

ANDERSON BOMB SHELTER from WWII in Britain



The ANDERSON SHELTER was designed in 1938 by William Paterson and Oscar Carl Kerrison in response to a request from the British Government Home Office.

It was named after **SIR JOHN ANDERSON**, then **Lord Privy Seal** with special responsibility for preparing air-raid precautions immediately prior to the outbreak of World War II, and it was he who then initiated the development of the shelter.

ANDERSON SHELTERS were designed to accommodate up to six people. The main principle of protection was based on curved and straight **galvanized corrugated steel panels**. Six curved panels were bolted together at the top, so forming the main body of the shelter, three straight sheets on either side, and two more straight panels were fixed to each end, one containing the door—a total of fourteen panels. A small drainage **sump** was often incorporated in the floor to collect rainwater seeping into the shelter.

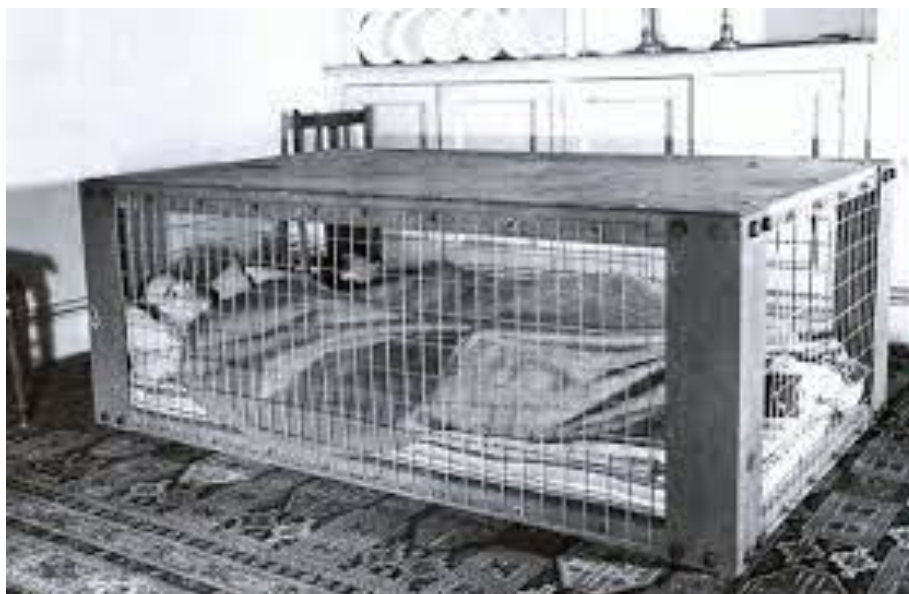
The shelters were 6 feet (1.8 m) high, 4.5 feet (1.4 m) wide, and 6.5 feet (2.0 m) long. They were either buried 4 ft (1.2 m) deep in the soil and then covered with a minimum of 15 inches (38 cm) of soil above the roof or in some cases installed inside people's houses and covered with sandbags.

When they were buried outside, the earth banks could be planted with vegetables and flowers, that at times could be quite an appealing sight and in this way would become the subject of competitions of the best-planted shelter among householders in the neighbourhood. The internal fitting out of the shelter was left to the owner and so there were wide variations in comfort.

Anderson shelters were issued free to all householders who earned less than £5 a week (equivalent to £320 in 2020, when adjusted for inflation). Those with a higher income were charged £7 (£440 in 2020) for their shelter. One and a half million shelters of this type were distributed between February 1939 and the outbreak of war. During the war a further 2.1 million were erected. Large numbers were manufactured at John Summers & Sons ironworks at Shotton on Deeside with production peaking at 50,000 units per week.

The Anderson shelters performed well under blast and ground shock, because they had good connectivity and ductility, which meant that they could absorb a great deal of energy through plastic deformation without falling apart. (This was in marked contrast to other trench shelters which used concrete for the sides and roof, which were inherently unstable when disturbed by the effects of an explosion – if the roof slab lifted, the walls fell in under the static earth pressure; if the walls were pushed in, the roof would be unsupported at one edge and would fall.)

However, when the pattern of all-night alerts became established, it was realized that in winter Anderson shelters installed outside were cold damp holes in the ground and often flooded in wet weather, and so their occupancy factor would be poor. This led to the development of the indoor MORRISON SHELTER. At the end of the war in Europe,



households who had received an Anderson shelter were expected to remove their shelters and local authorities began the task of reclaiming the corrugated iron. Householders who wished to keep their Anderson shelter (or more likely the valuable metal) could pay a nominal fee.

ALTERNATE DESIGN



DIY CONSTRUCTION

ONLY USED ONCE

