

CASE STUDY

Works: Soft Stripping,
Knotweed Removal and
Demolition

Sector: MoD



Arborfield Garrison Demolition of Sergeants' Mess & Buildings 69 & 69A, Berkshire

OVERVIEW: Lawson Group would need to soft strip and demolish the old Sergeants' Mess that was built in the 1940s along with Buildings 69 and 69A, otherwise known as Parcel AA.

CHALLENGE: Many areas of this project phase would need to be planned including Site establishment, Termination of incoming services, Tree and vegetation removal to the North boundary, Razor wire removal, Reptile fencing and exclusion zones, Tree protection, Hoarding and Heras fencing, Asbestos removal (separate case study), Soft stripping, Remediation, Deconstruction of Buildings, Processing and crushing of demolition arising's. Lawson Demolition would have to comply with BS5228 in respect to minimum noise levels during the execution of the works.

The presence of knotweed had been identified in a report, so Lawson Group would need to remove this and its spores to eradicate it from the site. A tarmac car park would also need to be constructed as part of this phase of the project.

SOLUTION: As the presence of Japanese knotweed had been identified in a report, this would have to be treated first. Large areas of the ground



were covered in 1000-gauge polythene surrounding the knotweed plants. The same type of polythene was also used to line a waste skip.

An excavator was used to carefully remove all the plants and any



potential spores lying in the soil. All waste was placed in the polythene lined skip which was sealed before removal. All plant and equipment were thoroughly decontaminated following the process. Once this had been completed, the construction of an asphalt covered car park could begin by Lawson Group's team.



Bat boxes were installed nearby as the presence of bats near or within the structures had been identified. Lawson Group's specially trained soft stripping team started removing loose contents from within the structures, including furniture, appliances, loose waste etc. by hand in a controlled manner and arising's managed in accordance with the Site Waste Management Plan. The structure floors were cleared of general waste and debris prior to demolition.



At the same time, the demolition team set about demolishing a garage block in the vicinity but nowhere near the strip out team for safety reasons. For this, Lawson Group used one of its own Cat 365 excavators with demolition attachment. Once the Soft stripping and garage demolition had been completed, then the demolition of the main superstructure could begin.



The scope of works included erecting Heras fencing to segregate demolition activities from the rest of the site, all fencing carried signage warning of the dangers that would affect others entering the demolition zone during structural mechanical demolition.



Utilising a High Reach 360° Tracked Excavator with a hydraulic pulveriser attachment rather than a percussive attachment in order to reduce noise and dust emissions, deconstruction of the Sergeants' Mess main building began, The methodology dictated that a top down process was used, removing timber, steel, concrete roof structures for processing and recycling.

The 360-degree high reach excavator with demolition attachment also commenced deconstruction on the centre of the structure and continued progressively through it. The demolition was carried out in accordance with the NFDC High Reach Guidance bay by bay system, in a methodical manner ensuring the building was stepped back.

Floors were progressively cleared to prevent overloading and the structural integrity of the building was maintained at all times. Work progressed into the structure breaking

down the individual concrete slabs. The cross beams were then removed followed by support pillars. Next, the brick and concrete walls were broken out and allowed to carefully drop onto the lower floors within the footprint of the building.



Arising's generated from the demolition were utilised to form a ramp for the excavators to use as a work platform during the demolition of the plant room and remaining high level lift motor rooms and stairwells.

The ramp was positioned so that it was not placing a load onto any structural walls.

All steel elements of the building were mechanically cut with a hydraulic shear attachment and lowered to ground floor level in a controlled manner.

A second 360° Tracked Excavator, with hydraulic shear attachment, processed the steel and placed it into segregated stockpiles in preparation for loading into the appropriate 40-yard waste bins for management. This was in accordance with the Site Waste Management Plan. Ground floor slabs, foundations, pile caps and hard standings were excavated and removed to a depth of 1.5m.

Water sprays were utilised within the demolition zone to suppress dust during the deconstruction works.

Other appropriate control measures were employed to mitigate the impacts arising from the production of noise, vibration and waste arising's. Also, for the potential safety risks to neighbouring properties and members of the general public using the adjacent footpaths and highways.



RESULT: All concrete hard standings were removed, and all concrete arising's crushed to a 6f2 specification, material permitting. Brick was crushed to a 60mm down crusher run and stockpiled on site. The site was successfully and safely deconstructed ready for the next phase of redevelopment.



To find out more on how Lawson Group can help with your next demolition or asbestos removal project, call Lawson Group on 01793 782000, email estimating@lawsongroup.co.uk or visit www.lawsongroup.co.uk

