

# Nuclear war toll underestimated

# Imated

Andrew Veitch, **Medical Correspondent**  
 The Government has seriously underestimated the number of people who would be killed in a nuclear attack, according to research published by the Home Office last night.  
 Ninety per cent of people in ordinary brick houses would be killed by a pressure of 9.6-12 pounds per square inch (psi) from a single one-megaton bomb. According to previous Government figures, the blast would have had to produce a pressure of 30psi to kill the same proportion.  
 The report does not deal in numbers of deaths, but it shows that the old calculations, based on second world war data, were wide of the mark: blast from nuclear

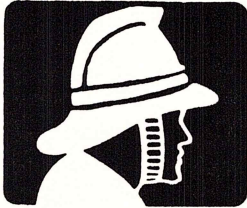
weapons will be far more deadly than that from TNT.  
 But it appears to have had an effect on Government planning. The Home Office said last night that eight authorities had started on a pilot project earlier this summer to identify communal bomb shelters.  
 It named them as Cheshire, Dorset, Hertfordshire, Kent, Oxfordshire, North and West Yorkshire and the London Borough of Kensington and Chelsea.  
 The shelters, in such places as flyovers and car parks, basements would have to be habitable for up to 14 days with 1.4 square metres of floor space for each person.  
 "The results of the review can be used for analysing shelter requirements and improving

civil protection in time of war," the Home Office added.  
 "Local authorities are being encouraged by the Home Office to carry out surveys of potential communal shelters in their areas and other Home Office studies have looked at a range of shelter types which can be fitted into houses."  
 The British Medical Association's report on the effects of a nuclear war prompted the Home Office to do its sums again — this time based on data from Hiroshima and US government assessments.  
 The results still underestimate the effects of an attack, say the report's authors, Dr S. Hadjipavlou and Dr G. Carr-Hill, of the Home Office's scientific research and development branch. They take no

account of deaths in high-rise flats, nor of the combined effects of several bombs dropping at once. They deal only with the effects of blast — not heat or fall-out.  
 If the walls of a house survive the blast, debris will be the biggest hazard, say the scientists in their report. "Blast waves will enter buildings causing household items to be displaced, and internal partitions, window frames, doors etc. to fail and become missiles."  
 Their views are clearly embarrassing for a government wedded to the principle of "protect and survive", which may explain why the report carried a disclaimer that the views expressed are not necessarily those of the Home Office.

BASED on last year's scientists Against Nuclear War computer exercise, four of five fire-fighters in Strathclyde could be killed or incapacitated by a nuclear attack.  
 This would leave around 600 active personnel able to carry out fire-fighting duties. Their effectiveness would, however, be doubly limited. Firstly, those who survived would be unable to move out of their homes because of killing radiation for at least 48 hours after the attack — yet this would be the time when fire-fighters would be destroying built-up areas.  
 The Government recognises this in its circular "War Emergency Planning for the Home Office" and the Scottish Home and Health Department states: "... In the period immediately following nuclear attack, it is envisaged that fire-fighting would be undertaken only when the return is expected to be worthwhile and the survival of organised fire service resources would be prejudiced. Planning should therefore be directed towards the preservation of the service for its role in the later survival period."  
 Secondly, most of the sur-

## FIRE



survivors would be in rural areas but it is in these sparsely populated areas that sophisticated fire-fighting equipment is least available.  
 In the city and the built-up areas, those fire-fighters who survived would find that there was no water to tackle fires.

EVERY day Strathclyde supplies 250 million gallons of water to consumers. Most of the water comes from surface areas, including small local reservoirs mainly in country areas.  
 Among the largest are Loch Katrine, Loch Lomond and the Daer Valley scheme in the very south of the Region.  
 Unlike other parts of the United Kingdom, Strathclyde gets very little of its water from rivers through purification schemes, or from boreholes.  
 This has advantages and disadvantages. In time of peace Strathclyde water is about the purest in Britain. But in times of war it could be easily con-

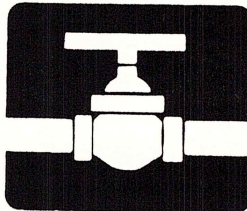
## WATER



taminated by radio-active fallout.  
 The prevailing wind in Strathclyde is from the south-west and nuclear attacks on Hunterston Nuclear Power Station, the Faslane complex and on government facilities

around the Solway Firth could rapidly contaminate and poison the main water supplies.  
 Particularly to the north of Glasgow, water pumping stations and pipelines could also sustain severe damage which would prevent even poisonous water being used for fire-fighting.  
 The Government recommends that families should store enough water for 14 days — this is equivalent to 3.5 gallons for each person.  
 Survivors suffering from radiation sickness, untreated injuries and problems caused by unhygienic living conditions would need double that amount of water.

## SEWERAGE



EVERY day in Strathclyde around 240 million gallons of sewage pass through the sewers system.  
 There are around 4,500 miles of public sewers in the Region along with 142 sewage works and 173 pumping stations which carry sewage from low-lying areas.  
 In the nuclear attack forecast by SANA these systems would be badly hit. The two main sewage works at Dalmeir and Shieldhall and many of the

smaller ones would be put out of order.  
 Many water pipes are laid close to sewers. If the sewers burst, they could contaminate drinking water remaining in the pipes and it is unlikely that enough of the 1,100 staff in the Sewerage Department would remain alive to be able to cope with the special problems for many months or even years.  
 At the same time, the attack would allow sewage to come to the surface and lead to various epidemics.

Rats and other creatures which inhabit the sewers would also be driven to the surface, carrying many bacteria and viruses which would cause disease.  
 These creatures are more resistant to radio-activity than humans and would spread the epidemics.  
 They could infect domestic pets and owners would be advised to destroy dogs, cats and other creatures as soon as possible.

Recent circular to local authorities, the Scottish Home and Health Department make it clear that changes had occurred in strategic thinking, that preparations should be made for conventional as well as nuclear attacks and that the amount of warning of an impending attack might be measured in days rather than weeks.  
 "For planning purposes", states the circular "it must now be assumed that there may be as little as seven days' warning of an attack; the basic essentials

of plans should be capable of implementation within 48 hours."  
 Staff would be briefed on their roles before and after an attack.  
 The public would be requested to stay at home and warned that there would be no food or medical supplies provided if they moved away.  
 A major public information programme would begin and Government pamphlets "Protect and Survive" and "Domestic Nuclear Shelters" would be distributed.

People would be urged to use domestic shelters either in their garages or in their homes.  
 "Protect and Survive" advises the construction of a "fallout" room in the innermost part of houses as well as a basic shelter inside this room.  
 Everyone would be instructed to stay inside the basic shelter for 48 hours after the attack and not to leave the fallout room for 14 days after the attack.