

**Building Recording of two
WWII Air-raid Shelters
at
87 Mill Lane,
Wednesfield, Black
Country**

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**Building Recording of two WWII Air-raid Shelters at 87 Mill Lane,
Wednesfield, Black Country**

by
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Summary

Two air-raid shelters located in the garden of number 87 Mill Lane, Wednesfield, Black Country (NGR SJ 9372 0134) were recorded in March 2003 by Birmingham University Field Archaeology Unit (BUFAU) for Pickering Builders Limited prior to their demolition. The shelters were originally constructed by Mr Fieldhouse, who also built the surrounding housing estate. The Fieldhouse family lived in a Bungalow on the site until recently. The first shelter to be constructed was of concrete and styled on the Anderson shelter, with a rounded roof. The second was of brick construction, English garden wall bond, a single brick thick, with a reinforced flat concrete roof. Both had traversed entrances to protect the occupants from blast, and chimney-style emergency exits to the rear. Both were of good quality materials which is suggestive of an early date, and were examples of quality workmanship.

1.0 Introduction

This report describes the results of building recording carried out on air-raid shelters situated in the grounds of a former bungalow at 87 Mill Lane, Wednesfield, Black Country (hereafter referred to as the site). Birmingham University Field Archaeology Unit (BUFAU) undertook the work reported on here in March 2003, on behalf of Pickering Builders Limited.

In accordance with the guidelines laid down in Planning Policy Guidance Note 15 (DoE 1990), a recommendation for a programme of archaeological work to accompany a planning application was made by the Black Country Archaeological Officer. The archaeological work was undertaken following consultation with the Black Country Archaeologist for the Local Planning Authority.

1.1 The site and its setting

The site is situated on the northwestern edge of Wednesfield, just off the principle Wolverhampton-Cannock road (A460, Fig. 1). The plot in which the shelters were situated was the largest plot fronting on to Mill Lane (Fig. 2). It was originally owned and developed by Mr Fieldhouse, who also laid out and built the surrounding housing estate (pers. comm. Ray Pickering). His widow continued to occupy the property, which was a large bungalow, until her recent death. The bungalow has subsequently been demolished.

The shelters were situated to the rear of a large double garage, which shielded them from view from the road (Plate 1). A later garage/carport incorporated the shelters into its build and they were latterly used for storage.

1.2 Aims

The primary aim of the survey was to record the structures prior to demolition.

2.0 Methodology

The structures were recorded by plans and details of elevations (at 1:20), supplemented by monochrome and colour print, and colour slide photography.

3.0 Results

Two semi-sunken air-raid shelters occupied the site (Fig. 3), the first was a concrete shelter, and the second was brick-built. Both were constructed using a cut and cover technique whereby a large hole was excavated, the shelter was constructed and then the earth banked back over the structure (Plate 2). The spoil which covered both of the shelters on site was a mixture of the underlying natural orange clay and top soil.

Concrete Shelter

The air-raid shelter was constructed wholly from reinforced poured concrete which was 0.2m thick. It measured c.3.6m in length, was nearly 2m wide, and 1.9m high internally (Plates 3 and 4). The shelter had a rounded roof similar in design to the Anderson Shelter, this was designed to deflect blast as well as bombs. A rectangular, chimney-like, emergency exit (0.72 x 0.6m, Plate 5) was built into the roof at the rear of the structure. There was no evidence for a permanent ladder, and so there was probably a wooden one which would have been lashed to the top of the opening, and the covering hatch did not survive in-situ. Internally the concrete had been wiped prior to it setting fully which gave a well finished surface which had been painted. There was evidence for horizontal wooden shuttering on the outside of the shelter. Internal fittings included a central electric light and there was a fuse box to the right of the door (Plate 6). To the left of the door was a shelf made using three steel rods, which were part of the original build of the shelter.

The shelter was entered down a flight of five steps and along a short corridor which was perpendicular to the shelter itself, a traversed entry, which was designed to give protection from blast (Plate 7). The walls here had also been well finished, and the concrete at the entrance had been moulded to include a door jamb. The western blast wall and part of the roof over the entrance had been removed when the garage was built, however, they were still visible as scars in the elevations (Fig. 4).

Brick-Built Shelter

A second shelter had been constructed adjacent to and abutting the air-raid shelter (Figs. 5 and 6). This bunker measured 3.4m in length, was 2.4m wide and 2m high internally (Plates 8 and 9). It was brick-built with walls of single brick thickness in English garden wall bond (Plate 10). The bricks were a mixture of good quality red brick mixed with occasional engineering bricks. The roof, which was flat, was of poured concrete (0.14m thick) and evidence for wooden shuttering was visible internally. Three beams had been built into the structure, they would not have supported the roof, and were probably used to hold the shuttering in place. A square

emergency exit (0.66 x 0.66m) was situated to the rear on the south side of the structure. The hatch had remained in-situ (Plate 11) it had a vent which could be opened from the inside. Once again there was no evidence for any permanent method of escape.

Similar to the concrete shelter the blast wall was perpendicular to the entrance of the bunker. The door lintel was pre-formed reinforced concrete, which were also used in the ceiling at the base of the stairs. Above the pitch of the stairs the ceiling was poured concrete over wooden shuttering.

One of the main problems with shelters that are semi-sunken, is their propensity for flooding. Although the concrete shelter was partially flooded, this was probably due to a combination of the absence of a hatch which had stopped rain from getting in to the brick shelter, and the amount of rubbish in it. The amount of water was small, suggesting that the original drainage system was still working to some extent.

4.0 Discussion

Following air raids made during the First World War, and the development of better aircraft and bombs, the Air Raid Precautions (ARP) committee was created in 1924 to safeguard civil defence (Brown 1999, 1). In 1937 the Air Raid Precautions Act was passed which compelled local authorities to provide protection from air raids and gas attack for the local civilian population (Burrige 1997, 61). The most common type of shelter was the ubiquitous *Anderson shelter*, the first of which was produced by the end of February 1939 (Dobinson 2000, 61), their corrugated steel shells can still be seen rusting away in many gardens today. A governmental memo dated to 1948 revealed that somewhere in the region of 2.5 million Anderson shelters were issued during the *approach* to war (ibid, 105). They were given out free to those on low incomes, and sold to those who earned over £250 per annum (Lowry 1999, 66). Anderson shelters were designed only to protect their occupants from blast, and debris, not a direct hit, although tests had shown that they could withstand the collapse of a two-storey building.

By the end of May 1939 the *domestic surface shelter* was provided as an alternative to the Anderson. They were constructed, by local councils, where neither the Anderson shelter or reinforced cellars were possible. Designed to accommodate the same number of people, they were also available for free to the same low-income group as the Anderson. However, they were often much bigger, although the original specification remained the same. The recommendations were that the walls be c.0.34m thick, cement concrete reinforced lintels should be employed over the entrance, and the roof should be c.0.13m thick, again of reinforced concrete (Dobinson 1999, 61).

Shelter construction was at its peak in Britain during the immediate pre-war period, with more appearing in response to heavy bombing by the Luftwaffe during the Blitz in the autumn and winter of 1940-41. Across the country many factories and foundries were given over to the production of munitions and war material. The industrial nature of the Midlands meant that there was a concentration of these so-called *arms towns* and this made the region a major target for bombing raids.

Wednesfield was in deed known to, and targetted by, the Luftwaffe, as a German bombing map dating to 1939 reveals (Fig. 6), the site at Mill lane lies just off the map to the northwest.

As well as those shelters which were provided by the state, many others were built privately by individuals, to their own unique specification and design. This is the case with the examples recorded at Mill Lane. The first air-raid shelter, of concrete, was obviously styled on the Anderson shelter. However, it was much more spacious, being twice the length and half as wide again as a standard Anderson. Space was not the only luxury that the occupants of this particular shelter enjoyed, shelters with their own electricity supply were certainly not the norm. The brick shelter may have been based on the *domestic surface shelter*, but was semi-sunken. Both were constructed c.4 feet below ground surface level, exceeding government recommendations of 3 feet.

Both the concrete and reinforcing bars in the concrete shelter were good quality which suggests that it was constructed early in the war effort as these commodities began to run out quickly. The same can be said regarding the use of wooden shuttering, wood was also in short supply and permanent brick shuttering, using low quality bricks, was employed latterly. The brick shelter was constructed using good quality bricks, which is again indicative of an early date. One of the crucial points when discussing the materials employed in the shelters is that we are actually looking at structures that were built by somebody in the trade. Somebody who could obtain these types of materials and who also had in his employment the manpower with the ability and knowledge to build, and build well, such structures. It is perhaps no wonder then that both shelters displayed signs of workmanship and no lesser amount of capital. The designs are interesting in that governmental guidelines have been followed, but they have been improved upon. These shelters were the height of luxury compared to most, being spacious, relatively dry (certainly not flooded), and with piped electricity.

The last great air strike that the Midlands was to endure took place on May 16 1941 (Anon 1942, 88). With the launch of Operation *Barbarossa* against the Soviet Union, German air raids over Britain dwindled. In Birmingham at the end of 1942 the total number of civilian dead was estimated at over 2,000, from an estimated 1050 enemy aircraft (ibid, 87). Without air-raid shelters such as those described above this figure would undoubtedly have been far worse.

5.0 Acknowledgements

The project was commissioned by Pickering Builders Limited. Thanks are due to Ray Pickering for his help throughout the project. Thanks are also due to Mike Shaw who monitored the project for the Local Planning Authority. Work on site was carried out by Edward Newton, Kirsty Nichol who also produced the written report which was illustrated by Nigel Dodds.

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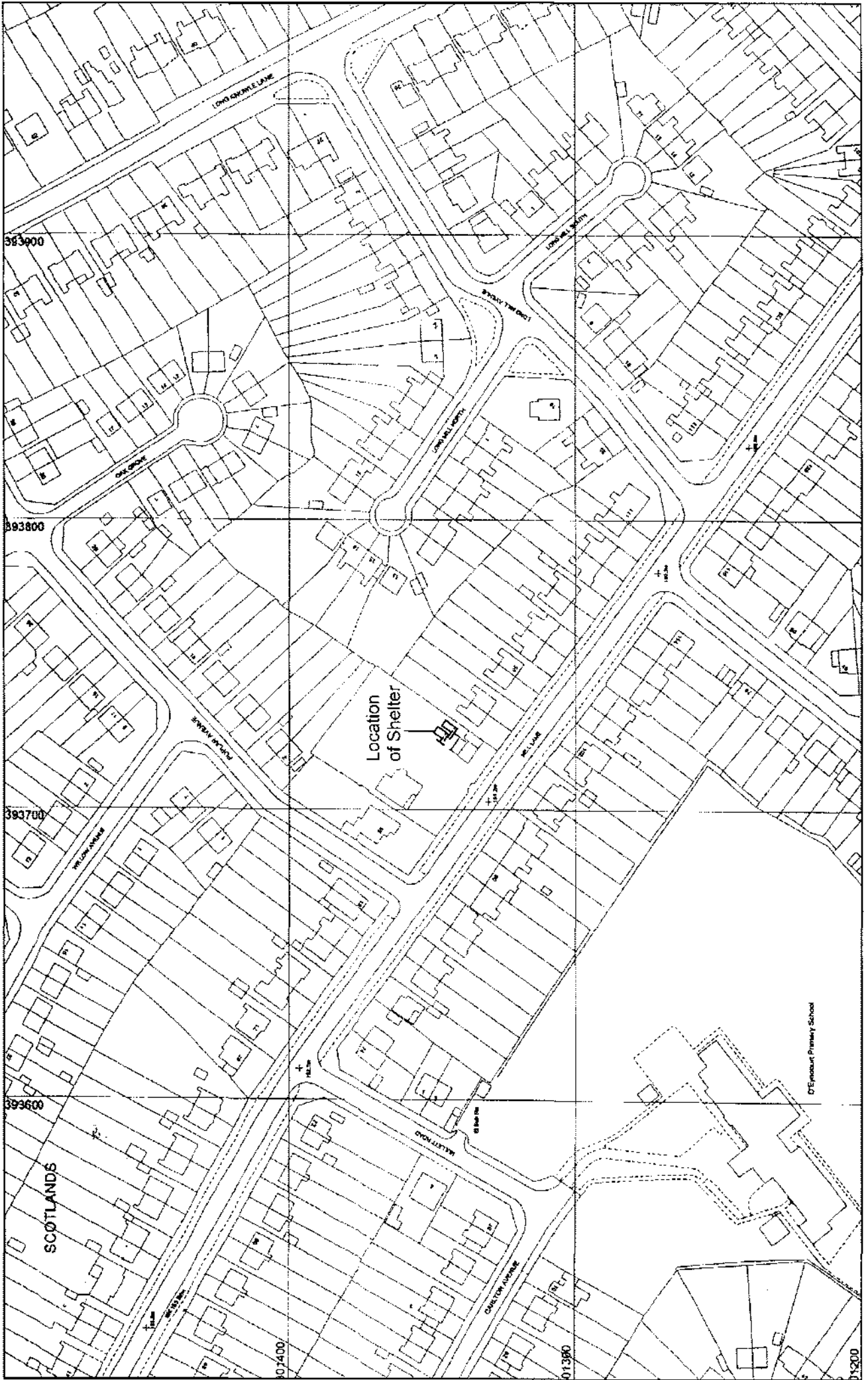


Fig 2

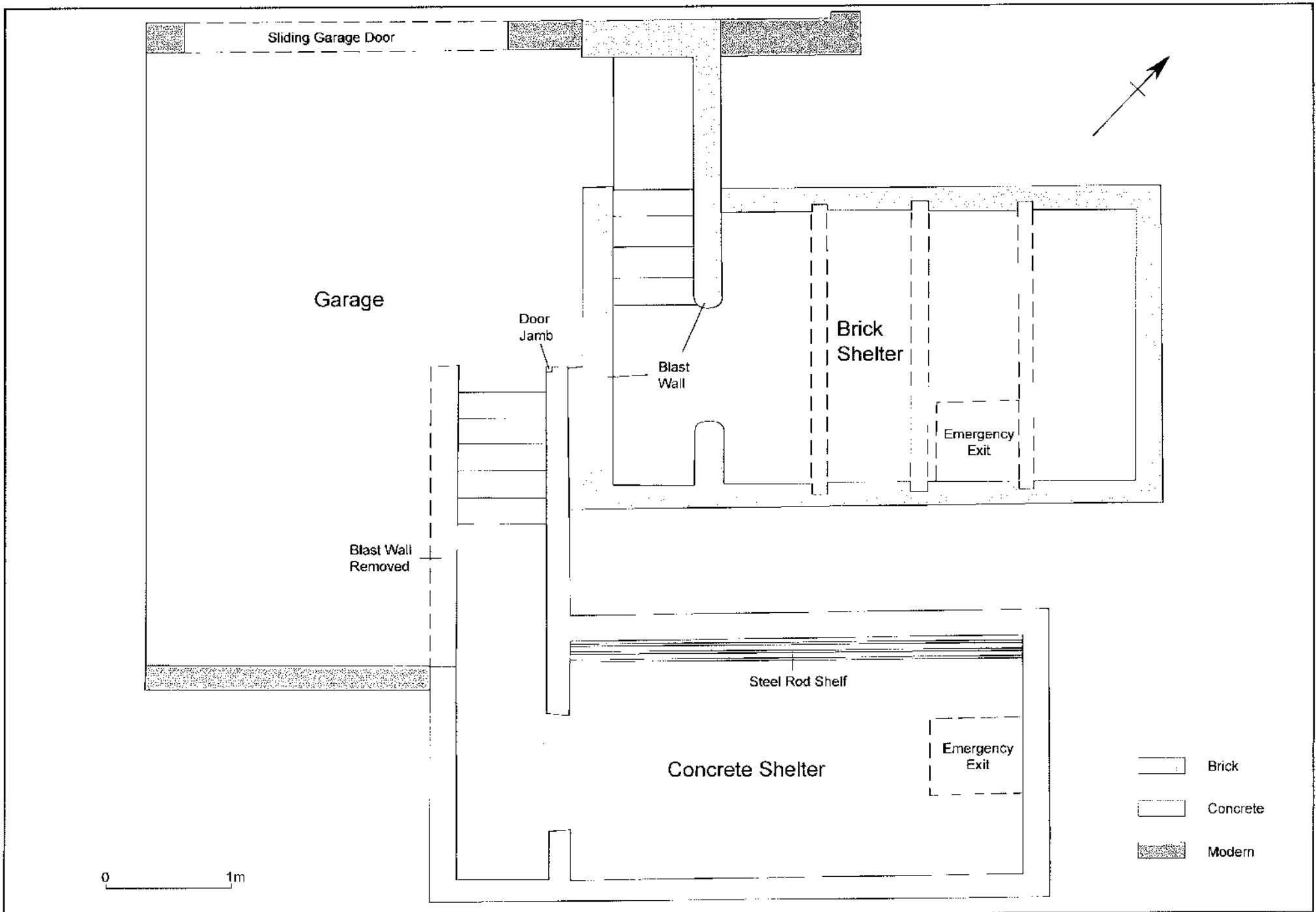


Fig.3

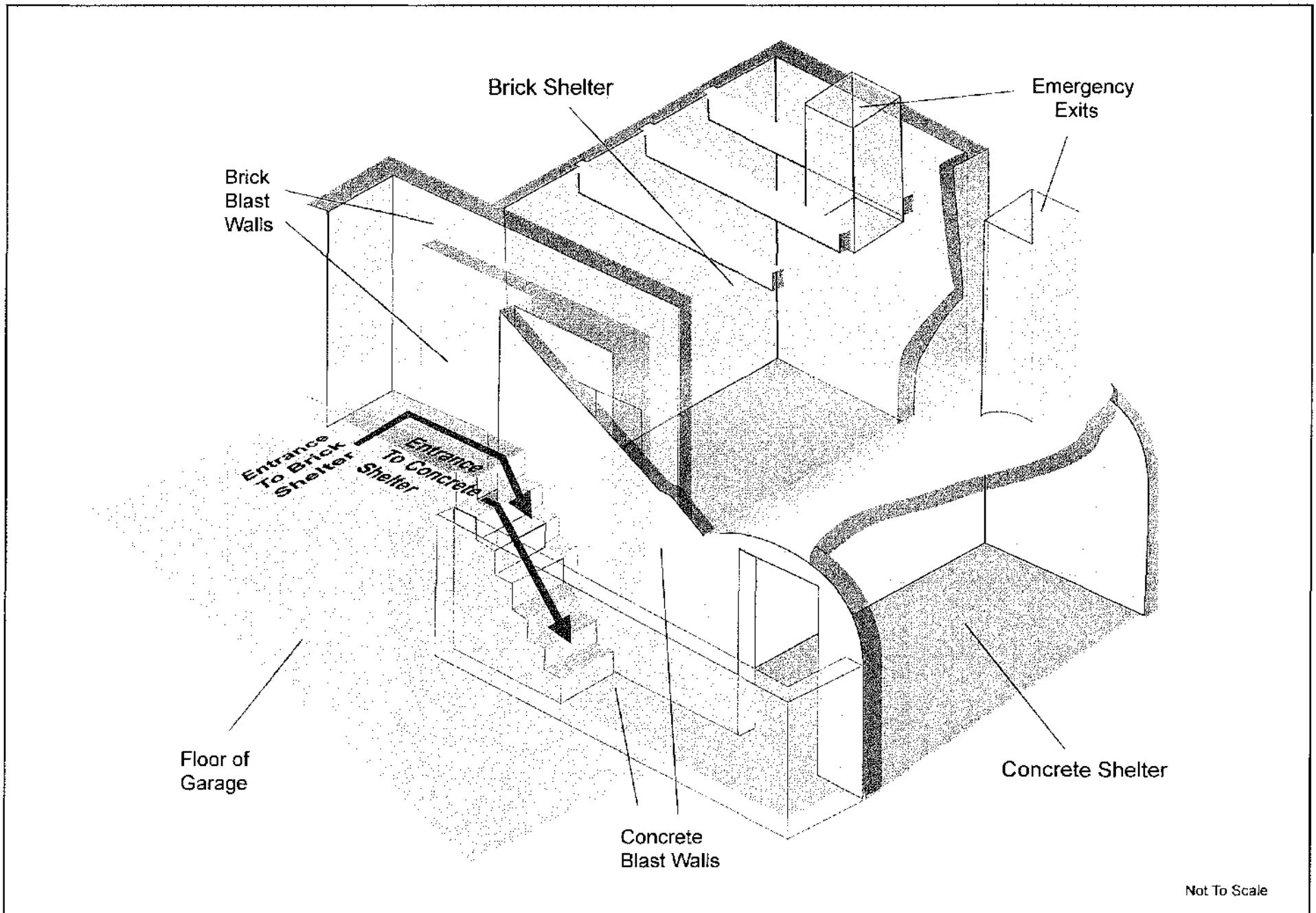


Fig.5



Plate 1



Plate 2

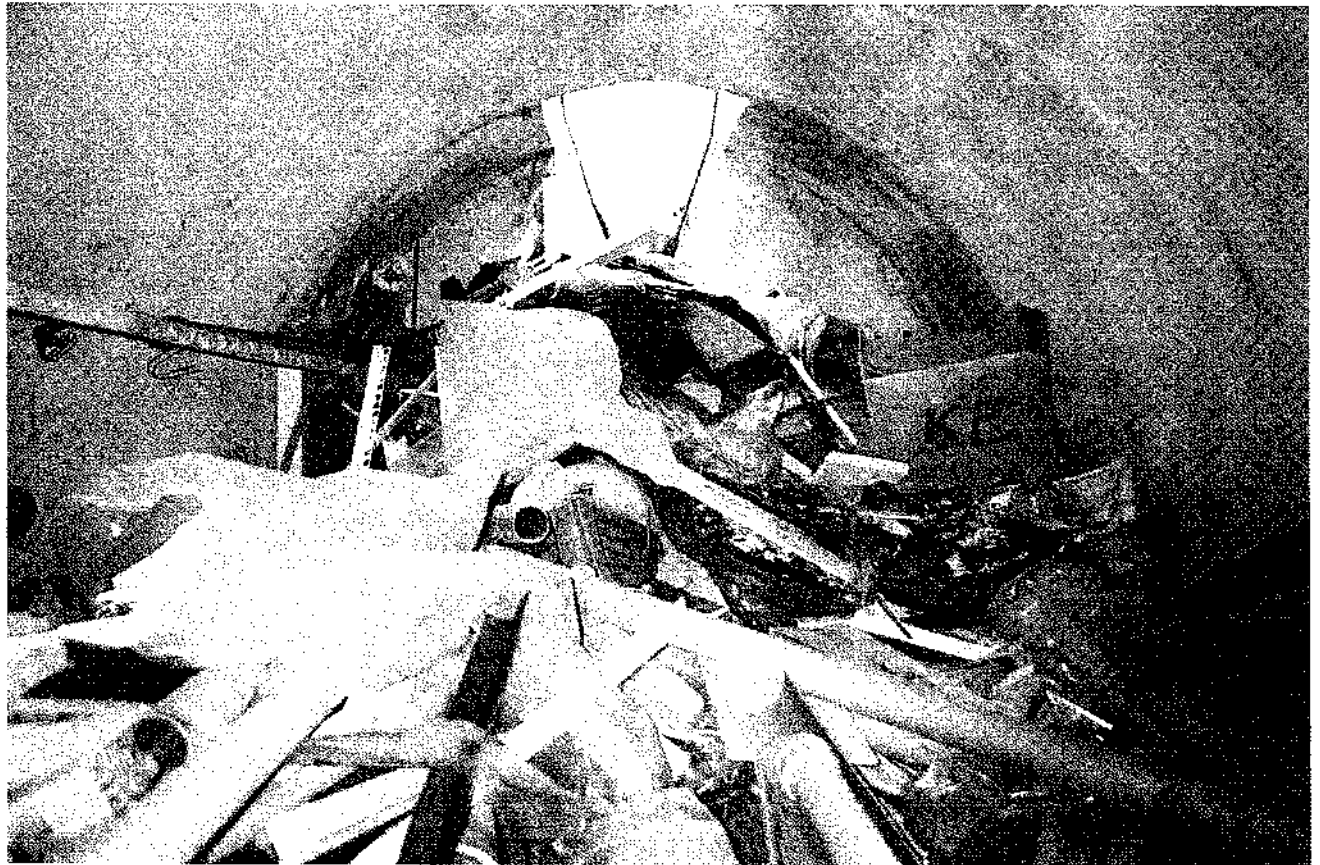


Plate 3

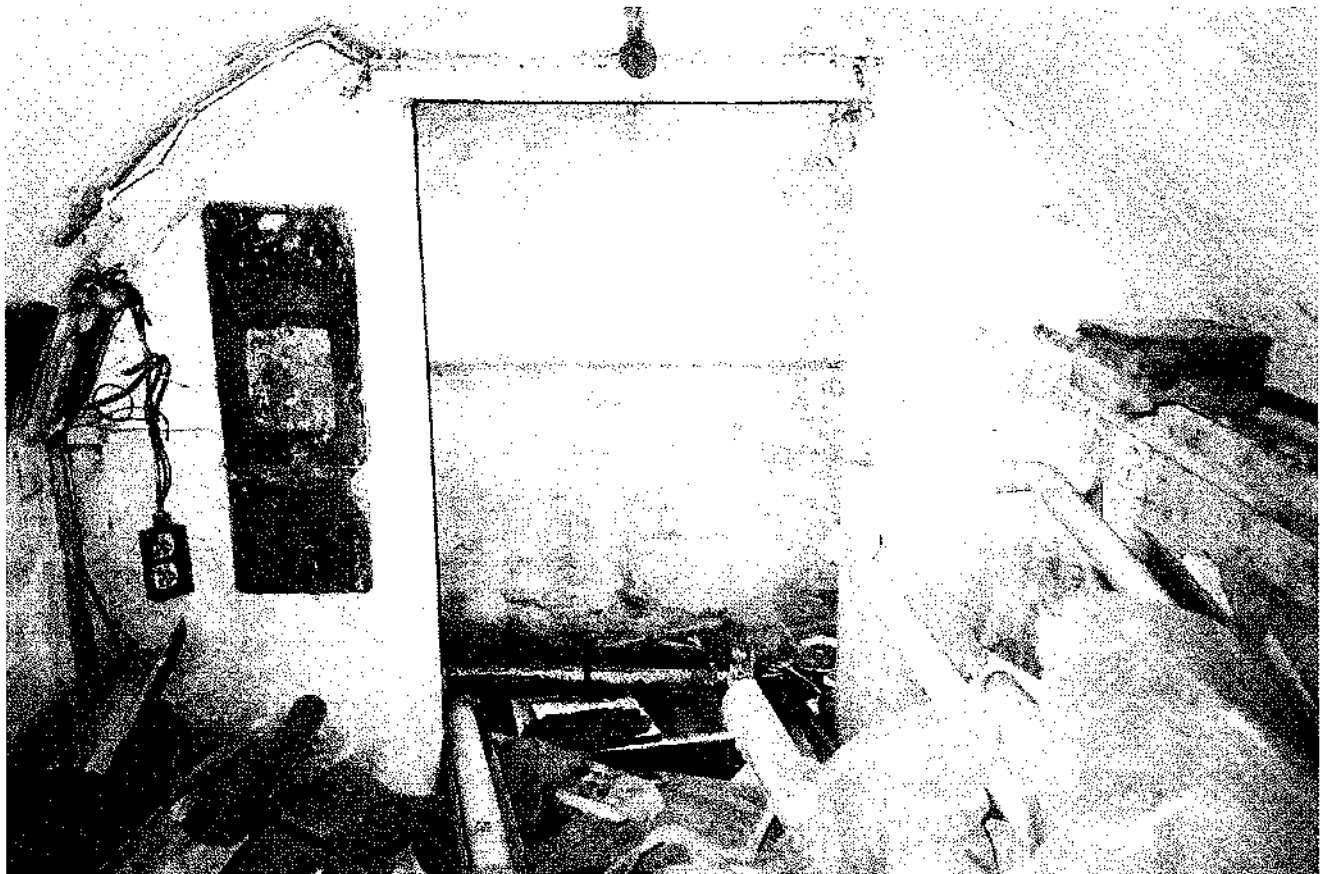


Plate 4



Plate 5

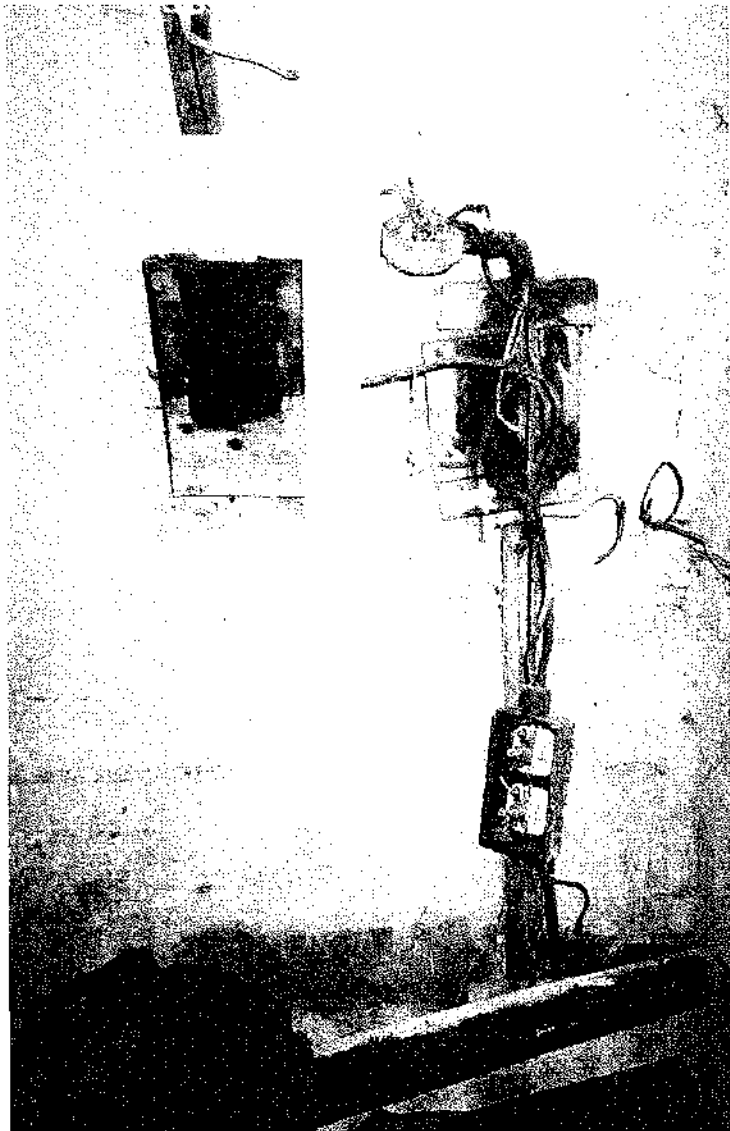


Plate 6



Plate 7

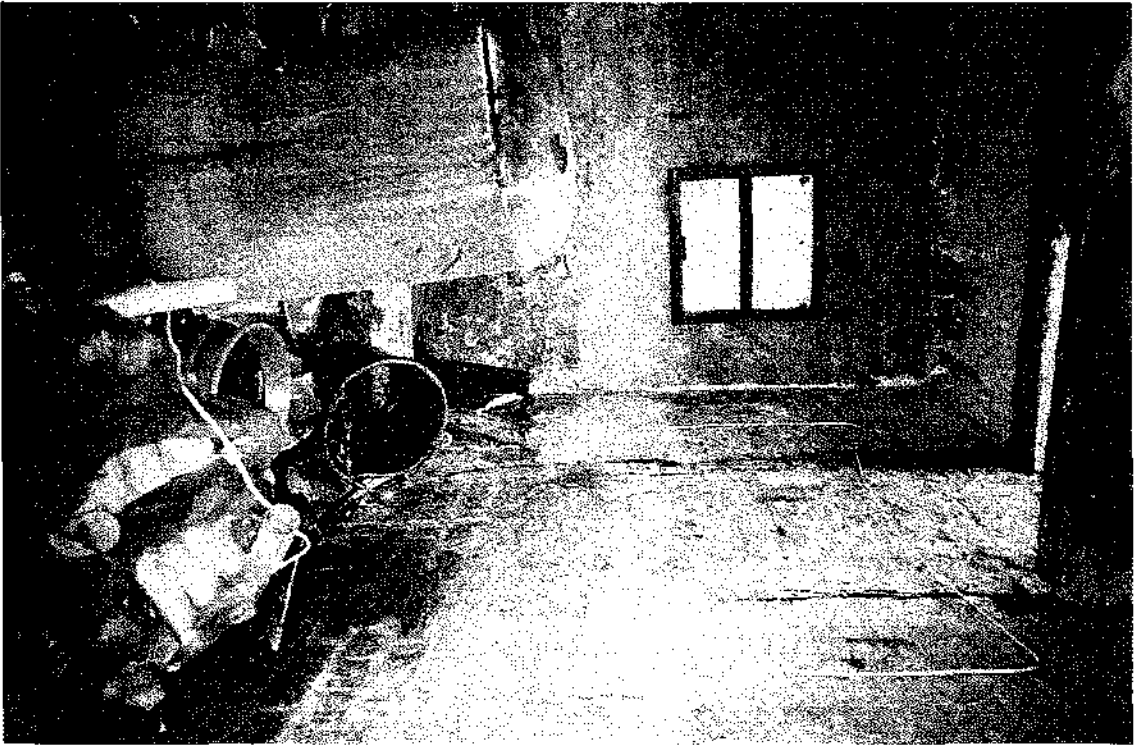


Plate 8



Plate 9



Plate 10



Plate 11