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**UK Civil Defence and
Nuclear Weapons
1953 – 1959**

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Executive Summary:

Less than four years after the May 1945 disbandment of the UK's civil defence services, new threats from the Eastern Bloc led to the Civil Defence Act (1948). The new Civil Defence Corps eventually recruited over 300,000 men and women but, like the Auxiliary Fire Service and National Health Service Reserve, the number of volunteers never reached the totals required for what successive UK governments agreed were essential components of UK deterrent policy. Progress was very slow with the necessary range of home defence measures, in particular shelters, evacuation planning and the stockpiling of essential materials. Following the December 1954 Strath report *The Defence Implications of Fall-Out from a Hydrogen Bomb*, the Government acknowledged the vastly increased problems presented by radioactive fall-out from thermonuclear weapons. Further, these more powerful weapons were now likely to be targeted not only on UK cities but also on nuclear bases in rural areas.

A review of home defence in 1955 recommended spending more but the extreme budgetary stringency of the time reduced defence, and particularly civil defence, expenditure meanwhile the prospect of the end of National Service in 1960 compounded home defence manpower problems. Political and public concern at the effects of fall-out, not least from atmospheric testing, caused the Government to question its own testing and contributed to the growth of the anti-nuclear movement in the UK. Although successive administrations asserted that civil defence measures were an integral part of deterrent policy, not least in steadying public opinion in a period of tension, reduced CD expenditure caused Whitehall, by February 1960, to conclude that the Government could not show that they had a coherent and reasonable home defence policy.

UK CIVIL DEFENCE AND NUCLEAR WEAPONS 1953 - 1959

Introduction

Civil Defence (CD) – the passive measures to protect the civil population from the effects of modern weapons in a future war – was profoundly affected by developments in the international nuclear arsenal in the period 1953-1958. By 1953, just eight years after the United Kingdom CD organisation had been disbanded, a new national CD organisation comprising a Civil Defence Corps, a new Auxiliary Fire Service and a National Health Service Reserve had been raised and trained to, it was hoped, deal with the atomic weapons then possessed by the Soviet Bloc. Although serious shortcomings were acknowledged in the manpower and equipment of the CD organisation, successive UK governments maintained that Civil Defence was ‘an essential, integral and continuing part of defence preparations for any future war.’¹ However, the development of thermonuclear weapon between 1952 and 1958 caused UK governments and the British people to question not only the value of CD as an, admittedly secondary, element of UK defence policy but also to question the morality of nuclear weapons themselves. The UK carried out its first nuclear test (*Hurricane*) in October 1952 and its first thermonuclear weapons in 1957, some years behind the USA who had tested their 10 MT device in the same month as the UK 25kT *Hurricane* test. Nevertheless, in 1957, the UK joined the USA and USSR in the H-bomb club. But thermonuclear weapons were so much more powerful than atomic weapons that the likely effectiveness of any affordable level of civil protection for the British public had to be questioned. Nevertheless UK CD was continued until 1968 when, following the November 1967 sterling crisis, most components of the civil defence organisation were reduced to a care and maintenance basis.

This paper summarises, in a chronological form, the evolution and implementation of Home Defence policy - that is civil defence across the wider field of Whitehall Civil Departments in the period from 1953 to 1959. Extensive unedited quotations from original documents are used and frequent references are made to the civil defence policies successfully operated from 1935 through to the end of the Second World War. These are included not least because the policies evolved and implemented for twenty years from 1948 were heavily influenced by the then very recent Second World War precedents and the lessons learned. Further, the politicians and senior civil servants making and implementing policy in the 1950s and 1960s were often those who had dealt with civil defence from 1935. Together with most of the adult UK population they had experienced, and often had been directly involved in, the generally successful measures which had been operated across the country when civil defence measures had been everyday Home Front routine for six long years. The end of the war in 1945 brought the rapid closure of a nationally directed but locally organised Civil Defence organisation which had generally worked very well – but, of course, only against the threats then faced.

The Second World War UK Home Defence Experience

The post-war Berlin crisis heralded the onset of the Cold War and brought new threats to the UK’s civilian population. It led to the Civil Defence Act of 1948 which

¹ Cmd 9075 *Statement on Defence 1954*.

established a new national civil defence organisation along the lines of the successful wartime model - so this paper first considers the lessons learned from that then recent war, namely:

a. The Value of Civil Defence. Contrary to the firmly held beliefs of many in the late 1930s, the Air Raid Precautions (later Civil Defence) measures taken provided a significant degree of protection to the UK civilian population. Although 60,595 UK civilians died (29,890 of them in the London Region) as a result of enemy action and another 86,182 were seriously injured², many more casualties would have been suffered without the ARP measures taken and the performance of the ARP Services raised, trained and operated by local authorities under the overall control and direction of the Regional System of Government. Not only were casualties minimised by such dispersal measures as shelter and evacuation, but previously poorly planned post-raid services, such as care of the homeless and emergency feeding arrangements, proved to be essential. Wartime regional organisations were appointed rather than elected, so the organisation was disbanded at the end of the war.

b. Central Control The advantages of the central control of local Services by the Ministry of Home Security, through the Regional Commissioners, were acknowledged by all, even by the local government associations who had originally firmly resisted the imposition of this third level of government inserted between Whitehall and the Town Halls. Most Councils co-operated but the threat of imposing a Ministry official and surcharging elected members was threatened although used against only one wartime local authority.³ This device was again used the 1950s when Coventry and then St Pancras Councils refused to implement Government civil defence policy. Wartime Regional Commissioners quickly and efficiently dealt with London's problems of homelessness, shelters and debris clearance – the latter task using members of the armed forces.⁴ Further, nationalisation of the 1,600 separate fire brigades across the country into the National Fire Service (NFS) in August 1941 increased efficiency, standardised drills and equipment and made best use of experienced senior officers. The brigades were not returned to local authority control until 1948, and then, outside London, to the County and County Borough authorities corresponding to the NFS Fire Force areas. If local authorities were to be given such important local responsibilities, central government had to retain effective control.

c. Mutual Support Almost regardless of the claimed adequacy of the ARP measures provided for the civilian population, there could have been no prospect of providing sufficient resources of trained manpower and equipment in every potential target area so 'mutual support' from less threatened areas was provided to those areas needing it. The ARP Services were raised, trained and controlled by their local authorities but direction from the Regional authorities enabled effective mutual support within and between regions. Within the regions mutual support, controlled by the Regional HQ, was available when needed thus, when the blitz proper on London opened on 7th September 1940, reinforcements were

² T H O'Brien *Civil Defence The History of the Second World War*, Civil Series HMSO (1955) Appendix 2 p.677. In addition to these casualty figures, another 151,000 were slightly injured and 167,000 treated at First Aid Posts

³ The Metropolitan Borough of Stepney was the only UK local authority that had its ARP responsibilities removed although such action was threatened in the case of West Ham. See Robin Woolven 'The London Experience of Regional Government 1938-1945' *The London Journal* Vol. 20 No.2 (2000)

⁴ A force of 16,000 civilians and 10,000 military pioneers were used on the clearance of bombed sites and blocked roads, a further 3,000 Royal Engineers assisted with road repairs. Regional Commissioner Sir Ernest Gowers to London MPs, 7 February 1941.

sent from many other parts of England. Later in 1944, some 7,000 Wardens from other regions were deployed to the London Region when the metropolis was under attack from the V weapons.⁵ A very useful precedent had been set.

d. Manpower With the ARP Services depending on volunteer manpower, recruiting sufficient numbers of unpaid volunteers remained a continual problem. In 1939, the Government approved the recruiting of small numbers of full-time (paid) members for the ARP Services to bring the Services to strength, thereafter there was an increasing reliance on volunteers, particularly when many trained volunteers and full-timers were called up to the forces and the war industries as national manpower pressures increased. In April 1940, Sir John Anderson (Minister of Home Security from the outbreak of war) appealed for an extra 250,000 part time volunteers for the ARP Services but by July 1940, some 1,166,000 men had volunteered for the Home Guard. In January 1942, all workers over 18 were obliged to continue their duties until released by the authorities. By these means, and the reduced establishment numbers of ARP/CD Service workers were maintained through the war, and the percentage of part-timers eventually reached 94% of the total by June 1944.

e. Mobile Columns. A partial solution to the problem of generating sufficient trained resources was found in the formation of mobile columns of Civil Defence Services drawn from local authority teams. Mobile columns were deployed to Plymouth when that city was under stress and both the police and the NFS themselves formed mobile columns for deployment to areas that needed their support. Civil Defence columns were also used as the Civil Defence Reserve being 'a nucleus of whole-time reserve parties and ambulances ready to go wherever they were needed'. The formation of wartime mobile columns as the optimum use of scarce resources was also used by the National Fire Service who even deployed mobile columns to Europe to follow the allied forces in their advance through France, Belgium and the Netherlands.

f. Value of Expert Advice In preparing and developing their CD policies in the late 1930s, the Government saw the advantages of obtaining independent advice from publicly acknowledged 'experts' in the relevant fields. These experts generally supported government CD policies. Thus in late 1938, after the Munich crisis, when Sir John Anderson sought the optimum form of blast-proof air raid shelter, he asked a committee of engineers to recommend an appropriate (and economical) shelter and the 'Anderson' shelter was the result.⁶ Then, when many called for bomb-proof 'deep shelters' for all, Anderson set up the multi-disciplinary 'Hailey Conference' of leading engineering, political, medical and scientific experts (and a Labour MP) to consider deep shelters. Their informed recommendations⁷ fortunately approved of the shelter policy then being implemented.

Finally, across Europe in the late 1930s, most governments had devolved responsibility for civil defence to their local authorities as they were in direct contact with the civilian population. This was also the best - or at least the most economic - solution found in the UK, although Whitehall expressed severe reservations about the ability of some local authorities to do take on such responsibilities as the reputations of Town Hall administrations and their political leadership was not high. In the event, these reservations were proved unjustified and the vast majority of local authorities performed with great credit through six years of war. In fact, across the country local authorities generally discharged their ARP responsibilities most effectively, and in

⁵ HO186//2938 CROSSBOW Reinforcements plans for London

⁶ *Air Raid Shelter Policy* Cmd 5932, December 1938

⁷ *Air Raid Shelters - Report of the Lord Privy Seal's Conference*, Cmd 6006, April 1939

London their solid performance probably delayed the much-needed reform of London Local Government until 1963⁸ as only a very few authorities did not perform well. Generally the personnel of the ARP/CD Services displayed heroism and professionalism built up by training and their experience through the Blitz. Left-wing journalist Ritchie Calder's comment in 1940 that 'Giving the task of [CD] to local authorities was like giving to the Mayor of Dunkirk the task of evacuating the BEF'⁹ was clever. However Wing Commander Sir John Hodsoll, the long-serving Inspector General of CD, who continued in that office until the 1950s, more correctly summarised the situation in his (unpublished) post-war memoirs by stating that:

The English local government system was a most unsuitable machine to meet the needs of an all-out war against the civilian population but, thanks to the British genius for innovation and improvisation, these [Civil Defence] arrangements worked.¹⁰

Whether another British resort to innovation and improvisation would be sufficient to match the challenges of public protection in the atomic age remained to be seen but the full co-operation of UK local authorities and an adequate supply of public-spirited volunteers to man and new CD Services both would be essential for any such British system to work.

The Postwar Civil Defence Organisation

Soon after the wartime civil defence organisation was so abruptly closed down in May 1945, new threats to the UK and the West from Eastern Europe were rapidly identified and resulted in the passing of the Civil Defence Act (1948). The Act generally had all-party support although both Communist MPs¹¹ abstained from the vote. Conservative Party criticisms on details of the CD Bill, mainly on the role and responsibilities of Corps members and local authorities were led by Sir John Anderson who had piloted the 1939 Bill through the House. The resulting CD Act benefited greatly from recent wartime experience and again established a nationally organised but locally run Civil Defence Corps. The Corps had Headquarters, Rescue and Wardens' Sections, while a new Auxiliary Fire Service (AFS) and a National Health Service Reserve were formed to support the peacetime Fire and Hospital Services. These Services were again to rely on recruiting a large number of locally based part-time volunteers with a few central and local government full-time officials to staff the HQ, Staff Colleges and Training Establishments. The Act came into force in 1949 when the extensive Regulations were published detailing the operation and responsibilities of the various Services.

Annual publicity campaigns were mounted to recruit members for the CD Corps, the AFS and the NHS Reserve. Essential components of the system were to be provided, included Regional Headquarters with protected buildings, complete with communications up to Whitehall and down to the local authority CD Corps control rooms, and a Warning and Monitoring Organisation to warn of air attack and to monitor the progress of radiation. The annual Defence Statements did not, until that of February 1952, mention civil defence. The 1948 White Paper stated that 'civil defence

⁸ See Robin Woolven 'World War II – the Salvation of the Metropolitan Boroughs?' *Camden History Review* No. 30 (2006)

⁹ Ritchie Calder *The Lesson of London* Seker & Warburg (1941) p. 37

¹⁰ Hodsoll Papers, Churchill Archives, Cambridge. File 6/2 p.121

¹¹ William Gallagher MP (Fife West - the 'red Clydesider') and Phil Piratin, the MP for Mile End who had been the sole Communist Councillor in Stepney 1930-45 and who had led the occupation of the Savoy Hotel by members of the Communist Party during an air raid on 15 September. Next morning, the Cabinet resolved 'to take strong action to prevent such demonstrations'. CAB 65/9 250 (40) 16 September 1940

is outside the scope of this statement¹² and this was repeated in the Statements of 1949 and 1950. Then, in January 1951, Prime Minister Clement Attlee warned the Commons that

We shall press on with civil defence measures which directly support the efficiency of the Armed Forces – in particular, communications, the control network and the warning system. In addition, we shall begin to build up stocks of some essential equipment required by the civil defence services, including the Fire Services and the Hospitals and Emergency Medical Services.¹³

There was always a dilemma over just how much the public could and should be told on the effects of nuclear weapons as, although the public needed to know the reason why civil defence measures were necessary, it was equally important that they should not be so frightened that they might decide that there was no point preparing to survive a nuclear attack. It had long been accepted that CD measures were necessary to 'steady public opinion [in support of the deterrent policy] in a period of tension'.¹⁴ The need to maintain public morale was acknowledged in a 1950 paper for the *Civil Defence Joint Planning Staff Working Party On Civilian Morale* by the Government Chief Scientist who argued for:

... systematic public instruction on the effects of mass destruction weapons and on the means of protection against them. The vital importance of a high standard of morale is stressed and public instruction is shown to be a first and most important step towards its achievement.¹⁵

By February 1952, the new Conservative Government, in its first Defence White Paper, appealed for more volunteers for the Civil Defence Services, explaining that:

The main objects of a civil defence organisation are to reduce casualties, to respond to the needs of those who are injured or have lost their homes, to maintain order and to fight fires, to keep essential services going and to sustain morale. In war large numbers of men and women, both whole and part-time, are required to serve these purposes, but in peace it is not possible to maintain standing whole-time services other than the ordinary civilian services such as the police, the fire and health services.¹⁶

Some basic level of information was available in the official training handbooks supplied to the Civil Defence Corps but the release of 'public information' remained a sensitive matter, particularly once the power and effects of new weapons was acknowledged. Meanwhile annual recruiting campaigns for more volunteers for the CD Corps and the AFS were mounted, but numbers still fell far below those required. Whilst publicising the need for volunteers for the CD Corps, care was taken not to alarm the public. Reports of a speech by the new Home Secretary (Sir David Maxwell Fyfe) in February 1952 'to stimulate recruiting for the civil defence services, which were seriously below their peacetime establishment' mentioned the delivery of new sirens for sounding air raid warnings. The speech caused the Prime Minister (Churchill) to tell the Cabinet next morning that 'he thought it unwise that the public should be alarmed by undue publicity about civil defence preparations at this stage.'¹⁷

¹² Cmd 7327 *Statement Relating to Defence, 1948*

¹³ Cmd 8146 *Defence Programme* - Statement made by the Prime Minister in the House of Commons on Monday 29th January, 1951 para. 14.

¹⁴ CAB134/2041 HDR(60)51 December 1960. maintaining public morale had also been the major reason for Air Raid Precautions Measures in the run-up to WW2 e.g. Sir Warren Fisher's CID Report on ARP in June 1937.

¹⁵ HO/357/9 *Public Instruction On Mass Destruction Weapons* Civil Defence Joint Planning Staff, Working Party On Civilian Morale 26th August 1950

¹⁶ Cmd 8475 *Statement on Defence 1952 VII – Civil Defence*

¹⁷ TNA Cabinet Conclusions CC10(52), 5 February 1952

On assuming office in October 1951, the new Conservative Government soon found the UK's preparedness for war to be far behind programme and, concerned at the poor state of civil defences likely to be achieved by September 1954, the Home Secretary circulated a Top Secret Memorandum *Civil Defence Preparedness* to selected Ministers and Officials. The paper highlighted the successes and the deficiencies of the programme since 1949 and detailed the shortcomings. He reminded readers that assumptions on the scale of attack was based on advice from the Chiefs of Staff and took account of the widespread devastation likely to be caused by atom bombs in the earliest phase of the attack. In particular, the Memorandum addressed the following problems:

Manpower ... In 1952, some 300,000 part-time volunteers and 15,500 instructors were available but the wartime establishment was some 1,500,000 part-time personnel and the aim was to enrol and train up to one-third of that number in peacetime. It was unlikely that more than 500,000 part-timers would be available (and these not evenly distributed across the country) by 1954 and only 60% of those would be regarded as really effective for war purposes.

Shelter In the last war air raid shelter was provided for a very large proportion of the population. ... A considerable part of this programme was carried out before the war ... [presently] The failure to provide a reasonable quantity of shelters would have disastrous effects on public morale, to say nothing of the increase in the number of casualties to be expected in the absence of adequate shelter. ... there is not at present in sight any possibility of anything which could be called a shelter construction programme.

Evacuation The object was to remove as many people as possible from areas most likely to be attacked. The policy was to carry out an organised voluntary movement of some 4 million of the "priority classes" (mainly women and children) from evacuation to reception areas, leaving certain neutral areas undisturbed. This movement, which from the London area was planned to take eight days, would be carried out when and where the Government decided ...

Hospital Accommodation In the last war over 200,000 beds for casualties were provided. In a future war casualties are likely to be much more numerous ... [we will need] an increase in the number of beds for general cases from under 200,000 to 500,000 with a corresponding increase in medical equipment and supplies. ... Only a very small amount of new construction of hospital accommodation is planned for completion by September 1954, ... it is unlikely that all the necessary staff and equipment will be available even for the 300,000 beds.

Care of the Homeless If the country is subjected in a future war to heavy air attacks over large areas, or by atom bombs, the number of people rendered homeless was estimated to be of the order of several millions. The temporary care and accommodation of these people, in addition to the priority classes previously evacuated and the provision of the necessary bedding and clothing and other equipment, was clearly a major problem — much bigger than in the last war. ... It was, however, unlikely that this would be nearly enough to accommodate the several millions of homeless that may be expected in a future war, and it will be necessary for this provision to be supplemented with hatted or tented camps ...

Emergency Feeding The dislocation of normal facilities caused by air attack, the evacuation of the priority classes, and the movement of the homeless to other areas, all demand adequate provision for emergency feeding.... by September 1954 little more than half the required provision will be ready, and then only if the necessary materials, including metal, can be allocated.

Summary and Conclusions ... even this limited programme was unlikely to be achieved in any field which requires capital works or the large-scale provision of equipment. Thus by the end of 1954 there should, on the one hand, be for most services a good nucleus of trained part-time volunteers, a reasonably adequate but not fully-protected communications system, and an air raid warning system capable of giving at least some minutes' warning: we should be ready to carry out the evacuation of the priority classes and able to provide people in the

blitzed areas with something in the way of food and some means of cooking it. On the other hand, the fire and rescue services will by that date be still seriously under strength; and it does not seem likely that we shall have any effective reserves of whole-time civil defence workers, or adequate supplies of equipment, either for them or for the part-timers; there will be no adequate provision for hospital expansion or the care of the homeless, there will be a grievous shortage of emergency water supplies for fire-fighting and very little provision will have been made for the due functioning of vital industry and essential public utilities. And there will be practically no provision of shelter of any kind.

... It would be misleading to suggest that a mere decision of policy to accelerate civil defence preparations would enable all the deficiencies to be made good in a period of eighteen months ... but there can be no doubt that, in terms of preparedness, even a modest start would be worth while.¹⁸

Although in August 1952 the Home Office published a small pamphlet *Civil Defence and the Atom Bomb*, the public's lack response to national recruiting appeals for more volunteers for the CD Services caused concern. The Home Office had found itself unable to provide sufficient whole-time staff for the Mobile Civil Defence Columns which it hoped to form. Police and Fire Mobile Columns were also being formed to make best use of the limited resources and national exercises were carried out to support regional police and fire services. The immediate requirement was for an experimental CD mobile column to develop the tactics for columns to be formed across the country, but there were few full-time CD workers that could be used, so a solution was seen to be the use members of the armed forces – possible by using some of the large numbers of National Servicemen then conscripted for two years' military service. In April 1952, the Home Office had asked the Admiralty, the War Office and the Air Ministry for personnel to assist in forming an experimental civil defence mobile column. Although the Admiralty could provide none, the Army provided 100 men and the RAF 50 so that the initial Experimental Mobile Column (EMC), mostly National Servicemen and under Army leadership, started training at the Home Office depot at Epsom in January 1953. After some weeks training by Home Office instructors, the EMC was able start its exercises (all wearing Civil Defence uniforms) with local authority Civil Defence Corps groups in cities around the country. In 1954, a second EMC was requested of the War Office and the Air Ministry and this was duly supplied to start work in February 1954, this time with 100 RAF and 50 Army personnel and under RAF leadership. One of the cities visited by the 1954 EMC was Coventry and, when it arrived in that much bomb-damaged (in 1940) city in April, it found itself, together with the local CD Corps, in the midst a political dispute. As news of the power of the H bomb and its fall-out became known, following US and Russian tests, Coventry City Council had resolved that:

... in view of reports of the devastating effects of the H bomb, it is a waste of public time and money to carry on with the Civil Defence Committee – we are taking steps to terminate its existence ... to strengthen the hands of international statesmen to ban the bomb'.¹⁹

The Government was not moved and appointed three Commissioners to run, at the City's expense, Coventry's Civil Defence as the 1953 Defence White Paper had stressed that:

Civil Defence ... forms an essential part of our defence planning ... It has not been possible to maintain in peace the large whole-time services which would be required in war for some rescue, ambulance and other civil defence services and for the augmentation of the fire services. ... A promising start has been made with a parallel

¹⁸ CAB 21/5327 Home Secretary's Memorandum *Civil Defence Preparedness* 4 April 1952

¹⁹ HO322/136 Correspondence with Coventry 1954-56.

Industrial Civil Defence Service. In addition, with the assistance of personnel lent by the armed forces, an experimental civil defence mobile column has been started which will carry out exercises in 1953 to set the pattern for the large number of whole-time mobile forces that would be required in war.²⁰

A more direct criticism of the slow progress of Civil Defence had appeared in December 1953 when the House of Commons Estimates Committee issued its 340 page *First Report on Civil Defence*.²¹ The main criticisms were of the extent of overestimating of expenditure by Civil Departments in the last four years and the less than satisfactory state of the Civil Defence Corps. The Committee found it easy to criticise CD expenditure, not least because the country, still recovering from the war, was having problems spending the money allocated as industry was still short of raw materials and manpower. Thus it was possible to take up the spare capacity existing in the textile industry and large sums were spent on tarpaulins, CD overalls and sandbags while more important equipment could not be produced. This imbalance was rightly criticised and, to improve Parliamentary oversight, the Estimates Committee recommended that Civil Defence expenditure be included in the Defence White Paper. Two months later the 1954 Statement reaffirmed that;

Civil Defence is an essential, integral and continuing part of defence preparations for any future war. In the development of a policy which gives first priority to preparations designed to deter a would be aggressor...²²

The reported unsatisfactory state of the Civil Defence Corps was a more basic problem for a volunteer manned organisation, some of whose members declined to undertake refresher training and whose attendance for CD Corps duty was poor. These problems continued for some years until the status of the Corps was improved by the 'dead wood being pruned' from the Corps and effectiveness was improved.

1954 - Enter the Thermonuclear Threat

Although in late 1952 the Russians had tested a series much more powerful weapons, by 1953 and in spite of the reported manpower, training and equipment shortcomings, the UK CD organisation was reasonably prepared for an attack by low-yield atomic weapons. In 1954 events, both internationally and within the UK, rendered obsolete many of those expensive preparations. Whitehall and the general public began to learn more of the effects of thermonuclear weapons and even the public began to realise the implications of the imminent deployment of H bombs, to some extent through the publicity given to the affairs of Coventry City Council but more directly by the publicity surrounding thermonuclear testing.

The USA had started a series of six H bomb tests in the Pacific and, on 17 February 1954, Sterling Cole, the Chairman of the Congressional Joint Committee on Atomic Energy (JCEA), spoke publicly in Chicago on the effects of the H-bomb. His speech was read with great interest by Churchill, who wrote to President Eisenhower on 4 March:

... On the day that the Soviets discovered and developed the Atomic Bomb the consequences of war became far more terrible. But that brief tremendous phase now lies in the past.

²⁰ Cmd 8768 Statement on Defence 1953 para. 87

²¹ First Report from the House of Commons Select Committee on Estimates Committee *Civil Defence* Printed 2nd December 1953

²² Cmd 9075 Statement on Defence 1954 para 86-87 amongst three pages on Civil Defence.

An incomparably graver situation is presented by the public statements of Mr Sterling Cole at Chicago on February 17. I have discussed these with my expert advisers. They tell me that the 175ft displacement of the ocean bed at Eniwetok Atoll may well have involved a pulverization of the earth's surface three or four times as deep. This in practice would of course make all protection, except for small Staff groups, impossible. You can imagine what my thoughts are about London. I am told that several million people would certainly be obliterated by four or five of the latest H bombs. In a few more years these could be delivered by rocket without even hazarding the life of a pilot. New York and your other great cities have immeasurable perils too, though distance is a valuable advantage at least as long as pilots are used.

Another ugly idea has been put in my head, namely, the dropping of an H Bomb in the sea to windward of the Island or any other seaborne country, in suitable weather, by rocket or airplane, or perhaps released by submarine.²³ The explosion would generate an enormous radio-active cloud, many square miles in extent, which would drift over the land attacked and extinguish human life over very large areas. Our smallness and density of population emphasize this danger to us.

Mr Cole further stated that Soviet Russia, though perhaps a year behind the United States, possessed the know-how and was increasing its production and power of delivery (or words to that effect). Moreover after a certain quantity have been produced on either side the factor of 'over-taking', 'superiority', etc., loses much of its meaning. One side has five hundred and the other two hundred both might be destroyed. A powerful incentive to achieve surprise would be given to the weaker-what about Pearl Harbour? His natural fears would prey upon his moral and spiritual inhibitions (if indeed he was so encumbered).

When I read Mr Cole's widely reported speech, I was surprised that its searing statements attracted so little comment. The reason is that human minds recoil from the realization of such facts. The people, including the well informed, can only gape and console themselves with the reflection that death comes to all anyhow, some time. This merciful numbness cannot be enjoyed by the few men upon whom the supreme responsibility falls. They have to drive their minds forward into these hideous and deadly spheres of thought. All the things that are happening now put together, added to all the material things that have ever happened, are scarcely more important to the human race. I consider that you and, if my strength lasts, I cannot flinch from the mental exertion involved.

I wondered, pondering on your letter, whether this was the background which had forced you to express yourself with such intense earnestness. I understand of course that, in speaking of the faith that must inspire us in the struggle against atheistic materialism, you are referring to the spiritual struggle, and that like me, you still believe that War is not inevitable. I am glad to think that in your spirit, as in mine, resolve to find a way out of this agony of peril transcends all else.

Churchill then mentioned the question of publicity, or at least of exchanging nuclear information by stating:

I entirely agree with Mr Cole's remark that in this matter 'It is more sinful to conceal the power of the atom than to reveal it'. This would not of course mean one-sided imparting of secret knowledge. But perhaps we have now reached, or are reaching, the moment when both sides know enough to outline the doom-laden facts to each other.

A fortnight after the Sterling Cole incident, the Americans completed their Bikini H-bombs test series with the *Bravo* round – a massive explosion of some 15 MT which produced unexpected levels of radioactive fallout many miles downwind of the Eniwetok test site. The USA did not disclose details of *Bravo's* weapon effects - or of the fallout produced in particular – among other things because of the restrictions placed on the Administration by the McMahon Act. Foreign Secretary Anthony Eden did, however, meet his counterpart Dulles in April 1954 to discuss a possible nuclear

²³ This refers to the base surge phenomenon investigated at Monte Bello tests.

test moratorium as a precursor to the Disarmament Conference to be held in London a month later. Some time later, Sir John Cockcroft (UK Atomic Energy Commission) obtained a copy of the January 1954 USAEC report on their *Project Gabriel* which evaluated 'the radioactive hazards from the fall-out of debris from nuclear weapons detonated in warfare'. But, unfortunately for the British authorities, this was an expurgated copy of the report with references to megaton weapons blacked out.

When Churchill addressed Parliament on the H bomb he 'spoke for $\frac{3}{4}$ hour with a strong voice ... making, as one author wrote, "the speech [which] may be considered his legacy to the nation" There were hopes among his colleagues that the now 79 year old Churchill would, at last, resign in favour of Anthony Eden ²⁴

On March 11 Churchill asked to see Eden, so Eden told Shuckburgh, about the 'the future of the Government'. Shuckburgh recorded 'Great excitement. He said he had been expecting it, because Rab [Butler] has at last succeeded in getting the Old Man to see the Budget problem, and the need for a plan for elections, etc. On return, he told me as follows, strictly in secret and no one else to know. P.M. said he had decided to resign in May - or end of summer at the latest (depending on his health). His only concern is to hand over as smoothly and effectively as possible to A E. ... As to timing, Harold Macmillan had told him it would be awkward for Ministers now steering Bills through the House if the change came before ... ²⁵

In the event Churchill remained in office for another busy year. With the two super-powers testing thermonuclear weapons, the Cabinet met on 8 July 1954 to consider the recommendation of the Defence Committee that a British H bomb should be produced – but no decision was reached as some Cabinet members had reservations. The record shows that, in discussing 'Atomic Energy' Churchill and his 16 colleagues:

... resumed their discussion of the question whether our atomic weapons should be adjusted as to allow the production of thermo-nuclear bombs in this country. What additional financial commitment would be needed? We are informed that the net additional cost would not be very substantial. Cost should not exceed £10 Million and the thermo-nuclear bomb would be made in lieu of atomic bombs - a relatively small additional cost....

No country could claim to be a leading military Power unless it possessed the most up-to-date weapons.... It emerged from the discussion that there was general support in the Cabinet for the proposal that thermo-nuclear bombs should be manufactured in this country. Some Ministers asked, however, that there should be a further opportunity for reflection before a final decision was taken. Meanwhile, it was agreed that there should be no interruption of the preliminary planning which had already been put in hand.²⁶

Whatever private discussions took place in the following fortnight, the Cabinet meeting on 26 July heard the Lord President (Marquess of Salisbury) invite them:

... to take a final decision on the question previously discussed on 7th and 8th July. After a short discussion, the Cabinet agreed that in order to preserve our position as a leading military power, the Cabinet:

1. Agreed in principle the proposal that the current programme ... should be adjusted to allow the production of thermo-nuclear weapons.
2. Authorised the Lord President to proceed with the production of thermo-nuclear bombs in this country.
3. Invited the Lord President to consider the publicity aspects of this decision.²⁷

²⁴ Martin Gilbert *W S Churchill Vol. VIII 'Never Despair – 1945-1965'* p.959-960 quoting Anthony Seldon *Churchill's Indian Summer* London, 1981 p.439

²⁵ Martin Gilbert *W S Churchill Vol. VIII 'Never Despair – 1945-1965'* p.959-961.

²⁶ CAB128/27 Cabinet Conclusions (54)48 Item 2, 8 July 1954

²⁷ Cabinet Conclusions 53 (54) Item 3, 26 July 1954 Item 5

This dramatic Cabinet decision was kept secret until the February 1955 Defence White Paper was published. Meanwhile the *Bravo* test had hit the world's headlines when the crew of a Japanese fishing boat, the *Lucky Dragon*, who had been fishing some 85 miles downwind of the test and outside of the published danger area, had witnessed the flash and blast wave of the explosion and, some two hours later, they had hosed down the ash and rain that had fallen on the vessel. On their return to their home port, nearly all of the 23 crew members reported the symptoms of radiation sickness and their catch was destroyed by the Japanese authorities. The Japanese demanded an enquiry and a (US) Congressional investigation was announced. A Press conference in late March involving Admiral Lewis Strauss, the Chairman of the US Atomic Energy Commission, was used to stress the military advantages of thermonuclear weapons. In subsequent questioning, Strauss admitted that a single H-bomb could destroy a large city. People across the world, led by such worthy figures as the Indian Prime Minister Nehru and the respected Dr Albert Schweitzer, responded by expressing opposition to the development, testing and production of such massive weapons. Through the summer of 1954 a global debate ensued on nuclear weapons, and on testing in particular. In late September, seven months after the *Bravo* test, the first fall-out fatality occurred when one of the *Lucky Dragon's* crew died.

Across the UK changes were being made in the training and equipment of the Civil Defence Corps and the Auxiliary Fire Service to enable these Services to deal with the new scale of devastation, casualties and suffering which a war with thermonuclear weapons would involve. All types of courses and training were radically changed, a new specialisation of 'Scientific Intelligence Officers' was established and new levels of training introduced. New equipment included the introduction from 1953 of purpose-built 'Green Goddess' pumping appliances to the AFS who were particularly proficient at piping water over long distances, both for fire-fighting and for decontamination purposes.²⁸

The Strath Report

The requirement for more information on fall-out led, in October, to Anglo-American discussions on amending the McMahon Act. In November, the Chiefs of Staff considered the fall-out problem and consider that the matter should be brought to the attention of Ministers. Thus, in November 1954, Harold Macmillan, the Minister of Defence, with the support and active interest of Prime Minister Winston Churchill, set up a group of experts under William Strath of the Cabinet War Plans Secretariat and the Treasury, to investigate and report on the implications of the H Bomb on defence planning and in particular the effects of radioactive fallout.²⁹ Strath's expert group comprised representatives from the Chiefs of Staff Committee (General Brownjohn), the Ministry of Defence (Deputy Secretary, Sir Richard Powell), the Scientific Adviser to the Government (Sir Frederick Brundrett) and the Home Office (General Kirkham and Mr Philip Allen). In addition Sir Robert Hall (Government Chief Economic Adviser) and Mr Patrick Dean (Foreign Office) attended 'on a personal basis'.

Strath and his group worked quickly by considering the available information on nuclear weapon effects. Sir John Cockcroft supplied Strath with his expurgated copy

²⁸ Eric Alley and Alan House *A Brief History of Civil Defence*, Civil Defence Association, 2005

²⁹ Recalling the first meeting of the Group, Lord (Philip) Allen recently said that he remembered the Strath group well, "not least because Strath had such a broad Scots accent that we found it difficult to understand what he was talking about much of the time"! Interview 7 July 2006.

of the USAEC *Project Gabriel* report. Large scale charts were prepared showing the likely spread of the plumes of radioactive fall-out from H bombs dropped on a number of major British cities. The group then considered the likely effects on defence installations, on economic activity (plotted using the prevailing wind direction) and on wider UK society of such a distribution of fall-out and their conclusion was the whole situation would be 'grim' – a word that recurs in the subsequent reporting. Strath also made a series of recommendations on how best the UK might prepare for such a calamity.

With the full support of Sir Norman Brook, William Strath and his group initially reported to Harold Macmillan in December 1954, warning that:

The grim effects of 'fall-out' added to the destructive power of the thermonuclear weapon, make global war less likely,.... But in a war the UK ... would be extremely vulnerable to nuclear attack

14. The widespread damage and immobilisation caused by 'fall-out' call for a radical reshaping of our plans for the defence of the home front. New problems of an unprecedented kind are created for the protection of the population – for shelter and evacuation plans. The role and organisation of the Civil Defence Services needs radical overhaul. How far they should be geared to their normal tasks of fire-fighting and rescue – and how far to relief and decontamination measures? The part which the military forces may have to play in support of the Civil authorities needs to be determined.

15. It is evident that civil defence in the broadest sense of the term must command a higher priority in defence planning than it has so far received. ...³⁰

Two days later, Macmillan sent a Memo to his Cabinet colleagues which was a rallying cry and, arguably, a bid to increase his Ministry's role in Home Defence. The rather old-fashioned style of Macmillan's opening and concluding points included:

The new concept of war – a short but incredibly violent struggle for air power – is not a deadly secret in Whitehall. Everyone discusses it openly from Field Marshals to errand boys.

Everyone knows that the issue, as far as this island is concerned, depends on whether we can somehow get through the first days or weeks.

We don't know what sort of bombs the Russians have, or are likely to have; how many will, fall, or where they will fall. Nor do we really know what their effect will be. But we do know that any purely static defence, although vital, is not enough. Everyone must be able to help everyone else. But this needs disciplined forces as well as neighbourliness. The good Samaritan must be organised, and not a chance wayfarer

To sum up There's no distinction today, between civil defence and home defence. Some men and women will go on doing their ordinary jobs ... They will join – if they wish to do their duty – what is called Civil Defence. They will be led and officered by their civil experts and officials. By their side, trained in the ordinary knowledge of rescue work, demolition, fire fighting, and the rest, will be all armed forces of the Crown in the island. The most important of these will be forces under the Commander in Chief, Home Forces.

To link the static 'civilian' forces, and the 'service' formations will be the new mobile columns – of the Royal Mobile Defence Force.

It's all one picture. There is no contrast or inequality of risk or effort between 'civilians' and 'service men'. We're all in it, whether we like it or not. We just do our separate jobs, as part of a team.

But to make these preparations, proudly and boldly, gives us our best chance that it won't happen. If the enemy knows our resolute mood, they may decide not to risk it. In a phrase of the day, it's part of the 'deterrent'. This broad scheme of Home Defence gives us at least the best hope of defending our island... [long quotation

³⁰ DEFE13/45 Report, 8th December 1954

from Henry V and ending] ... If we give the proper lead, our people will do their duty. We must act quickly and resolutely.³¹

Before the Strath Report went to the Cabinet Defence Committee, on 24 March, Harold Macmillan called an informal meeting of selected senior ministers in his office³² with both Strath and Sir Norman Brook present, to discuss Strath's report '*The Defence Implications of Fall-Out from a Hydrogen Bomb*'. Macmillan opened by saying that he thought that it would be useful for those Ministers most directly concerned to have a preliminary informal discussion of the issues raised in the comprehensive report which had been prepared at his request before it was considered by the Defence Committee. The meeting immediately turned to the most controversial topics of evacuation, shelter and dispersal of industry, all of which needed to be considered if the wider practical aspects Strath's recommendations were to be implemented. In particular the meeting considered:

Evacuation

The Meeting first examined the report's proposals on evacuation which were based on the promise that a wider distribution of the population would reduce the number of casualties. But evacuation would inevitably cause social and economic dislocation. If people stayed where they were casualties where the bombs fell would admittedly be very severe, but economic life could continue in the areas which escaped destruction. For these reasons evacuation policy for the periods both before and after attack required most careful considerations. It was true that the report did not contemplate wholesale movement. It assumed that the public would expect the Government to arrange, as they had done in the past, for the removal of certain classes, such as young children and their mothers, from the vulnerable areas. It recommended in addition that in order to maintain essential services, plans should be made to move essential workers to battle stations outside target areas. If, for example, dockers could be moved out during a warning period, their lives would be saved and imports could be handled at emergency ports. The report also suggested that those who had to remain in the major cities should work on a shift system and when not working be dispersed to the periphery, so as to spread the risk without bringing product and services to a standstill.

Dispersal of Industry

Some doubt was expressed whether the report gave sufficient emphasis ... to the long-term advantage of directing new construction of factories and other key installations, particularly power stations, away from vulnerable areas. In the case for example of atomic power stations, there was no reason why these should be sited in the large towns. The Meeting recognised that it would be easier to control the location of installations whose construction was financed by the Government than those built by private capital. Experience in the past, for example on the siting of conventional electric generating stations, had been that although the strategic interest was considered it was over-ruled in favour of economic advantage. It might be that in marginal cases extra emphasis on the strategic factor would tip the scale. The strategic importance of dispersing industry in peacetime was however such that it would be worth considering whether ways could be found of overcoming some of the difficulties which had so far stood in the way.

Shelter

The meeting were informed that, while it was not possible to provide effective shelter within the vicinity of a hydrogen bomb, it would be practicable to provide adequate shelter against fall-out beyond the area of devastation by blast. Scientific thinking was at present moving towards the view that brick-built houses would give better protection against fall-out than had previously been thought. A trench with overhead earth cover would make more effective shelter but it would be a damp and uncomfortable place in which to have to stay until the radio-activity had abated. It was hoped that future research would devise a

³¹ MISC/P(54)54 10 December 1954

³² CAB130/109 GEN.491/1st Meeting, *Defence Implications of Fall-Out from a Hydrogen Bomb* 24 March 1955

refuge room giving adequate protection which could be constructed in the ordinary house. If this could be done, house-holders could be advised what steps they could themselves take to secure satisfactory protection.

The Meeting were then given an indication of the report which the Home Defence Committee were likely to make to Ministers and, in discussion, the following points were made:

Strategic Assumptions

(a) The Chiefs of Staff considered that any future war in which the United Kingdom itself was attacked would involve the use of the hydrogen bomb. On this hypothesis such home defence preparations as were relevant only to war fought exclusively with conventional or atomic weapons should be discontinued. But the enemy, fearful of the terrible retaliation which use of the hydrogen bomb would bring upon him, might refrain from its use. If he chose to employ it he would be preoccupied with the overriding need to attack the United States and might not be able to spare sufficient hydrogen bombs for an effective attack on this country. Some of the aircraft carrying these bombs might be intercepted. It was possible therefore, that although London and possibly one or two more cities might be destroyed by a hydrogen bomb, other areas would be attacked with atomic bombs or even with high explosive. Would not those areas need protection against such types of attack?

(b) On the other hand the effect of a comparatively small number of hydrogen bombs was so devastating that it could be argued that the enemy would not think it worth risking resources on the delivery of conventional or atomic bombs.

(c) It was true that to base defence preparations on the assumption that the attack would be launched with hydrogen bombs involved taking a calculated risk. But there were grave difficulties in any other course. The cost of preparations which would be effective whether the attack was with hydrogen bombs or with conventional and atomic weapons only would be prohibitively high. Planning against two alternative possibilities would also give rise to grave anomalies. No protection would be provided in the most vulnerable areas which it was assumed would be attacked with hydrogen bombs, while targets of lower priority would be given a high degree of protection with deep shelters. The report envisaged that where protection against the two forms of attack could be combined, this should be done. [Strath] for example, recommended that on the target areas shelters provided against fall-out should be constructed in the manner most likely to give protection against blast and heat.

(d) The Meeting recognised that that the first priority must be given to the initiation of preparations against a hydrogen bomb attack because these were at present non-existent. Some of the necessary measures would be effective against attack with conventional or atomic weapons. When sufficient progress had been made against hydrogen bomb attack we could see to what extent the lesser form of attack had been covered and whether it would then be practicable to take additional precautions in that category.

(e) The Meeting agreed that, for planning purposes, Departments should continue to proceed on the assumption that the Government would be able to detect a deterioration in the international situation some six months before war came and would know, say, seven days in advance that an attack on this country was to be expected. The importance of a period of warning for the carrying out of home defence plans, for example on evacuation, emphasised the high value of good intelligence work in discovering the enemy's intentions.

(f) The Chiefs of Staff took the view that a thermo-nuclear attack would cause such devastation as to prevent the United Kingdom from being used as a main supply base for such operations as continued after the opening phase of war. Fighting would go on in other parts of the world but the main supply areas would be outside this country, possibly Australia, South Africa or even the United States. The earlier conception of a period of broken-backed war following the initial attack, in which this country would take part had been abandoned.

(g) The latest appreciation by the Chiefs of Staff had tremendous implications. The Service Departments would have to review the role, composition and equipment of the armed forces in the light of it. Particular attention would need to be given to the future of

reserve forces and to the importance of advance stockpiling of supplies and equipment in overseas theatres.

(h) But if thinking on the role of the active forces was moving along these lines, it would be illogical not to allow the full implications of the new conception to affect other aspects of our war preparations. To enable forces in overseas theatres to fight on from their own resources would involve heavy expenditure and it would be foolish to ignore any compensating savings which might be involved, for example, in cutting down reserve forces.

(i) Publicity The Meeting accepted the Home Defence Committee's view that the Government should not seek to impress the public with the dangers of thermo-nuclear war until they could tell them at the same time what measures of protection could be taken. Publicity on the effects of hydrogen bombing offered the chance of making the populations of the Soviet bloc realise what use of the bomb would entail, but if put out too soon it would breed despair among our own people and encourage the view that civil defence preparations were a waste of time and money. The argument still held that these were valuable both as a contribution to the deterrent and because our worst fears about the nature and weight of the attack might not be realised.

(j) It was important to the morale of the Territorial Army, which had been disheartened by the disbandment of Anti-Aircraft Command, that the vital role of the Mobile Defence Corps should be effectively publicised.

(k) The Meeting agreed with the suggestion that the Government's plans on evacuation and shelter would command wider public support if presented with the authority of an independent committee. Although it could be argued that there was little time to lose, the appointment of such a committee should be deferred until the Government were in a position to put concrete proposals before it.

(l) It would also be useful if an independent body could study the case for the dispersal of industry and advise on the locations which would be most suitable. The findings of such an enquiry might have some influence on industrialists.

(m) Although our airfields were an obvious target there were a great number of them and the enemy's main object in using his hydrogen weapons would probably be to destroy the life of the country by devastating our major cities. If it could be established that the United States Air Force as well as the Royal Air Force were planning to disperse their strategic bomber forces in this country, it would not be necessary in preparing the evacuation scheme to exclude the areas of the main bomber bases as unsuitable for the reception of evacuees.

Machinery of Control

(n) The meeting endorsed the recommendation made in the report that the regional organisation of Government should be strengthened now. It was important that the head of each region should be a well known man in his area, competent to handle the local authorities. This recommendation would be reinforced by a parallel one of the Chiefs of Staff.

Oil

(o) The importance attached to stockpiling of oil would involve heavy expenditure on the provision of new storage in places which were unsuitable from the commercial viewpoint. The economic disadvantage could be reduced by the use of pipe-lines. There would also be the heavy cost of buying oil to fill existing and new storage.

Expenditure on defence

(p) The major items of cost in the home defence programme would be stockpiling and, at a later stage, provision of shelter.

The Meeting finally considered what formal Ministerial consideration of the report would be required. The next step should be to circulate it to the Defence Committee with a view to a meeting after Easter. Thereafter, the Defence Committee's recommendations should be submitted to the Cabinet, copies of the report might be sent, for their formation, to members of the Cabinet and other Ministers in charge of Departments affected by its recommendations. It might be possible for some Departments to proceed with a certain

amount of preliminary planning on the basis of the report in advance of final decisions by the Cabinet. Further:

The Meeting

- (1) Invited Sir Norman Brook to circulate the report to the Defence Committee and to other Ministers concerned.
- (2) Took note that Sir Norman Brook would advise the Minister of Defence on the extent to which Departments might proceed with planning on the basis of the report in advance of Ministerial decisions upon it.³³

Post-Strath Policy and Implementation

As 1954 drew to a close, the second Experimental Mobile Column had completed its tour of the Regions and, in December, Macmillan recorded the changes being considered in response to the new weapons being developed by the Soviet Bloc:

... two decisions were soon taken. The Anti-Aircraft Command would be abolished [and] the Auxiliary Air Squadrons would have to be reduced ... Attlee agreed about the abolition of A.A. Command ... There was also now a new horror which for the first time came to the attention of those in Whitehall and began to leak through to the Press. This was connected with the problem of 'fall-out', not merely if these terrible weapons were used in war, but to a minor and not negligible degree in H-bomb tests. Early in December I had to tell the Cabinet that the main facts were available to departments and could not long be concealed from the public. A new system of Civil Defence would have to be developed, to be much more mobile and more highly trained. We should try to agree with the Americans upon a fresh presentation. Although some progress was made during the next few weeks, this matter was left to be formally presented in the Defence White Paper and discussed in the defence debate. ...

My chief effort was directed to drafting and securing the approval of the Prime Minister and the Cabinet to the main Defence White Paper. [and when it appeared in February 1955] Naturally public attention was largely concentrated on the momentous announcement of the Government's decision to produce the hydrogen bomb.³⁴

The Annual Defence Statement appeared in February 1955 with the dramatic announcement (emphasis added) of the secret decision reached in the previous July:

NUCLEAR WEAPONS

3. Overshadowing all else in 1954 has been the emergence of thermonuclear bombs. This has had, and will continue to have, far-reaching effects on the policy of the United Kingdom We have to prepare against the risk of a world war and so prevent it; it is on the nature of these preparations that the existence of thermonuclear weapons has its main effect. At the same time we must contrive to play our part in the defence of the interests of the free world as a whole, and particularly of the Commonwealth and Empire, in the 'cold war'; and we must meet the many other peacetime commitments arising from our position as a great power with world-wide responsibilities The United States government has announced that it is proceeding with full-scale production of thermonuclear weapons. The Soviet government is clearly following the same policy; although we cannot tell when they will have thermonuclear weapons available for operational use. The United Kingdom also has the ability to produce such weapons. After fully considering all the implications of this step the government has thought it their duty to proceed with their development and production.³⁵

The *Statement* later addressed in some detail the home defence implications of the new threat to the nation:

³³ CAB130/109 GEN.491/1st Meeting, *Defence Implications of Fall-Out from a Hydrogen Bomb*, 24 March 1955

³⁴ Harold Macmillan *Tides of Fortune 1945-1955* pp.570-571

³⁵ Cmd 9391 *Statement on Defence 1955* para. 3

HOME DEFENCE

101. Home defence measures, by demonstrating the country's determination to resist aggression in all its forms, buttresses the resolution needed to secure an effective deterrent policy. Against the thermo-nuclear attack of the future the best defence of the civil population on their small, crowded and vulnerable island is to try and ensure that it serves materialises. But we must, also in common prudence continue to provide financial and other resources for a mixture of insurance in case we should fail in our main aim of averting war. The extent of these precautions and the speed at which they should be put in hand will vary from time to time with changes in the national situation and with the progress of the defence effort.

102. [paragraphs above show] the effects that thermo-nuclear bombs would have. The very grimness of the prospect is a potent influence in restraint of war. Yet if war should come despite our efforts to prevent it, there is still much that can and must be done to mitigate the effects of a thermo-nuclear attack....

Evacuation and Shelter

114. Besides reviewing the role of the armed forces in home defence the Government are also re-examining all civil defence policies, notably those of evacuation and shelter. These must now take account not only of blast and heat but also of radioactive 'fall-out.' The distinction between evacuation, neutral and reception areas will be far less easy to make than in the past, since the effects of 'fall-out' might be felt over wide areas of the countryside and the relative safety of rural areas correspondingly reduced. Nevertheless some areas, particularly those with the greatest concentration of population and industry, would still be more vulnerable than others. There would therefore be more advantage to a measure of dispersal so long as this enabled the community to continue to function effectively.

115. Within a few miles of the point of burst it would be quite impracticable to provide protection against the violent explosive power of the hydrogen bomb. But beyond the area of devastation by blast and heat a considerable degree of protection against the effects of 'fall-out' during the period of intense radiation could be secured by shelter which need not be of very elaborate construction*, for example by a trench with overhead earth cover. This would have to be allied with disciplined behaviour on the part of the population and with the strict observance of suitable precautions after the attack.

116. Further study of the implications of 'fall-out' must, however, be carried out before the Government can decide the best policies both for shelter and evacuation.

Casualties and the Homeless

117. A single hydrogen bomb explosion on a built-up area would take a very heavy toll of life and leave very large numbers of people injured and homeless. To the increased casualties resulting directly from the greater destructive effects of the hydrogen bomb there would have to be added the " numbers of people effected or suspected of being effected by radioactivity. Planning of the casualty services must, therefore, take account of this tremendously increased burden.

118. The need to care for those who have had to leave their homes either in the course of evacuation or through destruction or contamination of their houses, would present a formidable problem in providing billets or rest centres. Full use would have to be made of every type of building in the areas to which the homeless were moved and emergency feeding arrangements would have to be provided. Plans prepared in advance to deal with such a situation would have to be supplemented on the widest possible scale by improvisation and by readiness on the part of local authorities and the public generally to do whatever they could to help themselves and each other.

The *Statement* then addressed such essential wider aspects of Home Defence as Communications, Ports, Stockpiling and Finance before cautiously but confidently concluding:

123. The new problems posed for home defence by the advent of thermo-nuclear weapons do not admit to simple or immediate solution. What is said here will be amplified by further statements as studies and planning proceed. The Government believe, however, that the country is entitled to know the gravity of the possible threat and to be given an indication of

the lines on which they are working to meet it. They are confident that the people as a whole will be ready and willing to play their part in building that will to resist which is an essential part of the deterrent to aggression.³⁶

‘Never Despair’

In the subsequent defence debate, on 1 March 1955, Churchill spoke of his Government’s July 1954 decision to embark on H bomb production:

Under Attlee’s leadership we have made our own atomic bombs, confronted by the hydrogen bomb, I have tried to live up to the right honourable Gentleman’s standard. We have started to make that one too. It is this grave decision which forms the core of the Defence Paper.

There is no absolute defence against the hydrogen bomb countries are vulnerable as well as islands Soviet Russia was, with the advent of the hydrogen bomb, on an equality of vulnerability with our small densely populated island and with Western Europe. Hitherto their population has been so widely dispersed over large land areas as to make them feel that they were not in any danger at all. (p.1099)

..there is time and hope if we combine patience and courage. All deterrents will improve and gain authority during the next ten years. By that time, the deterrent may well reach its acme and reap its final reward. The day may dawn when fair play, love for one’s fellow men, respect for justice and freedom, will enable tormented generations to march forth serene and triumphant from the hideous epoch in which we have to dwell. Meanwhile, never flinch, never weary, never despair.³⁷

The Opposition’s amendment had carefully refrained from questioning the Government’s decision to manufacture the hydrogen bomb. Indeed, a few weeks before the publication of the Defence White Paper, Attlee had told his followers that it was essential for the defence of Britain. ‘I was glad to see,’ Churchill wrote to Eisenhower on March 4 ‘from reports of your interview with the Press that we are in such good agreement about the H Bomb and all that. All went well in the House of Commons. Considering we have only a majority of sixteen, the fact that the Opposition vote of censure was rejected by 107 votes was a remarkable and entitles me to say that our policy of “Defence through deterrents” commands the support of the nation.’³⁸

The Government was determined to improve the strength, standard of training and overall effectiveness the CD Services. They had already appointed a Director General of Civil Defence (General Sir Sidney Kirkman)³⁹ in 1954 to provide an inspiring figure to lead the hundreds of thousands of volunteers around the country. In Whitehall, following Strath, a new Ministerial Committee on Civil Defence was established ‘to review what action that has been taken and what further action should be taken’. Kirkman’s appointment was announced by the Home Secretary in a BBC talk *Civil Defence and the Hydrogen Bomb* and other moves made to spread the knowledge of civil defence including the Women’s Voluntary Service ‘*One in Five*’ Scheme of three talks, to women not already involved in civil defence, on precautions that could be taken in the home before and after an attack. Frequent poster campaigns (e.g. the 1956 *Don’t Trust to Luck - Train in Civil Defence*’ campaign) appealing for recruits for the local CD Services were regularly mounted by the Central Office of Information and special slogans such as ‘*Civil Defence – Join Now*’ (1957) and ‘*Civil Defence is*

³⁶ Cmd 9391 *Statement on Defence 1955* paras 101-123

³⁷ Martin Gilbert *W S Churchill Vol. VIII ‘Never Despair – 1945-1965’* pp. 1098-1101

³⁸ Martin Gilbert *W S Churchill Vol. VIII ‘Never Despair – 1945-1965’* pp. 1098-1101

³⁹ Kirkman, Montgomery’s Artillery Commander at El Alamein, had been DCIGS and, on retirement, had the task of ‘looking for economies in the home forces’. Tom Davis, ‘Kirkman, Sir Sidney Chevalier (1895–1982)’, rev., *Oxford Dictionary of National Biography*, OUP, 2004.

Common Sense' (1962) were typical of those frequently used by the Royal Mail to frank postal items - but CD recruiting continued at its barely satisfactory level..

To set Whitehall moving, on 16 March 1955 Sir Norman Brook chaired a major informal meeting in the Cabinet Office of the most senior civil servants from Whitehall Departments and their senior scientific advisers; 20 of the 23 attendees were Knights of the Realm and two of the others were Strath himself, and his colleague Dr W G Marley of the Atomic Energy Research Establishment.⁴⁰ The subject for this grand 'informal meeting' was, of course *The Report of the Strath Group on the Defence Implications of Fall-Out from a Hydrogen Bomb*. By the time the 1956 Statement on Defence was published, Whitehall had carried out a thorough Home Defence Review and Strath himself, under the direction of Cabinet Secretary Sir Norman Brook, had reorganised the Committee of Officials on Civil Defence with senior representatives of the home Departments.

The Eden and the Macmillan Administrations to 1959

The defence debate over, Anthony Eden finally replaced Churchill as Prime Minister on 6 April 1955. Harold Macmillan moved to the Foreign Office and Selwyn Lloyd became Minister of Defence.⁴¹ The Cabinet Secretary promptly minuted, on 21st April 1955, the new Prime Minister the paper *The Defence Implications of Fall-Out From a Hydrogen Bomb*, which included Brook's recommendations for the Defence Committee and the Home Defence Committee: [emphasis added to highlight the more politically sensitive topics]:

D(55) 17 [the Strath Report] is the report of the group of officials appointed at the end of last year to assess the defence implications of fall-out from a hydrogen bomb. Its broad conclusion is that, although a determined hydrogen bomb attack against this country would cause human and material destruction on an appalling scale, it would be possible to contain its effects and enable the nation to survive if adequate preparations had been made in advance.

2. Many new problems are posed by the hydrogen bomb. The report does no more than outline possible solutions: much more work must be done before it can be firmly decided how far these are practicable and financially acceptable. The study was based on the best scientific information available in this country, which is closely in line with the information subsequently released by the United States authorities. But our scientists are still handicapped by lack of information which the United States authorities alone can supply from the work which they have already done. They cannot under their legislation disclose information about the actual performance of their weapons or about methods of manufacture, it seems reasonable that the Western Alliance should pool information on methods of defence against hydrogen bomb attack and one would hope that much useful knowledge and experience on this aspect of the problem could be made available without prejudice to United States security requirements. You may wish to mention this to Admiral Strauss, at your talk with him on Friday afternoon.

3. The group of officials was primarily concerned with the problems of home defence in particular with the responsibilities of the civil authorities. I understand that studies on the active defence side ... have already been initiated. But the Defence Committee may like to confirm with the Chiefs of Staff that the Services are making a corresponding study of the effects of the hydrogen bomb on military organisation and plans.

4. The Home Defence Committee, of which the Chiefs of Staff are members, and the Permanent Secretaries of the Departments directly concerned have considered the report.

⁴⁰ Home Defence Committee HDC(55) 4 dated 17 March 1955.

⁴¹ Selwyn Lloyd was replaced as Defence Secretary by Sir Walter Monkton on 23 December 1955 and the 1956 Suez crisis caused further changes in Cabinet as and, in turn, he was replaced by Anthony Head on 18 October..

They endorse its conclusions [and] set out their main comments but it is in no sense a summary of the report.

Mr Macmillan, when Minister of Defence, had a preliminary informal talk about the report with a few Ministers; but there has not yet been any consultation with the Ministers in charge of Departments concerned, except the Home Secretary and the Secretary of State for Scotland. When the Defence Committee has considered the main issues, the Ministerial Committee on Civil Defence can be called to enable Ministers concerned with departmental planning to express their views on the recommendations which are of special concern to them.

5. Discussion in the Defence Committee should, I think, begin with consideration of the strategic assumptions... The two most important recommendations are these:

(a) Because the Chiefs of Staff consider that any future war in which the United Kingdom itself was attacked would involve the use of the hydrogen bomb, we should discontinue any home preparations which are relevant only to war fought with nothing but conventional or atomic weapons.

(b) Because of the widespread devastation which would inevitable be caused by a hydrogen bomb attack on this country, we should discontinue any plans (e.g. for the building up of industrial war potential) which rest on the assumption that the United Kingdom would be available as a main supply base after the attack.

Endorsement of these assumptions would have an important and far-reaching effect.

Though I believe them to be correct, there can be no absolute certainty that they would be realised in the event. There is, therefore, a natural temptation to shrink from applying them stringently and to hedge against the possibility that war may take a different form. That, however, would mean that Departments would be asked to plan for two or more different contingencies. Apart from the confusion that this would cause, it is certain that we have not the resources to prepare for more than one. If we attempted to prepare against several contingencies, inadequate provision would be made against any. War planning is in itself an exercise in choosing between various risks: as the resources available for home defence are so limited, they must be concentrated to meet the most likely and most dangerous possibility. A clear lead on this is needed in order to end to prevent the present dispersal of effort and to give momentum to the preparations against hydrogen bomb attack.

6. I realise that delicate issues are raised by the assumption that the United Kingdom could not be used as a supply base after the initial attack. For example, a decision by the Board of Trade to dismantle their skeleton organisation of wartime industrial controls would become known to the industrialists who are advising the Board of Trade on these matters. I suggest therefore that, if Ministers approve this assumption, they should do so only for the purpose of enabling detailed studies to be made by departments; and that Ministers should reserve to themselves the opportunity of considering the implications of those studies before any overt action is taken or any communication is made to outside bodies.

7. In dealing with the report itself, the Committee may find it convenient to go through the summary of conclusions and recommendations ...

The two most difficult and politically sensitive questions of policy are those concerning evacuation and shelter. Dispersal of the population would inevitably cause social and economic dislocation and the report rejects anything like total abandonment of the highly vulnerable areas on that account; it concludes nevertheless that some measure of evacuation would have to be undertaken if casualties on a disastrous scale were to be avoided. The proposal is that priority classes, such as mothers and young children, should be removed to safer areas but that other people should remain at work on a shift system in the high risk areas, moving out at other times to the periphery of the large towns. This would enable the economic life of the country to be maintained and seems the soundest basis on which to work.

A shelter of reasonably simple construction could give security against fall-out and some degree of protections against blast and heat beyond the immediate vicinity of the explosion. But further research is needed, into the most suitable type of construction and

into the protection afforded by ordinary houses suitably adapted, before Ministers can be asked to reach a firm decision on the right shelter policy.

The Home Defence Committee suggest ... that the Government's eventual plan both on evacuation and on shelter would command wider public support if presented with the authority of an independent committee. But it would be premature to set up such a body until the plans for presentation to it have been more fully elaborated.

8. The Home Defence Committee also recommend ... that the Government should not seek to impress the public with the dangers of thermo-nuclear war until they can tell them at the same time what measures of protection can be taken. But public opinion will before long demand the further Government pronouncement forecast at the end of the Statement on Defence, 1955. It will take some time for Departments to examine the full implications of the report for various aspects of home defence and to provide the material for a further statement. This points to the need for giving the necessary impetus to the preparation of plans before parliament is dissolved.

9. I recommend that the Defence Committee should approve the report by officials [Strath] as the basis for the preparation of more detailed plans, which should be brought before Ministers for approval as they become necessary. All Departments concerned with war preparations are involved in some way in the report's recommendations and require to use it, as endorsed or modified by Ministers, as background against which to draw up their particular plans. Because of the pressure of business before the Dissolution, you may think that it will be sufficient if the Cabinet is informed briefly of the defence Committee's decisions. At Mr Macmillan's suggestion a copy of the report was sent to all members of the Cabinet, for their personal information, at the end of March.

10. I also recommend that the Committee should direct that the revision of war plans should be based on the strategic assumptions given by the Home Defence Committee ... should take account of the points made in that note.⁴²

Sir Norman Brook had thus highlighted the specific problems and sensitivities of the thermonuclear threat and mentioned the vast range of measures to be considered, also made suggestions for necessary changes. Brook himself tackled the problem of those Civil Departments who still had not even upgraded their planning to the atomic threat before the thermonuclear threat arrived by upgrading the Whitehall committee machinery, telling Strath, now back in the War Plans Secretariat:

You are proposing, as the opportunity serves, to get the Civil Defence (Official) Committee into better working order – it might be convenient to make the Minister of Defence (who is showing an increased interest in civil defence) Chairman of the Ministerial Committee. It may be better to preserve the present situation where the strategy of CD is settled by the Defence Committee while the C D (Ministerial) Committee serves as a forum for discussion between the Ministers most directly concerned with civil defence functions.

When the new CD Committee of senior officials first met in June 1955, under Brook's chairmanship. He opened by warning these senior civil servants that:

Some departments had not really appreciated the effects of the Atom Bomb before the thermo-nuclear weapon appeared. The Strath group was set up in December 1954 by the Minister of Defence (with the approval of the Prime Minister) and the Report which the group produced necessitates a drastic revision of the whole of our war plans. There is not a single Department which is not radically affected.⁴³

The 1955 Home Defence Review

Through the summer of 1955, and led by the Cabinet Office, Whitehall carried out a thorough Home Defence Review – a most useful and appropriate procedure which was to be repeated at five yearly intervals in 1960, and 1965 with a similar review of

⁴² DEFE 13/45 *The Defence Implications of Fall-Out From a Hydrogen Bomb* 21 April 1955

⁴³ CAB 21/5002 New committee CD(O) 1st Meeting, Brief on Background by Chairman, 1 June 1955

the remnants of the CD organisation being conducted in 1970-71. The state of the nation's resources deployed to meet an H bomb attack, as seen in 1955 showed that much had been achieved but so much more was left undone – and appeared unlikely to be achieved at the then levels of home defence expenditure by the civil departments. With the gloomy prognostications presented immediately post-Strath in 1955 there not only seemed to be so much to be done but many topics appeared to have no prospect of solution. The case of the 1955 Home Office Review of Shelter Policy is a good example where the problems are presented and the suggested range of solutions costed:

4. Against thermo-nuclear weapons, even if unlimited funds were available, there can be no possibility of providing protection against a direct hit or near miss, that is in the case of a hydrogen bomb, within 2 or 3 miles of the explosion. Even outside that radius, any shelter policy which is economically possible can only aim to reduce casualties rather than eliminate them.

.... [shelter against fall-out only] .. the estimated cost of £25 a head is highly provisional
....

[the possible courses of action are...]

- a. To provide purpose built shelters for the whole population over a suitable period of time would total £1,250 million.
- b. To limit the programme to purpose-built shelters in new buildings ...reimbursement from the Exchequer would be a matter of political judgement.
- c. To undertake construction of shelters in peacetime but to stockpile materials for construction in an emergency ... at £5 a head making a total of £250 million.
- d. To undertake no physical preparations or stockpiling in present circumstances and to confine action to planning and the issue of instructions to householders about measures that could be taken in an emergency.

The decision must be based on political considerations of higher defence policy. A broad decision is required because of its bearing on the total size and distribution of defence expenditure and partly to direct the direction of further research ... ⁴⁴

As defence expenditure was under pressure, the cheapest option was that generally followed. Regarding Home Defence expenditure by civil departments, a summary of through the period to 1960 was provided in the 1960 Home Defence Review:

The Strath Report had provided fresh impetus to Home Defence. ... Specific decisions announced in the 1955 Defence White Paper included the establishment of the 48 Battalion Mobile Defence Corps, specially trained and equipped for rescue and fire-fighting and the announcement that 10,000 RAF Reservists a year would be trained in fire-fighting so as to serve with the national fire service in war.

In the 1955/56 estimates provision of some £70 million had been made for defence expenditure by civil departments... when the Strath Committee conclusions were approved in principle by the Defence Committee, departmental plans were reviewed, and a seven year programme was put forward, including a rising curve of annual expenditure of £80 million up to £180 million of which one third would be for civil defence in the narrow sense and the rest on stockpiling. Ministers were not able to agree to an expenditure of this of this order and eventually a figure of just under £45 million was approved for 1956/57. ... it was decided that preparations for global war should be given the lowest priority. The effect of this on home policy was never established, but in combination with extreme budgetary stringency at that time, there was a further reduction in the estimates for defence expenditure by civil department for 1975/58 to £21.9 million. The most important cut was in food stockpiling.

.... To sum up, while the Strath recommendations, as accepted by the Defence Committee, ranged over the whole field of civil preparations for home defence, Government policy has been in practice to exclude expenditure on the comparatively costly 'survival' measures, while concentrating the limited amount of money available on

⁴⁴ CAB134/793 *Shelter Policy* – report of the Official Committee on Civil Defence, October 1955

the maintenance of the civil defence services, expenditure on which has come down since 1955/56 only from about £12 million to about £9 million.

Remembering that this Home Office report was compiled for the 1960 Home Defence Review, the summary concludes:

It will be seen that in some respects progress has been reasonably satisfactory, but over the field as a whole physical preparations have been phased back or stopped in order to keep within financial limitations. In brief, there has been no agreed evacuation scheme and no provision has been made for shelter. Given some 48 hours for preparations, the public could be warned by siren of the approach of manned hostile aircraft, and once the BMEW system is in action some four minutes warning of the approach of missiles. ... a warning and monitoring system for fall-out has been established, Revised operational plans for the fire service have been made, but there is a shortage of manpower and of equipment for mobile columns, and an even more serious shortage of equipment for supplementary water supplies. Medical plans have advanced but lack of money has slowed progress. The food stockpile has been reduced rather than increased. The country's communications has been strengthened but plans for emergency broadcasting are not likely to be completed for some years ... it is not possible to provide at Government expense wireless sets which are not dependent on mains electricity supplies

....⁴⁵

Recalling in 2006 the atmosphere of the late 1950s in the Home Office, Lord (David) Renton, then a junior minister, clearly remembered that "money was everything and the level of expenditure on CD was particularly critical".⁴⁶ Nevertheless, a slightly more confident Whitehall used the 1956 Defence White Paper, without understating the 'grim effects of fall-out' in thermonuclear war, to explain the changes being made in home defence policy and the work in progress on the range of civil defence measures. But the emphasis was on planning for the future and warning the public that, as in 1938, it would be for householders to arrange their own shelters. The White Paper stated that:

The reshaping of home defence plans has to have special regard to the revolutionary implications of the threat of persistent contamination from radioactive fall-out over wide areas. Sufficient is already known from information made public ... to establish the nature and extent of the threat in contaminated areas, severe restrictions for some days on movement out of doors would be called for. For purposes of survival under such conditions the household becomes the basic unit. So general and widespread danger will need to be met primarily by each household acting on guidance and instructions from the central and local authorities both before the event and after.

To give full protection to everyone from sickness or death from the hazard of radioactivity alone would involve physical preparations on a vast scale and to make such preparations against all hazards of a thermo-nuclear attack on this country would place a crippling burden on the national resources. ...

... The emphasis will be on plans and preparations to establish a system of warning and monitoring of radio-active fall-out and an adequate scheme of control through the organs of central and local government, and to ensure the availability of the necessary communications, to build up local and national services trained and equipped to deal with the casualties and to mitigate the other effects of thermo-nuclear attack, to revise evacuation plans, to continue the continued functioning of essential public services, and to inform the public fully, both as to the dangers involved and the steps that can be taken to meet them ... but the need for strong and efficient local civil defence services as great as ever.

The Mobile Defence Corps The formation has begun of the first of 25 reserve battalions of the Mobile Defence Corps... the response to the plan for the enrolment of volunteers to provide the officers and NCOs of these units has been encouraging... ..

⁴⁵ CAB134/2039 *Current Home Defence Policy and Preparations* Note by Home Office 6 April 1960.

⁴⁶ Telephone conversation with the 98 year old Lord Renton, 28 September 2006.

the planned strength of the MDC will be reduced from 48 battalions to 36, sustained by an annual intake of 7,500 men from the Army. ... the reduction in the numbers for MDC will be more than offset by increasing the number of reservists made available by the Services for training for fire-fighting by the Home Office from 10,000 to 15,000 a year. The Army will provide 2,500 men a year and the RAF Class H reservists will be increased to 12,500.

Evacuation The problem of devising measures of evacuation on a scale appropriate to the risks of thermo-nuclear attack has been engaging the Government's closest consideration. ... Many more people than in the last war will have to be enabled, if they wish, to leave much wider areas. ...

Shelter ... Full protection within a few miles of the ground burst of a megaton weapon is impracticable. Outside this range protection against blast and heat could be obtained from shelters similar to those used in the last war. The danger of fall-out however necessitates shelters which can be occupied for 48 hours or more.. To give a high degree of immunity, the ideal would be a shelter would be below the surface, preferably inside a house. But to provide this degree of protection on a country-wide scale would result in an insuperable burden on our economy and the Government have reached the conclusion that considerations of finance and resources preclude a programme for the construction of domestic shelters at public expense.

Casualties and the Homeless The casualties resulting from a nuclear attack would be likely to surpass in numbers anything with which the ordinary hospital services, however expanded and diluted, could expect to deal. As regards the homeless, the pre-attack movement of the population due to evacuation will give rise to extensive problems of welfare of those who have left their homes; after the attack the extent of movement is much less certain ... Subsequently there may have to be large-scale movements of people away from undamaged homes in areas where persistent levels of residual radioactivity would make continued living hazardous for a period of, possible, some months..⁴⁷

Discussions continued on the difficult topic of evacuation policy. A meeting of the Ministerial Committee on Civil Defence in February 1956, chaired by Home Secretary (now Gwilym Lloyd-George), presented the grim dilemmas of evacuation policy in the era the H Bomb as the number of citizens now in evacuation areas had risen to some 25 million, half of the UK population. Even if evacuation was restricted to just 14 million of the traditional 'priority classes', he feared that industrial production would progressively close down, there would be danger of public panic, the break-up of family units and the paralysis of civil defence preparations. Plans had to command public confidence and need for evacuation schemes to be voluntary although billeting in reception areas would have to be made compulsory.⁴⁸ From the Ministry of Housing and Local Government, Duncan Sandys, who had been involved in the *Crossbow* evacuation plans preparing for the V weapon offensive in 1944, contributed the common-sense advice that:

It is quite certain that it would not be possible to evacuate everybody and it would be silly to pretend we could. The Government should simply say that evacuation would be carried out by stages ... and that the process would continue as fast as transport could carry the people and as long as time allowed.⁴⁹

A similar warning was sent to Major Lloyd-George in June 1956 by Sir Walter Monkton, Minister of Defence, on his seeing a draft Home Office Memorandum to be circulated to local authorities on fall-out measures:

⁴⁷ Cmd 9691 *Statement on Defence 1956* Home Defence, paras 104-128

⁴⁸ CAB134/1206 *Evacuation Policy* – Home Office Paper dated 17 January 1956 and subsequent Ministerial Committee meetings.

⁴⁹ CAB134/1206 Memorandum by D Sandys, 1 February 1956.

... If people are reminded in an official publication that after a nuclear attack they ought to remain under cover in special fall-out shelters constructed in their houses, surely the Government will be pressed to provide shelters for everybody. The report on the medical hazards of nuclear radiation by the Medical Research Council is to be published tomorrow and this will help to focus public attention on the point.

I am inclined to suggest for these reasons that the Cabinet have their discussion on the £100M economies on Thursday – which will be an opportunity for a wide ranging survey of defence policy - you should raise the question of publishing this memorandum.⁵⁰

The Home Secretary 'had been hesitant about circulating the paper while discussions about future home defence expenditure were going on' agreed with Monkton's view and the circulation of the paper to the Cabinet was delayed until 'after the [summer] recess'.⁵¹

During 1956, serious decisions were required on future nuclear testing as the UK was about to plan a series of thermonuclear tests in the Pacific. A search for a suitable remote test site was being conducted as a matter of urgency as it was 'a race against time' to carry out the tests before a test ban treaty was accepted. Eden's Government was sensitive to accusations that they might be accused of threatening mankind by further polluting the atmosphere with fallout if they carried out the planned 1957 British H bomb tests. They therefore awaited the report on radiation fallout being produced by Sir Harold Himsworth, Secretary of the Medical Research Council, and were considerably relieved when Himsworth, at a meeting of Ministers and senior advisers⁵², reported that 'the effects of external radiation was insignificant and the genetic effects were negligible'. The meeting produced an interesting insight into the concerns of those attending:

[the meeting was] called at the suggestion of the Lord President's suggestion to consider whether the proposed announcement of British nuclear trials to be undertaken in the Pacific in 1957 ... [and] the forthcoming publication of the report of the Committee appointed by the MRC to consider genetic and other effects of nuclear explosions. Sir H Himsworth [summarised the report] ... the effects of external radiation was insignificant and the genetic effects were negligible ... if the rate of firing increases we could approach [the point] at which ill effects might be probable in a small number of people.

Sir John Cockcroft accepted this conclusion ... [but] the strontium level could not be ignored.

Sir Frederick Brundrett ... level of testing was unlikely to continue at the level of recent years ... [there was] no case of the level of the next ten years at the level of the past three years.

Discussion ... there was nothing in the report which would justify cancelling or postponing this series of tests. Concealment of preparations are becoming increasingly difficult ... [we are] obliged to ask a United States airline to change its plans to use Christmas Island – it is intended to make an announcement on 31 May 1956

After discussion the Prime Minister said that the least objectionable time for an announcement would be in parliament on 7 June. The [MRC] committee's report is to be published on 12 June and the PM will say that the Government has taken full account of all that was said in the Committee's report.

⁵⁰ DEFE13/45 *Public Control Under Fall-Out Conditions*, Memo Monkton to Lloyd-George, 11 June 1956

⁵¹ DEFE13/45 Memo to MoD, 30 July 1956

⁵² Anthony Eden (PM), Lord President, H Macmillan, R A Butler, Selwyn Lloyd, Walter Monkton; also present were Sir Edwin Plowden, Sir Harold Himsworth (Secretary Medical Research Council), Sir John Cockcroft (AEA) and Sir Frederick Brundrett (MoD)

Agreed: The Government must stand firm on their decision to hold a series of tests in the Pacific in Spring 1957. This was justified on the grounds that this was settled Government policy that the UK should possess thermo-nuclear weapons and the Government was not prepared to incur the expenditure of accumulating a stockpile without first satisfying themselves that they were effective. It was however, to be expected that a growing weight of public opinion would develop against any long continuance of major test explosions and it might be impractical for us to hold any further tests after those planned for the Spring of 1957. Indeed the Government might find themselves compelled, by the force of public opinion, to undertake to accept the international prohibition of further tests after this particular series had been successfully completed.

In view of the likely trend of public opinion, the Government might be well-advised to take the initiative in proposing discussions between the three Powers concerned with a view to the limitation, and ultimately the prohibition of nuclear tests.

The Meeting:

Invited the Foreign Secretary to arrange, in consultation with MoD and AEA, a paper to be prepared, summarising the findings of the Committee of the MRC on '*The Hazards to Man of Nuclear and Allied Radiations*' and indicate the lines on which the PM might announce, in a statement in the House of Commons, on 7 June, the Government's decision to hold a series of thermo-nuclear tests

Agreed that, subject to the cabinet discussion 5th June, the announcement about the holding of thermo-nuclear tests in the Pacific in the Spring of 1957.

Took note that the report of the Committee of the MRC would be published on 12th June.

Invited the Foreign Secretary to consider the possibility of initiating discussions with the Governments of the US and Soviet Union with a view to the conclusion of an agreement ... providing initially for the limitation, and eventually for the prohibition, of further thermo-nuclear tests.⁵³

In January 1957, in the aftermath of the Suez crisis and with the nuclear test question still dominating much of Government weapons planning policy, Harold Macmillan replaced Anthony Eden as Prime Minister and, with hatchet man Duncan Sandys as his Minister of Defence, there followed controversial reviews of Britain's defence plans. Sandy's April 1957 Defence White Paper announced that:

... the time has now come to revise not merely the size, but the whole character of the defence plans. New and ever more formidable weapons have been succeeding one another at an increasing rate.

Although short of detail on Civil Defence, the Paper again confirmed its inclusion in national defence policy :

18. While available resources should as far as possible be concentrated on building up an active deterrent power, it would be wrong not to take some precautions to minimise the effects of nuclear attack, should the deterrent fail to prevent war. Civil Defence must accordingly play an essential part in the defence plan.

19. As in other fields, the country's economic capacity limits the effort which can be devoted to this purpose. In 1957/58 the main task will be to keep the existing local organisation in being, so as to provide a basis on which realistic planning can continue. The necessary training equipment will be provided. Essential research will proceed, and work on emergency communications and on setting up the fall-out warning and monitoring system will go on. These preparations will provide a framework for expansion, should that later be necessary.

21. While concentrating available resources so far as possible on building up an active deterrent power, some precautions must be taken to help organised society survive, should the deterrent fail to prevent war. ... In 1957-58 [we will] concentrate on keeping the local organisation in being so as to provide a basis on which realistic planning can continue.⁵⁴

⁵³ CAB130/115 *Meeting of Ministers on Nuclear Tests and Radiation* 28 May 1956

⁵⁴ Cmnd 124 *Defence: Outline of Future Policy* April 1957

The 1957 White Paper was controversial, not least because it announced reductions in the armed forces manpower from 690,000 to 350,000 by the end of 1962 but also for the radical equipment changes planned for these smaller armed forces – and there was to be no further call-up under the National Service Acts after the end of 1960. The two main reasons given in the paper for this dramatic ‘new approach’ were scientific advances and the need to reduce defence expenditure. Collective defence as part of ‘the defence of the free world’ was to play a greater part in meeting ‘the growth in the power of weapons of mass destruction[as] no country can any longer protect itself in isolation’. The White Paper stressed the need for a new, more economic approach to defence which naturally included expenditure on CD:

. . . . It has become evident that a military effort on the scale planned in 1950, which envisaged expenditure amounting to £4,700 million over three years was beyond the country’s capacity.

... the time has now come to revise not merely the size, whole character of the defence plans.

. . . . In recent years military technology has been making dramatic strides. New and ever more formidable weapons have been succeeding one another at an increasing rate

These scientific advances must fundamentally alter the whole basis of military planning. But it is only now that the future picture is becoming sufficiently clear to enable a comprehensive reshaping of policy to be undertaken with any degree of confidence.

.. It must be frankly recognised that there is at present no means of providing adequate protection for the people of this country against the consequences of attack with nuclear weapons. Even if only a dozen enemy bombers get through [the Javelin and Hunter air defences] they could with hydrogen bombs inflict widespread devastation and might well blot out a large part of the people of the cities..

... Since peace so largely depends upon the deterrent fear of nuclear retaliation, it is essential that a would-be aggressor should not be allowed to think he could readily knock out the bomber bases. Fighter aircraft will in due course be replaced by a ground-to-air guided missile system.

In the 1957 Defence Debate, Macmillan and Duncan Sandys stoutly defended the changes they were making in defence policy, Macmillan in particular highlighted the shortcomings in the approach of the Labour Party speakers. In his memoirs he recorded:

Since the Defence White Paper makes it clear that all our defence – and the economies in defence expenditure are founded on nuclear warfare, it throws the Socialists into still greater confusion. Gaitskell’s position becomes more and more humiliating. Meanwhile, however, the political side of their campaign has dangers for us all. The sentimental appeal is very strong. The worthy people of all types and ages are easy prey and of course they will be cynically exploited

In the debate, which Sandys opened with an admirable exposition, I naturally concentrated upon the dilemma in which the Opposition were placed. We regarded nuclear power as a deterrent against massive attack. Many members had tried in the defence debate two years previously – the last in which Churchill had spoken – to force us to define what would be the occasions on which we should rely on conventional resistance, and what would be the situation when all-out war would be necessary.

On the general issue, while expressing sympathy and understanding for the true pacifists, it was not difficult to submit proposal to effective dissection. Full disarmament might come one day, and a test-ban treaty was not impossible. But it would be a mistake to believe that ‘banning the bomb’ - even if it could be agreed and effectively policed – would solve the problem of European security. I went on to observe:

I have been through two major wars fought by conventional weapons. Some people now talk as if those were quite harmless and quite respectable operations. [*Hansard 17 April 1957*]

On the first day of the debate the most notable speech on Opposition side was delivered by George Brown. Considering the absurd position which the Opposition have got themselves into over the Bomb, I thought he made a gallant effort. Of course, he had to go back on his robust broadcast statement. The Opposition amendment is contradictory and ridiculous, for it attempts a compromise between two diametrically opposed views. [Hansard 16 April 1957]

The Press, who had already given a generous welcome to the Sandys Defence White Paper, recognised that, on the nuclear issue, the balance: 'the argument weighed heavily in favour of the Government. But, alas, great difficulties still remained. The complexity and expense of modern weapons, together with the heavy risks involved with novel and untried devices, were to prove, during the years that followed, a perpetual source of difficulty and disappointment. On the wider issue, although the world seems to have become accustomed to a situation in which the great powers have the capacity to destroy themselves and their neighbours, yet the very magnitude of the disaster has produced a certain sense of stability, and even security. But under the cover of this 'balance of fear' new conflicts of a minor but dangerous nature have developed in many parts of the world. I had no doubt that the part that Britain should still play, even in the changing world and with new Commonwealth responsibilities replacing her old imperial power, could be adequately performed by the kind of forces which were then designed.⁵⁵

The 1958 and 1959 Defence White Papers were also short on further details of Civil or Home Defence although the 1958 Paper had stated that the volunteer manpower problem was improving:

Civil Defence remains an integral part of the defence plan. ... It is the Government's policy to encourage the recruitment and training of the Industrial Civil Defence Service which contributes well over 200,000 volunteers towards the total of half a million men and women now enrolled in civil defence.⁵⁶

With the UK having successfully tested its own H bomb in 1957, in March 1958 the Ministerial Committee learned that:

the Russians, either using bombers or ballistic missiles when available, [could mount] a comprehensive attack on this country. It would be aimed in all probability at nuclear bomber bases and offensive missile launching sites (a total of at least 40 to 50 targets) as a first priority. Even if there were no deliberate attacks on centres of population, the smallness of the UK and the possibility of weapons going astray, it is very likely that centres of population will be hit.... If, as is possible, ground burst weapons are used ... extensive areas of the country would be contaminated by fall-out as well.⁵⁷

So, once again, the threat to the country was even more formidable as even those bomber bases in rural areas were now probable targets - so the problems of home defence were consequently much greater. Nevertheless, in September 1958, the Cabinet Defence Committee set the Civil Defence budget (Civil Departments) at £18.85 million annually⁵⁸ although the 1959 Defence White Paper, confirmed that:

2. No major change is contemplated in the structure or role of civil defence. During the coming year, the Civil Defence services will be giving special attention to dealing with radiological hazards. Additional orders are being placed for training equipment and further deliveries radiac instruments will be made. Essential communications will continue to be strengthened and a part of the development of the warning and monitoring system organisation, constructional work for the Royal Observer Corps will be accelerated.
3. Although the prospective end of National Service has made it necessary to disband the Mobile Defence Corps, the Territorial Army is to be given more operational training in

⁵⁵ Harold Macmillan *Riding the Storm 1956-1959* pp. 267-268

⁵⁶ Cmnd 363 *Report on Defence Britain's Contribution to Peace and Security*, 1958 para. 52

⁵⁷ CAB134/1476 *Form and Duration of A Future War* 19 March 1958

⁵⁸ CAB134/2040 CD(59)8, 4 December 1959

civil defence techniques and the co-operation between the Army and the civil defence authorities continues. Next year a new field for recruitment will be opened to the civil defence services when nearly two million men who joined the armed forces before 1949 will be freed from their present reserve liabilities under the Navy, Army and Air Force Reserves Act of 1954..⁵⁹

The prospect of the end of National Service producing more civilian CD volunteers proved too optimistic but efforts were put in hand to raise the effectiveness of the CD Corps by pruning members with poor attendance records and those unwilling to undertake additional training. The lowering of expenditure on home defence was not highlighted in the 1960 Defence White Paper which did detail the 'shaking out' of those less effective volunteers:

... Some 142,000 volunteers have been recruited for the Civil Defence Corps during the last three years. About 132,000 members have gone from the Corps over the same period, but this was largely the result of the removal from the registers of the inactive and untrained.⁶⁰

By the late 1950s, such was the cost of measures necessary to provide effective Home Defence that, even in an era when Britain had 'never had it so good', the concept of effective civil defence in a thermonuclear age was not only being seriously questioned but was also becoming unaffordable. Meanwhile, from the mid 1950s, an increasingly effective anti-nuclear movement was developing in the UK and, although it is difficult to identify any specific influence that movement might have had on home defence policy and its implementation, there is no doubt that politicians of all parties were always aware of the likely public reaction to nuclear and related defence decisions they took. Public interest in civil defence and in the essential contribution of local authorities had been dramatically raised in 1954 when Coventry City Council refused to carry out its CD responsibilities (above). The question of civil defence returned to public attention in 1958 when a similar revolt in the Metropolitan Borough of St Pancras resulted in the appointment of a Commissioner and a similar withdrawal of their policy by the Borough some months later.⁶¹

Nevertheless although civil defence was generally agreed to be an essential element of defence policy, opposition to spending on home defence was not limited to the articulate anti-nuclear movement as some within the Whitehall considered that scarce defence resources should be better spent directly on improving the integrity of the nuclear deterrent. By 1958, home defence expenditure was increasingly restricted to the achievement of a more efficient range of Civil Defence Services and, as the wide-ranging and thorough 1960 Home Defence Review was unanimous in its view that some provision should be made for carrying on the government of the country in nuclear war, and that the provision of emergency headquarters for the central Government and of a regional organisation should be completed.

Significantly there was, in Whitehall by the end of the 1950s:

.. a minority view that other home defence preparations have no place in our defence policy, since we could not afford to undertake preparations on a scale that would influence the public's attitude to the deterrent policy in a period of tension, still less provide adequate protection against attack. Those who hold this view consider that our limited resources are best spent on maintaining an effective deterrent, but they

⁵⁹ Cmnd 662 *Progress of the Five-Year Defence Plan, 1959* paras 20-21

⁶⁰ Cmnd 952 *Report on Defence 1960* paras 49-50

⁶¹ The anti-nuclear movement through the period to 1974 may be the subject of a separate paper in this series.

nevertheless recognise that it would be politically impracticable to abandon home defence entirely at the present time. They consider that expenditure for this purpose should be severely restricted, and progressively reduced as this become politically possible.

The view of the majority of the Committee is that home defence preparations are an integral part of the deterrent policy, primarily because of their potential value in steadying public opinion in support of this policy in a period of tension. Some of the Committee also think that the Government has a duty to take measures to mitigate the consequences to the civil population in global war, and that home defence preparations are justified in order to increase the chances of survival if a war were to come. In practice, measures which would be justified on this latter ground are largely the same as those which would be of value on the former ground, namely to steady public opinion in a period of tension.

Thus, although UK civil defence reached a high point around 1959 in terms of smaller and better trained and better equipped Civil Defence Services, the policy and organisation was considered unsatisfactory to meet the thermonuclear threat, the 1960 Home Defence Review concluding that:

The Government could not show that they had a coherent and reasonable home defence policy; it would be difficult to give a positive lead in home defence or to make a comprehensive statement of policy; and little could be done to remedy the present lack of interest among local authorities and others concerned in home defence. These difficulties would be reduced if some moderate increase in home defence expenditure could be allowed.⁶²

Making the case for a moderate increase in home defence expenditure, the majority of the 1960 Review Committee considered that a coherent and publicly defensible policy for home defence was needed. However budgetary restrictions continued and, in 1964, the incoming Labour government expressed the intention of giving high priority to public expenditure of social and economic value - so the prospects for more civil defence expenditure were poor.⁶³

⁶² CAB134/2041 HDR(60)51 Home Defence Review, Conclusions, Paras 151-158, December 1960

⁶³ UK Civil Defence 1960-1974 will be the subject of a subsequent paper.