sharpness Canal. This coupled with its proximity to residential housing and local businesses meant sensitive handling of the remediation and a comprehensive programme of community relations was essential.



Total site excavation
85,000m³
of material

Actions

The site was subject to a number of intensive Investigations between 1992 and 2009, where an excess of 150 trial pits and 50 boreholes were made to determine underlying site conditions.

The remediation work, which commenced in February 2011, was subsequently based on an environmental improvement strategy targeting key source areas such as the below ground gasholder, tar tank and storage areas.

Remediation work involved:

- The excavation of 1 gasholder of 12,000 m³ volume on site, and 1 tar holding tank of 420 m³ volume on site.
- A total site excavation volume of 85,000 m³ of materials, of which 8,500 m³ was concrete.
- Demolition of buildings associated with the gasworks on site.
- The storage and treatment of soil for reuse.
- Backfilling all excavations and leaving the site tidy and secure.

Community engagement

National Grid hosted a public exhibition in July 2012 to consult with local residents and stakeholders before submitting a planning application. Consultees were encouraged to fill out a feedback form at this event, which allowed us to identify concerns and take them into account during the job.

To coincide with the submission of the planning application, we again contacted key stakeholders to discuss the proposal for the future end use of the site.

Communication with the local community was maintained throughout the project, including monthly update letters and a community relations helpline available six days a week. In addition an information day was held for Contaminated Land Officers in surrounding areas, and a National Grid School Power event was held at the local Grange Primary school.

Minimising disruption

Stringent control measures were implemented on site to minimise any disruption to the local community:

- Screens were erected around the site perimeter to reduce the visual impact of the works on our surrounding neighbours.
- We used odour suppressants to neutralise odour on site.
- Stockpiles and access routes were dampened down to prevent dust spreading.
- An agreed traffic management plan was put in place. Any vehicle entering and leaving the site was carefully monitored and all drivers briefed about safety.

Working hours were agreed with Gloucester City Council, and a strict monitoring regime was followed to ensure that levels of noise, dust and vapours caused by remediation activities remained below the levels set by the council.



During the remediation, National Grid Property reused 93,000 tonnes of material and sent 22,600 tonnes of soil to treatment centres for recycling, and a further 37,400 tonnes was sent to landfill as non-recoverable waste.

Outcome



The successful remediation of the site has resulted in the environmental risks of this redundant town gasworks being addressed and has enabled this derelict land to be returned to beneficial use.

This sensitive remediation work was carried out over approximately one year and during this time the team worked closely with the local council and particularly the Environmental Health Officer to ensure any complaints or problems were addressed thoroughly.

When the largest gasholder was excavated it created a far stronger concentration of odour than had been anticipated. The site team brought in a number of measures to mitigate against this and the community relations team worked closely with the nearby residential and business neighbours to reassure them. The matter was resolved, and this is a credit to the measures put in place and the communication channels upheld.

The site has now been sold.