



## CASE STUDY

**Works:** Licensed Asbestos Removal

**Sector:** MoD

# Arborfield Garrison (Hazebrouck Barracks Asbestos Removal), Berkshire

**OVERVIEW:** As part of the prestigious project at Arborfield in Berkshire, Hazebrouck Barracks needed licensed asbestos to be removed from five of its buildings. Lawson Environmental (part of Lawson Group) were utilised to carry out this specialist work.

**CHALLENGE:** The following work would need to be carried out:

**Building 44:** Removal of approximately 280m<sup>2</sup> of AIB, 566m<sup>2</sup> of cement cladding and panels, 4.5m<sup>2</sup> of floor tiles, 106LM of well bonded material and 22 gaskets was needed. ACMs were located throughout the building, in insulation boards, cladding and soffits, windowsills, floor tiles, pipe gaskets and skylight upstands.



**Building 54:** Would require removal of 2No asbestos insulation board door header panels from the first and second floor corridors.

**Building 70:** Removal of approximately 340m<sup>2</sup> of contaminated non asbestos ceiling tiles and 340lm of AIB strips to edge of ceilings would be needed.



**Building 71:** This building would need the removal of approximately 712m<sup>2</sup> of contaminated non asbestos ceiling tiles and 712lm of AIB strips to the edge of the ceilings.

**Building 72:** Approximately 120m<sup>2</sup> of contaminated non-asbestos ceilings and 120lm of AIB strips to edge of ceilings would have to be removed.



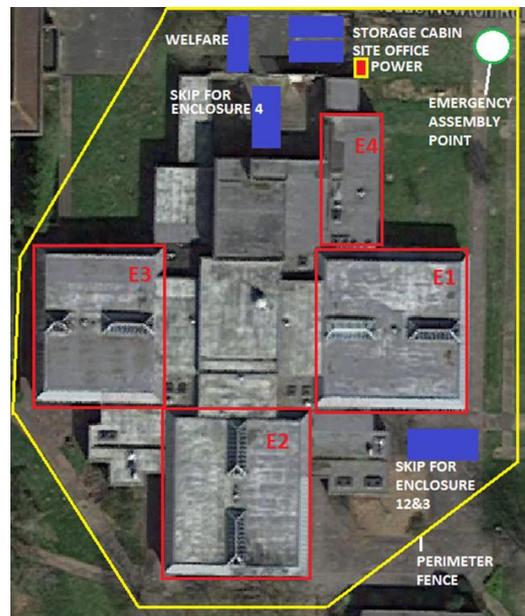
All this would have to take place before any demolition works could commence.

## SOLUTION:

**Building 44:** As all rooms were at ground level, the building was divided into four enclosures, three large and one small. A Decontamination unit (DCU) was directly connected to enclosures one, two and three.

Bag and airlocks were positioned at the furthest point from the Negative Pressure Units (NPU's). Waste and transit routes were made as short as possible to reduce the possibility of contamination. Before any works were carried out, an assessment of the building's interior was carried out by the site supervisor to determine if any areas required a pre-clean before works started.

Operatives, carrying out the removal work, wore red disposable hooded and elasticated coveralls. Safety wellingtons were also worn along with suitable hand protection. A positive powered respirator was also worn during removal works. Blue was worn during the transit procedure and white for all work outside the working enclosure.



The enclosures were formed using existing structural elements of the building and timber framework to which 1000-gauge polythene was fixed. Staples were used to secure polythene sheeting to the timber framework. 75mm polycloth tape and spray adhesive was used on all joints and areas that needed to be sealed. The floor of the enclosure was formed again with 1000-gauge polythene and any joints closed with 75mm tape. A sacrificial sheet of polythene was then used whilst

removal took place. This sheet was disposed of as asbestos waste before any visual inspection or air monitoring was carried out. Vision panels were installed within the enclosure showing all areas and further vision panels were also placed on the third stage of the airlocks and baglocks.

To remove the high up, sloped insulating panels, operatives accessed the area of work via a scissor lift with an extending platform. Once the basket was at the correct height, the operator pushed the extending platform out towards the sloped insulating panels, the operative then assessed the safest method and commenced their removal. The AIB sloping panels were screwed and nailed onto the wall, these were removed using hand tools and cordless drills. The fixings were removed in conjunction with using shadow vacuum procedures (LEV).



After the first panel had been removed the void was vacuumed as far as could be reached without over-extending, then a water and surfactant mix was applied using a handheld manual pump-up spray to the rear face of the next panel and left to penetrate.

Any MMMF insulation in the ceiling void above was sprayed with surfactant and double bagged for disposal as contaminated waste. The panels had been screwed into metal/timber tracking which was removed and disposed of as asbestos waste.

To remove the insulating board ceiling panels and insulating board window reveals, techniques similar to those mentioned above were used.



Insulation board was found between two electrical boxes, so were fully wrapped in 1000-gauge polythene. A sheet of 1000-gauge polythene was then laid on the floor below each box. Each of the electrical boxes were then removed from the wall using small hand tools and lowered carefully to the floor.

They were then double wrapped, sealed and removed to the waste container skip. All surfaces were cleaned using tac rags and an H type vacuum, any waste debris/residues were bagged immediately and also removed to the waste container skip.

**Building 54:** This building, with enclosures and DCU, was set up in a similar way to that of building 44 above. Door header panels on the first and second floor corridors were then removed. Some of the AIB had been screwed and these were all visible. They were removed using hand tools and cordless drills. Other AIB had been nailed on, these were also removed using hand tools. The fixings were removed in conjunction with using shadow vacuum procedures (LEV).



**Buildings 70, 71 & 72:** Again using the same preparation of the building as Building 44, work started on Buildings 70, 71 and 72 to remove the contaminated non-asbestos ceiling tiles and AIB edging strips. The ceiling tiles had also been screwed in but not all screws were visible. These were removed using hand tools and cordless drills. The fixings were removed in conjunction with using shadow vacuum procedures (LEV). The tiles around the perimeter of the ceiling were removed first and the void was inspected for any apertures to adjoining areas and were sealed as necessary. Once the perimeter tiles had been removed, the remaining tiles were removed in a sequential manner.



Once the first of the remaining ceiling tiles had been released, an operative lowered one side in order to make the back of the ceiling tile accessible for decontamination. The back of the tile was carefully vacuumed, prior to carefully applying an application of fibre suppression and then lowered horizontally. The ceiling tiles were then placed into red bags, sealed and put neatly to one side until ready to be removed from the enclosure.

Any MMMF insulation in the ceiling void above was sprayed with surfactant and double bagged for disposal as contaminated waste. Once all ceiling tiles had been removed, the AIB infill strips were sprayed with surfactant and left to soak. Once they had sufficiently soaked, they were removed using shadow vacuum techniques and placed into red bags ready for disposal.



**RESULT:** All the Hazebrouck Barracks buildings were decontaminated, and any ACMs were successfully removed in accordance with regulations. The buildings were then ready for the demolition stage.

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

