RON HULL GROUP

Demolition of Rossington Concrete Water Tower

Location: Rossington, Doncaster

Scope: Demolition of concrete water tower and brick-built pump house and remove all arisings

Disciplines: Demolition, crushing, groundworks and waste disposal

Client: JN Bentley Ltd

Programme: 2 weeks

Value: £100,000

Ron Hull Demolition Ltd were awarded the works following a competitive tender, based on competency and quality after demonstrating robust methods, policies and procedures.

The scope of works for the demolition of the concrete water tower and brick-built pump house included protection to the underside of the tower to prevent cross contamination with asbestos containing materials. The works were completed by remote demolition utilizing a combination of standard excavator and high reach excavator.

The sequence of events consisted of the following activities:

- Confirmation of isolations and decommission
- Demolition of Pump house
- Vacate residents from the adjacent bungalows during high reach demolition works to the tower
- Demolition of concrete water tower

- Processing of concrete
- Removal of clean concrete from water tower
- Removal of protection mat from underside of water tower
- Remove foundations to a depth of 500mm
- Site clearance

The concrete water tower consisted of 10 no. concrete reinforced columns supporting the concrete water tower with rebar, there was evidence the structure had degraded over time.

Demolition of Brick Built Concrete Roof Pump House

The high reach was situated on the 6F2 pad put in-place by the Client, who had also protected the under ground pipes in the pumphouse prior to commencement.

The high reach with grab attachment was utilitsed to grab the concrete roof section and slide off the brick course to bring to ground level. The high reach began to push the brick side walls outwards away from the footprint of the building. All arisings were removed from site in sequence with the removal works from the water tower.

Demolition of Concrete Water Tower

The high reach excavator with cracker jaw attachment penetrated into sections of the concrete water tower progressively working towards 50% half way down the tower. Throughout these works the concrete column supports remained intact for stability.

This element of the works was carried out in a top down method working around the concrete tower taking down sections by a meter at a time this maintained structural stability of the tower. The four inner concrete columns were reduced down to biscuit level once accessible. The internal steel overflow pipes were pulled up and removed out of the drum when accessible.

Concrete arisings were cleared from the working area periodically by the high reach machine.

Once all columns had been demolished down to the intermediate supports, the high reach machine was removed from site and replaced with a 21 tonne excavator. The Excavator detached and processed the columns down to ground level.

On completion of removal of clean concrete the excavator began to load away contaminated soils under controlled condition with background monitoring being carried out throughout the removal works by an Accredited company.

Given the nature of the site working within close proximity to a residential area additional actions were implemented to minimise the environmental impact to the area.

Continued project monitoring and progress evaluation was conducted throughout the duration of the project to ensure performance criteria and client objectives were maintained and achieved.