



**OVERVIEW:** This project was part of a bigger redevelopment scheme awarded to Lawson Group. The site was made up of a former BP fuel station, car wash and shop in a busy area of Tottenham Hale, London.

**CHALLENGE:** The scope of works would include soft stripping of the premises, demolition of the superstructure, removal of waste and safe removal of underground tanks.

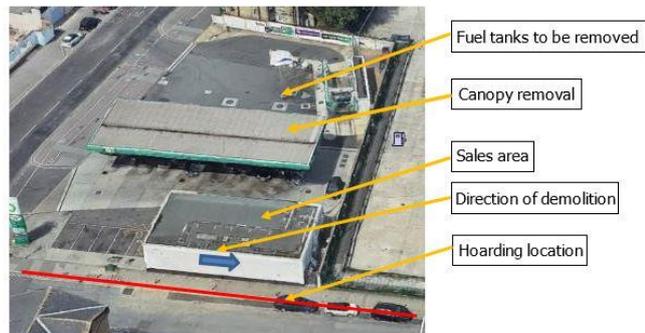


The buildings to be removed included a single-storey, steel-framed building that had an insulated flat roof and brick walls along, with a separate drive-through car wash. The main building had been used as the garage forecourt shop and was situated next to the very busy Ashley Road. There was a steel frame tin-clad canopy that also had to be removed, this covered the forecourt area that fronted the shop. Because of the location, careful traffic management would be required in and around the site.

A live gas main (63mm) passed through the site, along the western boundary. This was due to be diverted in the future, but it would remain during the demolition phase with the existing slab and surrounding ground to be left in place to act as protection.

**SOLUTION:** A CAT scan for live services was undertaken before work started. Loose contents from within the structure, including furniture, appliances, loose waste etc. were removed by hand in a controlled manner and arising's managed in accordance with the Site Waste Management Plan.

Door frames and skirting boards were removed by using bars and sledgehammers. All nails and fixings were removed from the walls. The fencing carried signage warning of the dangers that would affect others entering the demolition zone during structural mechanical demolition.





One of Lawson Group's very own 360° demolition excavators, with shear attachment, was positioned at the rear of the garage canopy. All tin sheeting was removed to ground level which in turn exposed the steel frame.

Once the steel frame had been exposed, the shear attachment was used to cut each crossbeam into one-metre sections, these were then removed from the working area. Once all the cross beams had been removed, the vertical supporting posts were cut and

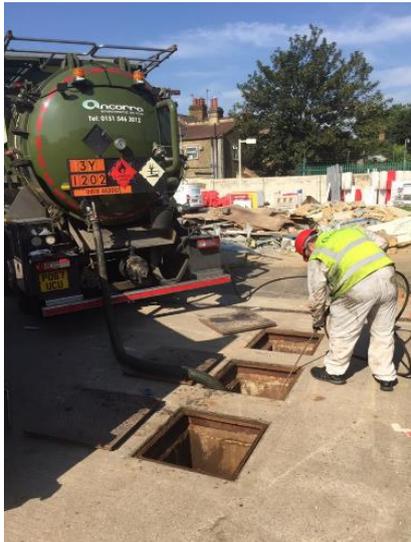
removed. A second excavator then processed all the material and cleared the area. The first 360° excavator then proceeded to remove the shop building. Starting at the end of the building, the roof was lifted off and removed back to approximately five metres in length.

The back wall of the building constructed of brick was then next to be removed. The grab attachment was positioned over the wall and a one-metre high section of brickwork was lifted down; this was repeated. All insulated panels were lifted down in sections and placed in the processing area. Once the roof had been



removed, the side walls of the building were lifted out. The

general waste generated was collected as works progressed. As the mechanical deconstruction of each building progressed, a dust boss was moved along ensuring all areas were covered and no dust was being generated.



Once all the waste had been processed and removed from each building, the slab was cleaned off using a grading bucket. Work could then begin on removing the 2no 10,000 litre oil interceptor tanks. Site investigations found that both interceptor tanks would require pumping out and cleaning, in order to

issue a gas free certificate before removal. Specialist contractors were brought in to ensure both the interceptor tanks were completely empty and thoroughly cleaned. They were also on hand to monitor proceedings throughout the removal process in case of any issues occurring. After being cleaned and given the all clear, the slab directly above the interceptor tanks was broken up and removed allowing for their removal.





An excavator with bucket attachment dug around each interceptor, a breaker attachment was used to break out the surrounding concrete. Once the tanks and concrete had been removed, an inspection of the area was made by the supervisor. Any suspected contaminated ground was also dug out and stored on plastic sheeting. Once all the concrete had been removed, the sides of the hole were battered back, crushed material was placed in the hole and compacted in layers using a twin drum roller.

The remaining hardstanding areas had to be removed next in order to allow access to the main fuel tanks in the ground. The tanks that needed removing were:

- Tank 1 - UGL 65,000l concrete filled
- Tank 2 - Derv 65,000l concrete filled
- Tank 3 - U Derv 15,000l concrete filled
- Tank 4 - UGL 15,000l concrete filled

Investigations showed that the fuel tanks had been filled with concrete, it was not known if the pipework to the dispensers had been cleaned, so before removal

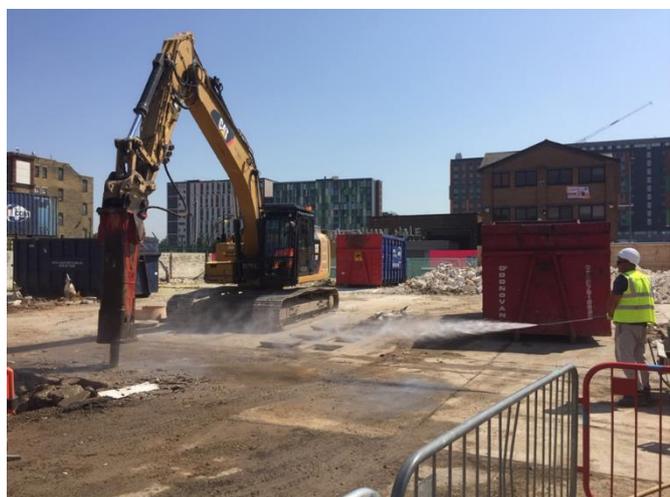


Flushing the fuel lines back to tank



commenced, all the pipework was pumped, washed and given a gas free certificate by the appointed contractor on site. Each tank was dug around and exposed. Using a breaker attachment, a long split was made in the top of the steel tank then a second excavator was used to pull open the top of each tank. A breaker attachment was then used to break up the concrete inside the tank. As works progressed the supervisor monitored the removal.

There was a risk of pockets of gas or fuel within the concrete, so a plan was put in place to ensure that if any was found then work would stop and the decommissioning contractor, who was on standby for the duration of the works, would remove the liquid using the tanker. Once the concrete inside the tanks had been removed, a grab attachment was used to remove each of the steel tanks. These were removed from the working area and cut up using a shear attachment. The breaker attachment was then used to break out the concrete that was under each tank, the second excavator dug out and removed the concrete from the area. Once all the concrete had been removed then the area was assessed by the supervisor. Any liquid or sludge found was pumped out by the standby decommissioning contractor.





During the above processes, the site manager checked for any signs of contamination within the concrete and soil. After the tanks had been removed, the excavations were stepped back in one-metre high sections. Now all the tanks had been removed, the area was backfilled in 150mm layers using crushed material that was imported.

Following the removal of all the hardcore, the site depths were assessed by the client as a reduction in height was required to a depth of 500mm across the site. To do this, an excavator, with grading bucket attachment, started at the furthest point from the main gates - whilst an appointed engineer set out levels across the site. The excavator proceeded to grade off the soil to the required depth across the site. This was then stockpiled ready for removal. The second excavator then proceeded to load the muck into eight-wheel lorries that were controlled by the appointed banksman.

**RESULT:** The site was safely cleared on time and on schedule, ready to hand over to the client for the next stage of development.

To find out more on how Lawson Group can help with your next demolition or asbestos removal project please call 01793 782000, email [estimating@lawsongroup.co.uk](mailto:estimating@lawsongroup.co.uk) or visit [www.lawsongroup.co.uk](http://www.lawsongroup.co.uk)