

CENTRAL REGION HOME DEFENCE PLAN

Chapter 1

The Purpose of the Plan and Basic Assumptions

Reference: SHHD Circular ES(Scot) 3/75

1. "Civil Defence" is defined in the Civil Defence Act 1948 as including "any resources not amounting to actual combat for affording defence against any form of hostile attack by a foreign power, or for depriving any form of hostile attack by a foreign power of the whole or part of its effect; whether the measures are taken before, at, or after the time of the attack." On this definition is based the concept of defence planning for civil preparations by both central and local government to meet a war or the threat of war. In amplification of the definition H.M. Government have defined the aims of home defence as being:

- (a) to secure the United Kingdom against internal threat;
  - (b) to mitigate as far as practicable the effects of any direct attack on the United Kingdom involving the use of conventional, nuclear, biological or chemical weapons;
  - (c) to provide alternative machinery of government at all levels to increase the prospects of and to direct national survival; and
  - (d) to enhance the basis for national recovery in the post attack period.
2. In the above context the main responsibility for the internal security of the United Kingdom lies with Central Government supported by the police and when necessary the armed forces. The purpose of local authority Home Defence Planning is therefore directed to meet the aims set out in paragraphs 1(b), (c) and (d) above, the responsibility for which is shared jointly between Central Government, and local authorities at both Regional and District level.

Assumptions

- 3. The Warning Period. The current NATO military and political assessment is that prior to any outbreak of hostilities there would be a period of international tension which would give a period of some weeks or possibly months, for the implementation of war emergency plans. For planning purposes it should be assumed therefore that a period of 3 - 4 weeks will be available for the implementation of war emergency plans, though where practicable an earlier implementation time should not be excluded.
- 4. Form of Attack. The current assessment is that any hostile attack on the United Kingdom will almost certainly be by nuclear weapons, although there may be a short initial phase when only conventional weapons are used. Also while the use of chemical, and to a lesser extent biological weapons, cannot be discounted against vitally important civil and military targets, their general use is assessed as unlikely. This plan is therefore directed primarily at preparing the/

the Region to meet a nuclear attack. The measures proposed are in any case likely to be equally relevant to an initial phase when only conventional weapons might be used.

5. Effects of Attack. Since the scale and pattern of a nuclear attack cannot be determined with any precision it is impossible to assess the probability of casualties and damage. Solely for the purpose of survival planning the Home Defence Plan makes the assumption that the population survival rate would range from 60% in the worst affected areas to 95% in those least affected. On the other hand the loss of essential services and production capacity, due both to direct damage, the loss of power supplies and disruption of manpower and natural resources could be as high as 80%. Furthermore, few, if any, parts of the country would be unaffected. If any did escape the direct effect of explosions and resultant fall out they would nevertheless be affected by the disruption of essential services and communications.

#### Planning Objectives

6. From the above assumptions it follows that in the event of a nuclear attack the most important aim of government in its widest sense, including both central government, local government, and statutory bodies, must be to survive as a framework of government, designed to marshal and co-ordinate surviving resources and in the longer term to provide the administration necessary for a more stable existence. This therefore is the prime aim of the plan. Secondary to this aim, the plan contains details of resources which might be deployed for basic life saving tasks such as rescue and first aid at the time of any attack or in the follow up period. However, because of the likely constraints on movement under fall out conditions and the primary aim of long term survival, basic life saving tasks and the immediate succour of casualties can only be considered as being lower in the order of priority.

#### Overt and Covert Measures

7. The appendix to this chapter contains a list of measures which the Regional and District Authorities might be invited to implement during the period of tension. It will be seen that some of these could be implemented without general publicity (covert measures) while others (overt measures) would necessarily be known about. In some circumstances H.M. Government might direct that only covert measures were to be implemented, equally well the political climate might dictate that the emphasis should be placed on overt and measures to demonstrate H.M. Government's determination to resist any threat. The plan has therefore to be flexible enough to provide a wide range of options to meet any given circumstances within a variable time scale.

#### Emergency Powers

8. Some of the measures listed in the appendix would require the enactment of Emergency Powers and while it may be assumed that these powers would be available at the outset of a war they would not necessarily be available during a period of tension.

#### Notification

9. While it is expected that it will be clear from the political situation that/

that it would be prudent for the civil defence procedures to be reviewed, it is expected that the H.M. Government will give at the time a firm notification that local authorities should revise the level of their Civil Defence preparations and specifying which measures were to be implemented. This would be followed by general guidances, details of funding particular measures, and any further instructions. These would be passed by the normal means of circular, telex, telephone, depending on the urgency until such time as Zone and Regional Headquarters had been activated when the chain of communications would be to Zone and thence to Regional Headquarters.

#### Advice to the Public

10. Since the pattern of any attack and the resultant fall out cannot be predicted the advice of H.M. Government would be aimed at avoiding mass movement of people. The public would therefore be repeatedly advised by leaflets, posters, the press, radio and television to stay put, with amplifying instructions of the system of warning of attack and fall out; of the action to be taken if a warning is given, and any measures which they can take to enhance the protection afforded in their homes. The general aim would be to keep any disruption of the social, economic and industrial life of the country to a minimum until such time as an attack is imminent. The public would therefore initially be advised to carry on with normal day to day activities until such time as the situation dictates that they should be advised to stay as far as possible in or near their own homes and to listen in for further announcements. It follows that the concept of formal planning for the dispersal of population from one area to another is no longer a requirement. It is, however, recognised that in the stress of the situation many people may not heed the advice to stay put and a flexible plan is required for the care of the homeless by use of rest centres and billeting.

## TRANSITION-TO-WAR MEASURES

This list is not exhaustive and is intended merely as a guide to the more important measures to be taken by local authorities in a period of war emergency. While the chronological sequence of authorisation of these measures could vary considerably, the following progression is illustrative as a basis for planning.

### INITIAL REVIEW ARRANGEMENTS

1. Review of Controller and Emergency Committee designate appointments.
2. Review of designated key officers with home defence responsibilities and call out arrangements for these officers.
3. Review of arrangements for liaison and assistance from voluntary organisations and local self-help schemes.
4. Review of emergency feeding plans.
5. Review of rest centres, homeless and billeting arrangements.
6. Review of emergency water and essential works arrangements.
7. Review of telephone preference scheme.
8. Review emergency sanitary and environmental health services.

### PREPARATORY MEASURES

9. Briefing of local authority staff and any other people to fill war posts.
10. Collection and distribution of radiac and other equipment from government stores.
11. Assumption by key officers of their home defence organisational responsibilities.
12. Warning to all personnel to stand by for designated war duties.
13. Preparation to activate wartime headquarters at all levels.
14. The formation of local self-help, first aid and personal welfare services.
15. Provision for the control of the public under fall-out conditions.

### ACTIVATION

16. 24-hour manning of wartime headquarters by duty officers.
17. Activation of wartime headquarters communications in advance of full manning.
18. Advice and information to the public.

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ORIGINAL

- \*19. Assumption of powers by Controller and Emergency Committee.
20. The education service shut down - Scottish Education Department Circular No. 555 dated 20th March, 1964.
- \*21. Requisitioning of premises and stores.
22. Activation jointly with the appropriate Health Board of simple personal health facilities at community level.
23. Full activation of local authority wartime headquarters and controls at all levels.
24. Activation of rest centres.
25. Activation of billeting arrangements.

\* Emergency Powers required.

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CENTRAL REGION HOME DEFENCE PLAN

Chapter 2

Direction and Control - Machinery of Government War

Reference: SHHD Circular ES(Scot) 3/75 Annexe B

1. One of the primary aims of Home Defence Planning is to provide for the continuation of government at all levels in the likely event that central government will no longer be operable from its customary locations and that communications will be disrupted. To provide for this a new form of government on a zone basis will be introduced in war to assume control of domestic and internal affairs.

The plan for government-in-war in Scotland provides for the setting up of a Scottish Central Control under the Commissioner for Scotland, with three subordinate Zonal Headquarters, North, East and West under Zone Commissioners. These zones are composed as follows:

Western Zone covering Central Region  
Dumfries and Galloway Region  
Strathclyde Region

Eastern Zone covering Border Region  
Lothians Region

Northern Zone covering Fife Region  
Grampian Region  
Tayside Region  
Highland Region  
and the Island Authorities

Regional Controllers

2. Below the Zones, in each Region a Regional Controller will be appointed and he would be empowered to exercise the full function of the local authority in the Region. The Regional Controller designate for the Central Region is, in accordance with established Central Government policy, the Chief Executive of the Central Regional Council. As Regional Controller he would be responsible to the Zone Commissioner and, if communications for the Zonal H.Q. were cut, he would be expected to exercise the full powers of internal government over the Region until further instructions were received. The authority for the exercise of these powers would be given by Ordinance of the Zone Commissioner, if necessary in retrospect.

3. While the circumstances still allow it, it is important that the normal democratic procedures of local government should function and to this end a special Emergency Committee of the Council will be nominated and would be vested with the same authority as normally exercised by the full Regional Council. The Regional Controller would for as long as circumstances/

*No clear indication  
of Regional Commission  
being involved*

circumstances permitted be expected to consult the Emergency Committee on general policy in relation to the disposition of regional resources and to the discharge of those functions of the Regional Council which are essential to the life of the Community. The Controller would also be expected to report to the Committee from time to time on the steps which he was taking as a Government Official. The Central Regional H.Q. will be in the basement of New Viewforth, with an alternate H.Q. at Buchanan Street, Balfron.

4. If and until required to exercise the full powers of internal government, the Regional Controllers' responsibilities would be:

- (a) to determine priorities
- (b) to plan for the most effective use of surviving resources
- (c) to co-ordinate the activities of essential services.

To fulfil these functions he would be able to call on the Departmental Directors and liaison officers appointed from Government Departments and other agencies to the Regional Headquarters. He would also call on the District Controllers. The one exception is the Chief Constable. The latter, while having to maintain a close liaison with the Controller in order to keep the Controller informed of the public order situations and to make himself aware of information and policy decisions which could affect his operation of his force, is responsible for the maintenance of law and order and the operational control of his force to the zone Police Commander.

#### District Controllers

5. Under the Regions would be set up District Headquarters under a District Controller, who would be the Chief Executive of the District. As with the Region a small District Emergency Committee should be formed consisting of three or more elected members and they would have the same relationship with the District Controller as would the Regional Emergency Committee have with the Regional Controller. The District Controller would be answerable to the Regional Controller.

6. The District Controller would be responsible for assessing the situation within his district, determining priorities, identifying and co-ordinating the deployment of resources and undertaking any additional functions delegated to him by the Regional Controller. To carry out these functions he would be assisted by the Departmental Directors and Managers and Liaison Officers appointed by Central Government Departments and other agencies to the District H.Q. The District War Headquarters will be located as follows:

- (a) Falkirk District. Former C.D.H.Q. at rear of Municipal Buildings, Falkirk.
- (b) Stirling District. The Ground Floor, Municipal Buildings, Stirling.
- (c) Clackmannan District. Marshill House, Alloa.

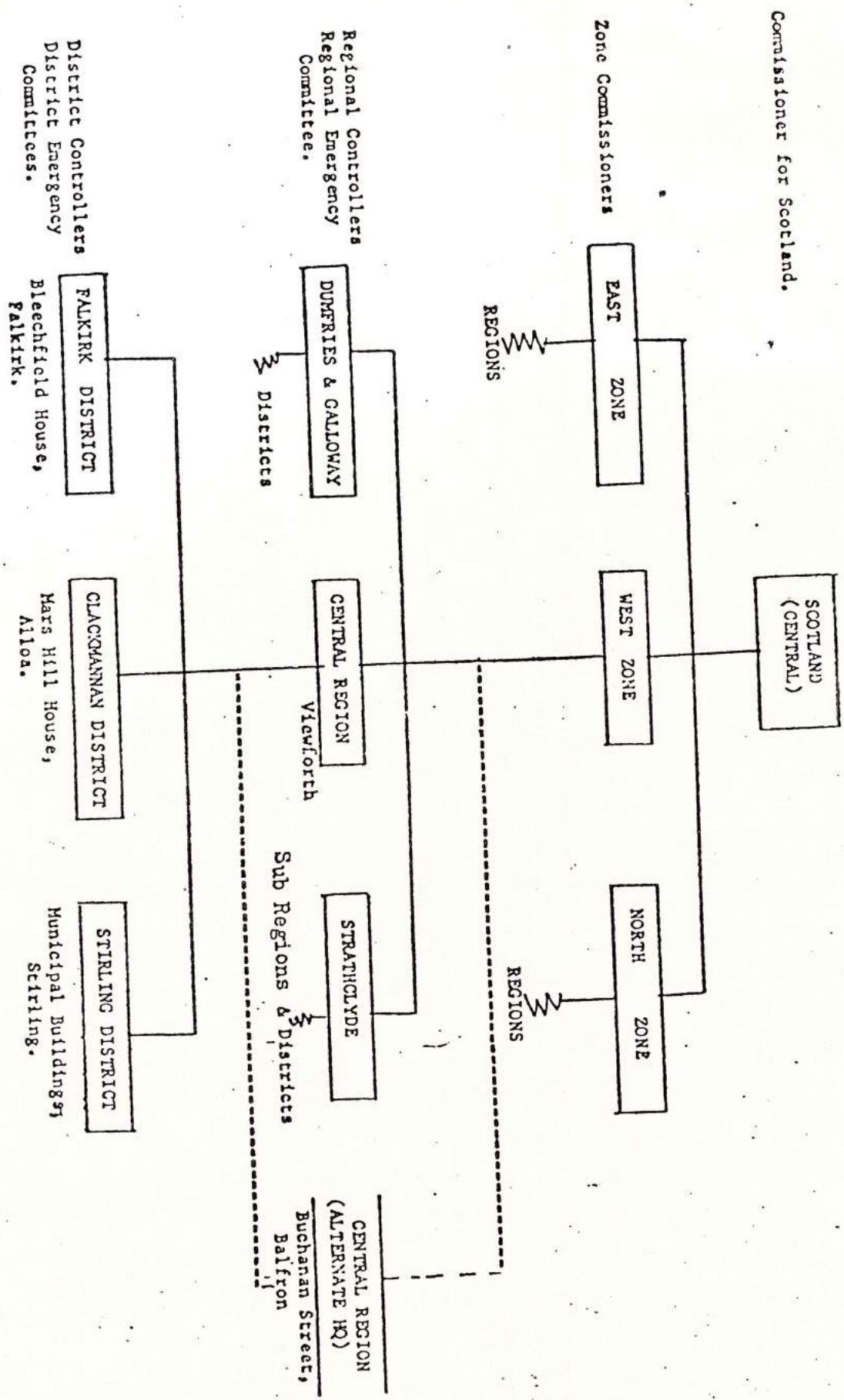
Responsibilities/

Responsibilities and Accountability

7. It must be appreciated that the system described above is a four tier system for the conduct of all internal government functions, whether exercised in peace time by Central Government, Regional Councils or District Councils. Furthermore, the appointments of Regional and District Controllers would be made by the Secretary of State under emergency legislation and they would not only have all the powers exercised normally by the Regional or District Councils but also other powers as may be given by emergency legislation or by ordinance from the Zone Commissioner. Furthermore, the accountability of the Regional Controller is to the Zone Commissioner, and that of the District Controller is to the Regional Controller.

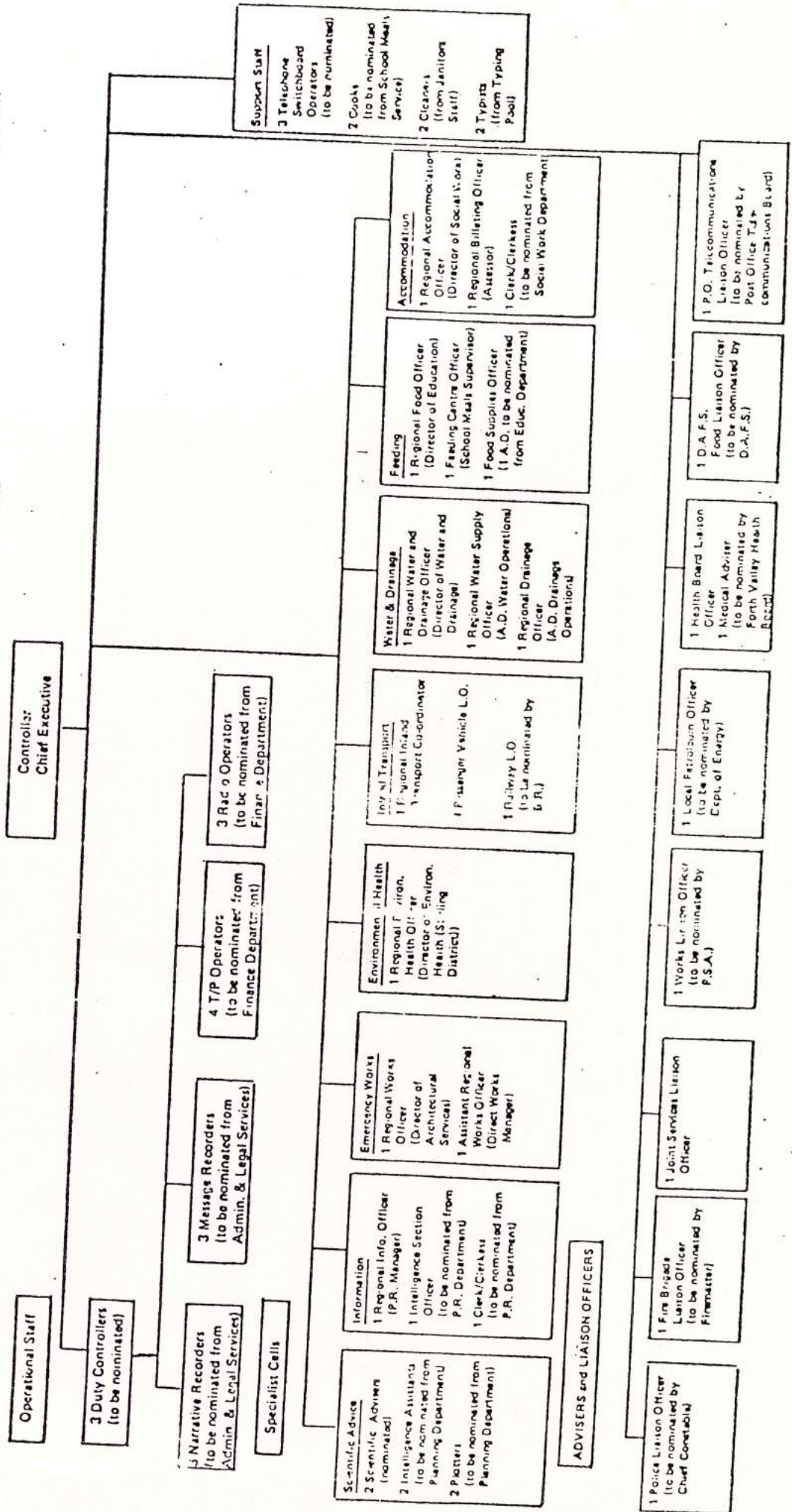


Diagrammatic Presentation of the Machinery of Government in Mar.



**STAFFING and ORGANISATION CHART for REGIONAL WAR HQs, VIEWFORTH**

ANNEX A



CENTRAL REGION HOME DEFENCE PLAN

Chapter 6

Communications

Reference: SHHD Circulars ES(Scot) 9/1976 and 6/1977

1. In the wartime situation envisaged the communications problem will be one of the major factors in whether some semblance of orderliness can be reached in the close down and immediate post attack phases. If successful communications can be achieved then advice and leadership will be available from the District Headquarters to the grass roots. If they cannot then individual communities will have to fend for themselves and the problem of building up the overall picture of radioactivity levels will be greatly increased. The communications links can be readily divided into three levels which can easily be considered separately, namely (a) Communications between Zone and Regional/Alternate Regional Headquarters, (b) Communications between Regional/Alternate Regional and District Headquarters and (c) Communications below District level.

Communications between Western Zone/Regional and Alternate Regional Headquarters

2. The Scottish Home and Health Department have undertaken to provide the following communications, which it is planned should be installed in peacetime as a charge to Central Government Funds:-

- (a) A direct land line from Zone to the Viewforth Exchange and to the Alternate Regional Headquarters at Balfron.
- (b) Two direct teleprinter lines between Zone and Regional Headquarters and Zone and the Alternate Regional Headquarters.
- (c) Direct radio links between Zone and the Regional Headquarters and Zone and the Alternate Regional Headquarters.

In addition to the above depending on conditions it may of course also be possible to use the normal Post Office Telephone Network which as far as the Headquarters are concerned will be adapted for operation through the emergency manual switchboard system.

Communications between Regional/Alternate Regional and District Headquarters

3. The main form of communications between the Regional and District Headquarters will be by the ordinary Post Office Telephone Network assuming that it remains functioning. This will be supplemented as follows by radio links:-

- (a) The Regional Direct Works Department will provide one mobile set and operator on the Direct Works network at the Regional, Alternate Regional and District Headquarters. This will be the main radio link between Headquarters.

(b)/

- (b) At each Headquarters there will be a Police Liaison Officer and a Fire Brigade Liaison Officer. These Officers will be in radio communication with Police and Fire Brigade Headquarters by use of portable sets on the Police and Fire networks. In the event of a failure of (a) above it will therefore be possible to relay messages through Police and/or Fire Brigade Headquarters.
- (c) At each Headquarters there will be a mobile set from the Regional Roads Department, primarily for communications between Community Aid Centres and the District Headquarters (see paragraph 4 below), which could be used as a further radio link.

#### Communications below District Level

4. The main form of communications below District Headquarters to Community Aid Centres, Information Centres, Rest Centres, Feeding Centres, Emergency Works Organisation Depots, Plant and Transport Depots, etc. will be by the ordinary Post Office telephone. In addition should an attack be expected the Director of Roads will be required to deploy to each Community Aid Centre a vehicle with a radio plus one person to operate it; in addition one portable radio on the Roads Department network will also be sited at the Regional/Alternate Regional Headquarters and each District Headquarters to provide communications with the Community Aid Centres. In this situation it will be necessary to husband the battery life of the sets and while the sets in the Headquarters will be watched continuously for emergency messages, those in the Community Aid Centres will only be operated to pass emergency messages, and to receive messages from the District Headquarters for ten minute periods at 8 a.m., 4 p.m. and 10 p.m., during the close down phases unless contact has already been established by telephone.

#### Other Radio Communications Available

5. In addition to the above the Police, Fire Brigade, Ambulance Services and Water and Drainage Department will continue to operate their own radio networks for their own tasks and in addition to these there are numerous VHF radio networks which might be requisitioned and used, for example, AA and RAC networks, taxi operators, the Post Office, Electricity Boards, etc. Post attack depending on the situation and relevant priorities these could be used as necessary, similarly any surviving military communications could be a useful addition to the communications resources of the Region.

#### Telephone Communications

6. At present the only Headquarters where telephones are actually installed is Stirling District Headquarters, though plans are in hand to install extensions from the Main Viewforth Exchange in the Regional Headquarters, and to install lines and a PBX in the Alternate Regional Headquarters. This leaves the District Headquarters at Alloa and Falkirk without lines. To avoid problems arising when the Headquarters are transferred to and from the above ground office to the War Headquarters it is proposed that the District Councils be asked to install eight switch lines from their peacetime exchanges to the District War Headquarters so that when the War Headquarters are manned the lines could be switched through without altering telephone numbers.

7. The telephone numbers of all Headquarters, Community Aid Centres, Feeding Centres, Rest Centres and Information Centres have been reported by the Emergency Planning Officer to the Post Office Telecommunications Board for inclusion in Category 1 Priority under the Telephone Preference Scheme. In addition there are Government Plans for adapting some of these numbers for switching to the Emergency Manual Switchboard System, details of which would be released through Central Government. The Emergency Planning Officer also holds the list of those facilities without telephone connections so that these could be fitted if required as an emergency measure.

#### Personnel

8. Whenever Local Authority radio links are set up the Department providing the radio will also be expected to provide operators to man the radios and if necessary base stations.

9. As far as telephone communications go in the pre attack and post attack recovery phases, no special arrangements are planned, but the Controllers' staffs will be expected to make and receive their own telephone calls in the same way that peacetime calls are made and received in the Regional and District Offices. For the shut down phase, however, lines will be limited and therefore a form of signals organisation will be enforced in the Headquarters with three message recorders nominated to receive and take down messages. It is unlikely that time will permit for these persons or for those who will communicate with them to receive more than a perfunctory introduction to their duties, by way of training, however, in ordinary peacetime Local Authority personnel are accustomed to make, receive and pass on telephone messages without employing any set form of procedure and there is no reason to suppose that the same people would not be perfectly capable of doing the same in war time, provided they were instructed to make a note of all calls received, from whom received and the time.

#### Electro Magnetic Pulse

10. One of the least understood phenomena following a nuclear burst is that known as Electro Magnetic Pulse or E.M.P. for short. From experiments it would seem that the result of this phenomenon is to generate a high voltage in aerials, overhead telephone cables, power lines, etc., which could render radio and telephone equipment unserviceable. To minimise the possible disruption of communications as far as possible as a result of this phenomenon at the warning of an attack all radio equipment should be switched off and disconnected from the aerials. Also where it is essential to keep open a radio link and there are two or more links between Headquarters only one should be used at the same time during the attack period.

#### Communication Post Attack

11. It is difficult to make firm plans for communications post attack because the method used will very much depend on the facilities which remain available. However, it is likely that the following means will be available in undamaged areas:-

- (a) Telephone communications at least to those numbers designated as Category I and increasingly to other priority users.
- (b)/

(b) Radio via Local Authority radio networks, but this may be affected by power supplies and availability of batteries.

(c) If all else fails messengers may have to be employed to carry written messages by motor vehicle or bicycle.

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FIG. I - Radio and T.P. Communications between Zone and Region/Alternate Regional Headquarters.

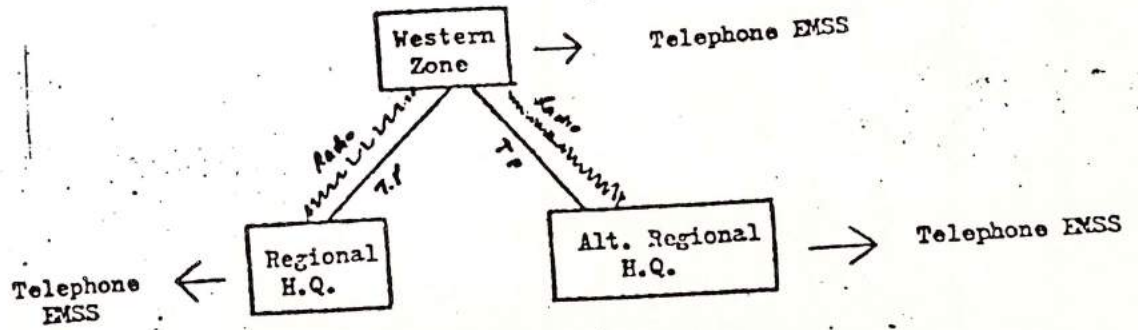


FIG. II - Radio Communications between Region/Alternate Regional Headquarters and District Headquarters.

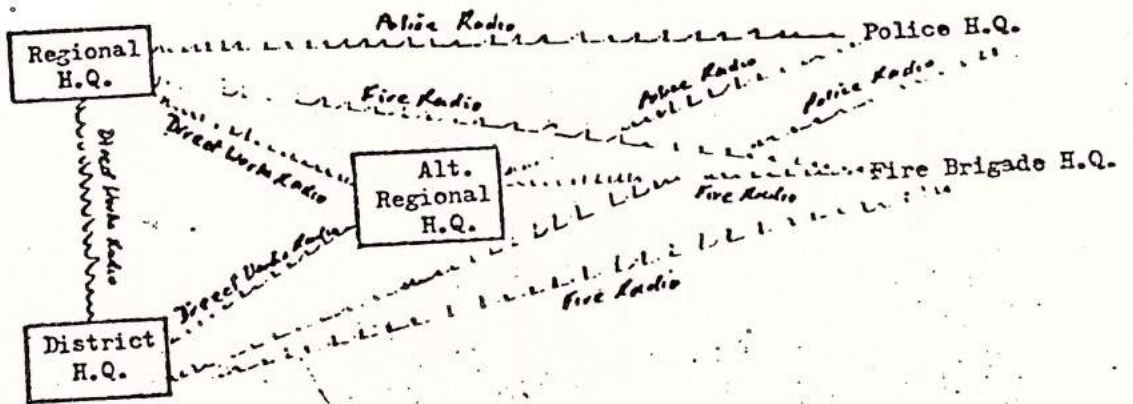
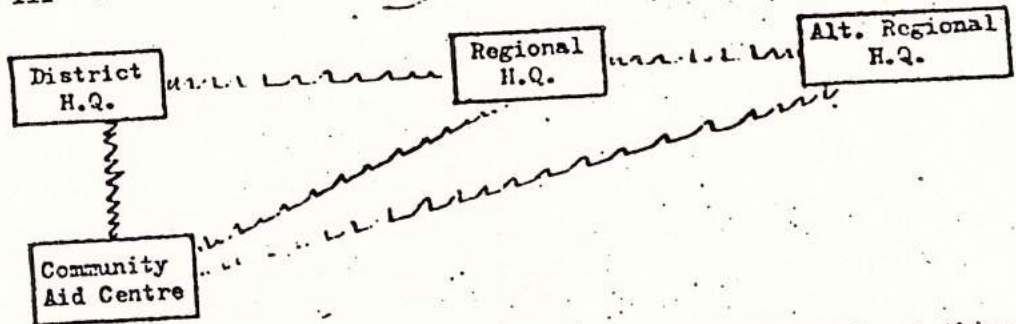


FIG. III - Radio Communications below District Level



All Radio Links at this level provided by Roads Department.

~~~~~ Radio  
 \_\_\_\_\_ Teletypewriter.

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# CENTRAL REGION HOME DEFENCE PLAN

## Chapter 7

### Public Survival Under Fall-Out - Release Procedures

References: SHHD Handbook "Nuclear Weapons"; SHHD Circular  
ES(SCOT) 3/19/6 as Amended by Circular ES(SCOT) 11/1977

#### The Problem

1. Predictions of the possible patterns of nuclear attack on the United Kingdom indicate that after the attack most of the country will be subject to intense radiation of the order of thousands of roentgens per hour and that there is unlikely to be any part of the country which might not be subject to what would be a lethal level of radioactivity if people did not take adequate precautions. It is clear that Central Region with its position just north-east of what must be considered prime targets in the Glasgow/Clyde Areas with a prevailing south-westerly wind must expect a very high level of fall out radiation.
2. Prior to attack the government will have mounted a major publicity campaign instructing the public to stay put in their homes and to construct fall out shelters within an inner fall out room. It is assumed that most people will have taken this advice and that during the attack period on hearing the warning (a wailing note on the siren) and the subsequent fall out warning (three maroons or three blasts on a whistle), they will have taken cover in their fall out shelters and will remain there until some further instruction is given. If people do not take this advice and they go out during this time then they do so at their own risk and they will seriously prejudice their chances of survival.
3. Immediately post attack therefore the District Controllers will have the problem of weighing against each other two opposing aims namely (a) to keep people under cover to minimise radiation injury and (b) to achieve some movement to get medical aid to the injured, to house refugees from stricken areas, to secure water, food and other essential supplies and to carry out other vital survival tasks. In general, however, it is unlikely that in the immediate post attack phase the District Controllers will have sufficient information to predict that people can be permitted to leave their fall out shelters even for a few minutes and in general therefore it should be assumed that until radiation levels are determined any person leaving his fall out shelter is a likely casualty, and decisions would have to be made in this light. For example the lives of medical staff should not be jeopardised by sending them out of cover to deal with casualties who in any case are likely to have contracted a lethal dose of radiation.
4. The longer term objective is of course to assess when it is safe to allow/



allow people to come out from cover for a period, and how this information is to be promulgated. This is the raison d'etre of the release procedure system and its operation is the most important task of the District Controller in the immediate post attack phase.

#### Warnings

5. The Police are responsible for the warning system. The warnings are:-

##### The Warning of Attack

A wailing note on a siren. This warning will be received from the UK Warning and Monitoring Organisation and is expected to give a warning of approximately four minutes of attack.

##### Fall Out Warning

The firing of three maroons or three blasts on a whistle. This warning will be given by the Police when the UK Warning and Monitoring Organisation gives an indication of fall out danger.

##### All Clear

A steady note on a siren. This indicates that there is no further threat either of attack or of radiation. Clearly in any fall out situation this general all clear is of limited application and it will be necessary for alternative arrangements to be made for instructions to be passed by the British War Broadcasting System.

#### Levels of Radioactivity

6. It is not intended in this plan to go into dose rates and their effects in any depth. These subjects are already covered in the circulars quoted and the SHED handbook "Nuclear Weapons". Broadly speaking however it is expected that post attack people will have to spend 48 hours in their inner refuges and up to 14 days in their fall out rooms. District Controllers will allow the release of people from cover in two bands, namely:-

|        |                                                                                   |                                      |
|--------|-----------------------------------------------------------------------------------|--------------------------------------|
| Band A | Operative when external dose rate falls to between 4 and 1 roentgens per hour.    | Period of release -<br>1 hour in 24  |
| Band B | Operational when external dose rate falls to between 1 and 0.5 roentgens per hour | Period of release -<br>9 hours in 24 |

Operation/

## Operation of Release Procedures

7. For the operation of release procedures the Districts are subdivided into areas based on the peace-time Community Council Areas, except that in urban areas several community councils areas have been aggregated so that town and other adjacent populated areas are covered in their entirety. When the Scientific Adviser advises that the external dose rate in one of these areas has fallen to 4 rph the District Controller will ordain a release period of one hour per day for that area under Band A, similarly when the level in an area falls to 1 rph the District Controller will allow a release period 9 hours per day under Band B, and when it falls to 0.5 rph in an area all restrictions will be removed.

8. In urban areas where control of a concentrated population is necessary it is recommended that release procedures should be set for a specific time, whereas in the rural areas where stock must be attended to the actual timing of the release period is best left to the individual.

9. Maps of the release procedure areas for the three Districts are enclosed with this plan.

## Passing of Information on Release Procedures

10. The principal means by which District Controllers will pass information on release procedures to the people will be by the War Broadcasting Service, the District Controller requesting the broadcasting of the necessary instructions through the Regional HQ or if there is communications failure direct to the Zone. This will be backed up by the District Controller passing information to the Police, and to Community Aid Centres in each area for dissemination by word of mouth in the area.

## Radiation Intelligence

11. Intelligence on radiation levels will be received from the following sources:

- (a) from the UK Warning and Monitoring Organisation
- (b) from the Police
- (c) From Fire Stations
- (d) from Community Aid Centres

This information will be plotted by the Scientific Advisers in both the Regional and Alternate Regional HQs and the District HQs and they will advise their Controllers when release can be applied in the various areas. Although the operation of release procedures is the responsibility of the District Controller radiation levels are also plotted in the Regional and Alternate Regional HQs so that release procedures can be operated/

operated from those headquarters in the event of a District HQ being non operational.

#### Temporary Emergence From Cover

2. Despite the above it is clear that even in an area with a high radiation intensity there will be essential operational tasks which must be undertaken, for example the reading off of radiation levels. This is recognised and it is accepted that persons with operational duties to perform could be exposed to a dose of 75 roentgens provided that, together with the radiation they receive in shelter, maximum dose of 150 roentgens over seven days is not exceeded. This dose is referred to as the War Emergency Dose (WED).

3. When release is allowed under Band A for one hour a day it is assumed that this period will give persons an opportunity to carry out essential tasks such as emptying sanitary and rubbish containers, replenishing food and water from nearby sources, first aid treatment of the sick, etc. In areas of intensive radiation however the lack of water and food might compel Controllers to allow the public a short period for these essential tasks before the dose rate has fallen to 4 rph. This would depend on the Scientific Advice given. Similarly in some circumstances Controllers might, acting on scientific advice, allow some more frequent or more selective release in Band A before a general nine hour release is possible. In any case controllers should assume that they are not to attempt any movement within areas receiving a DR7 of 300 rph or more, without prior orders of the Zone Commissioner, or until at least six days have elapsed after the attack.

Tables Showing the Probable Effects of Radiation and Decay Rate of Radiation

Table I. Downwind Contamination. Areas of contours for reference dose-rates one hour after burst assuming a 50% fission yield for  $\frac{1}{2}$  MT and larger weapons and 100% for KT weapons.

| DRI   | Areas in square miles |        |                  |       |       |        |        |        |
|-------|-----------------------|--------|------------------|-------|-------|--------|--------|--------|
|       | 20 KT                 | 100 KT | $\frac{1}{2}$ MT | 1 MT  | 2 MT  | 5 MT   | 10 MT  | 20 MT  |
| 3,000 | 0.2                   | 1.2    | 10               | 20    | 40    | 100    | 200    | 400    |
| 1,000 | 1.3                   | 6.4    | 45               | 90    | 190   | 500    | 900    | 1,900  |
| 300   | 5                     | 25     | 200              | 300   | 700   | 2,000  | 3,500  | 7,000  |
| 100   | 16                    | 82     | 450              | 900   | 2,000 | 5,000  | 9,000  | 18,000 |
| 30    | 50                    | 250    | 1,100            | 2,000 | 4,000 | 11,000 | 22,000 | 44,000 |
| 10    | 200                   | 1,000  | 2,250            | 4,500 | 9,000 | 24,000 | 47,000 | 93,000 |

Table II.

| Dose Rate<br>7 hours after<br>burst (DR7) | Days Before Dose Rate Falls To |       |       |       |       |         |
|-------------------------------------------|--------------------------------|-------|-------|-------|-------|---------|
|                                           | 16 rph                         | 8 rph | 4 rph | 2 rph | 1 rph | 0.5 rph |
| 30                                        | 0.5                            | 1     | 1.5   | 3     | 5     | 8.5     |
| 100                                       | 1.5                            | 2.5   | 4     | 8     | 14    | 23      |
| 200                                       | 2.5                            | 4     | 7     | 13    | 24    | 41      |
| 300                                       | 3.5                            | 6     | 10    | 18    | 33    | 58      |
| 400                                       | 4.5                            | 7.5   | 13    | 24    | 42    | 73      |

Table III.

| Release Band   | Period of Release | Dose Rate Limits | Total Dose over 24 hrs. |
|----------------|-------------------|------------------|-------------------------|
| A              | 1                 | 4 - 1            | 10 - 2.5                |
| B              | 9                 | 1 - 0.5          | 10 - 5                  |
| No Restriction |                   | 0.5              |                         |

Table IV.

Radiological Response

| Accumulated dose | Radiological Condition after 7 days |
|------------------|-------------------------------------|
| Up to 220r       | No deterioration                    |
| 220 - 320r       | Radiation sickness but no death     |
| 320 - 420r       | Death rate rising to 50%            |
| 420 - 520r       | Death rate rising to 100%           |

CENTRAL REGION HOME DEFENCE PLAN

Chapter 8

Fall Out Protection in War - Provision of Shelters

Reference: SHHD Circular ES(SCOT) 14/1976

1. Successive governments have followed the policy that it is not possible to protect the public against all the effects of nuclear attack. The general policy therefore will be that householders and employers will be advised by Central Government to do the best they can to reinforce homes and workplaces to give the population adequate protection against fall out only. There is therefore no policy that the Central Government or the local authority will provide sufficient fall out shelters for 100% of the population.

2. Because of the above policy there will be many people who will not have adequate shelter from fall out either because they live in unsuitable dwellings (e.g. caravans or bungalows) or because they may be caught away from their homes or workplaces at the time of an attack. The advice given to the public pre attack will be that such people should seek shelter with neighbours or in the most convenient house and householders will be enjoined to allow such persons to shelter in their houses. In addition in urban areas provision has been made for suitable buildings to be earmarked to provide public fall out shelters for 2% of the population. The buildings earmarked are listed in Annexe A to this chapter.

3. Although these buildings are earmarked in peace-time no action has been taken to prepare them for occupation. In the assumed period of tension prior to attack the following action will therefore need to be taken:

- (a) Emergency water tanks holding  $3\frac{1}{2}$  gallons of water for each person to be installed in shelters by Water and Drainage Department.
- (b) Emergency provisions for 14 days per person to be pre-planned and positioned by School Meals Service.
- (c) Emergency boxes containing a first aid box, a transistor radio and batteries, torches and batteries, 14 plastic bags and plastic ties for each person for whom the shelter is designed, disinfectant, blankets, to be provided by the Supplies Department. Stocks of these items will need to be ordered or requisitioned as soon as expenditure is permitted on Home Defence preparations or authority for requisition is given.
- (d) Districts work officers (designate) are responsible during the pre attack period of tension for implementing immediate works to improve the protective factor of buildings earmarked in their respective/

respective districts for fall out shelters to as near 60 as possible. Assistance may be sought from the Regional Works Officer (designate) who will allocate such Regional resources for the task that can be spared after full protection work has been completed on the Regional and District War HQs.

4. When morited by the state of international tension District Controllers should nominate Shelter Wardens either from local authority employees or from volunteers living in the vicinity of each snelter. Their job will be to open up the shelters, to use their discretion about the number of persons allowed in, and to provide some form of leadership and to preserve order within the shelters.

Chapter 8 -- Annexo A

Clackmannan District - Earmarking of Fall Out Shelters

| <u>COMMUNITY</u> | <u>PREMISES</u>                                                    | <u>CAPACITY<br/>NO. OF<br/>PERSONS</u> | <u>WORK REQUIRED</u>                                                 |
|------------------|--------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------|
| Alloa            | Ground Floor,<br>Patons & Baldwins,<br>Kilncraig Mills             | 300                                    | Sandbagging of all<br>windows and doors.<br>Emergency lighting.      |
| Alva             | Ground Floor,<br>Masonic Hall                                      | 80                                     | Sandbagging of all<br>windows and doors.<br>Emergency lighting.      |
| Dollar           | Ground Floor,<br>Dollar Academy,<br>Main Building                  | 40                                     | Sandbagging protection.<br>Emergency lighting.                       |
| Sauchie          | Clackmannan College,<br>of Further Education,<br>Ground Floor Part | 120                                    | Sandbagging to increase<br>protective factor.<br>Emergency lighting. |
| Tillicoultry     | Alva Academy (Firpark)<br>Ground Floor                             | 80                                     | Sandbagging to increase<br>protective factor.<br>Emergency lighting. |

Because of lack of suitable buildings the planning figure of shelter capacity for 2% of the normal population cannot be met in the following communities.

|               |     |
|---------------|-----|
| Clackmannan   | 75  |
| Menstrie      | 30  |
| Coalsnaughton | 30  |
| Tullibody     | 120 |

Falkirk District - Earmarking of Fall Out Shelters

| <u>COMMUNITY</u> | <u>PREMISES</u>                                                     | <u>CAPACITY</u><br><u>NO. OF</u><br><u>PERSONS</u> | <u>WORK REQUIRED</u>                            |
|------------------|---------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------|
| Falkirk          | Callander Riggs Shopping Centre, Lower Service Area.                | 300                                                | Sandbagging of entrance.<br>Emergency lighting  |
|                  | Old Brewery Site, Lower Car Park                                    | 900                                                | Sandbagging of entrance.<br>Emergency lighting. |
| Grangemouth      | Basement Town Hall                                                  | 45                                                 | Cleaning of room.<br>Sandbagging of lights.     |
|                  | Basement Municipal Buildings                                        | 40                                                 | Cleaning of room.<br>Sandbagging of lights.     |
| Denny            | Lower Floor, New Library, New Shopping Precinct                     | 72                                                 | Sandbagging of shop fronts and upper floors.    |
|                  | Gas Board Show Room<br>New Shopping Precinct and two adjacent shops | 150                                                |                                                 |

Because of lack of suitable buildings the planning figure of shelter capacity for 2% of the normal population cannot be met in the following communities:-

|               |     |
|---------------|-----|
| Grangemouth   | 405 |
| Bo'ness       | 260 |
| Bonnybridge   | 120 |
| Larbert       | 100 |
| Stenhousemuir | 160 |
| Laurieston    | 65  |
| Airth         | 20  |
| Brightons     | 65  |
| Carron        | 55  |
| Westquarter   | 25  |
| Maddiston     | 50  |
| Palmont       | 50  |
| Redding       | 35  |
| Slamannan     | 30  |
| Whitecross    | 20  |



Chapter 8 - Annexe C

Stirling District - Earmarking of Fall Out Shelters

| <u>COMMUNITY</u> | <u>PREMISES</u>                 | <u>CAPACITY<br/>NO. OF<br/>PERSONS</u> | <u>WORK REQUIRED</u>             |
|------------------|---------------------------------|----------------------------------------|----------------------------------|
| Stirling         | Thistle Centre<br>Park Car Park | 2,450                                  | Sand bagging, north<br>east side |

Because of lack of suitable buildings the planning figure of shelter capacity for 2% of the population cannot be met in the following communities:-

|                 |     |
|-----------------|-----|
| Bridge of Allan | 80  |
| Callander       | 35  |
| Doune           | 20  |
| Dunblane        | 100 |
| Aberfoyle       | 20  |
| Balfron         | 25  |
| Bannockburn     | 120 |
| Cambusbarron    | 30  |
| Cowie           | 60  |
| Fallin          | 60  |
| Plean           | 40  |

Chapter 16

Environmental Health

Reference: SHHD Circular ES(SCOT) 8/1977

1. It is difficult to produce any detailed planning for dealing with the massive environmental health problems which will arise in a nuclear war because it is virtually impossible to comprehend the full extent of the problem, nor is it likely that the resources which would be available would be able to meet all the requirements. The possible planning during peace-time is therefore limited to the provision of an organisation which allows for the provision of Environmental Health advice to the Regional and District Controllers at all times and the listing of the main problems that are likely to be met and notes on the possible ways of meeting them.

Environmental Health Advice

2. In peace-time Environmental Health is a District Function and there is no Environmental Health expertise available within the Regional Authority. Therefore assuming that the District Directors of Environmental Health will be available to advise the District Controllers there is a need to provide Environmental Health advice to the Regional Controller at Viewforth, and during the attack and immediate post attack periods to provide Environmental Health advice at both the Regional and Alternate Regional Headquarters. To meet these requirements the following is planned:-

(a) Advice to Regional Controller during Pre Attack and Post Attack Recovery Phase

The most convenient and best source of advice to the Regional Controller during these times will be from the Director of Environmental Health for Stirling District, as being the nearest one to the Regional Headquarters. The Director of Environmental Health for Stirling District will under these circumstances also be deemed to be the Regional Environmental Health Officer.

(b) Advice at Regional and Alternative Regional Headquarters during the Attack and Shut Down Period

During the attack period and the immediate post attack period it is likely that the main problems concerning Environmental Health will fall on the District Controllers and they will require the best Environmental Health advice available, namely their own Director of Environmental Health. Nevertheless there is also a need for the Regional Controller to have Environmental Health advice available in his Headquarters during this period and also in the Alternate Regional Headquarters at Balfron. Accordingly during/

during the shut down period the Depute Director of Environmental Health for Stirling will form one of the team manning the Regional War Headquarters and the Depute Director of Environmental Health for Falkirk will form one of the team manning the Alternate Regional Headquarters at Balfron.

Notes on Specific Action Falling to the Environmental Health Departments Pre Attack Information

B. During the pre attack period of tension the main task of the Environmental Health Departments will be the Education of the public not only in the environmental health measures necessary to survive in fall out refuges, supplementing the "Protect and Survive" programme as necessary, but also educating people on the health and sanitary measures necessary post attack. In this respect advice leaflets should be drafted in peace-time so that they can be swiftly prepared for issue in a period of tension covering the following subjects:-

I) Advice to the householder on:-

- (a) Sanitation in the fall out refuge.
- (b) Drinking water in the fall out refuge.
- (c) Measures to avoid food poisoning during the close down period.
- (d) Measures to reduce the risk of disease both during the close down phase and once radiation levels have fallen.
- (e) What foods will be safe to eat after attack.
- (f) Drinking water after the attack.
- (g) Sanitation post attack. How to construct a simple field toilet.

II) Advice to Officials-in-Charge of Rest Centres and Feeding centres on:-

- (a) Construction of large scale field toilets.
- (b) Emergency washing facilities.
- (c) What can be done to reduce the risk of disease and food poisoning in communal field kitchens and feeding centres.
- (d) Measures to minimise the risk of disease generally.

posal/

Disposal of Human Remains

4. One of the subjects which must be faced is that as a result of a nuclear attack there will be casualties, the numbers ranging from 100% in the target areas to less than 10% in those areas where there is no damage, but heavy fall out. The average number of casualties is calculated at approximately 40% which for Central Region would mean that there would be some 108,000 dead. In the worst hit areas the problem of disposing of the dead, once radioactivity conditions allowed could probably only be solved by incineration by ad hoc methods, with little ceremony and perfunctory identification. In the less damaged areas it is likely that interment could be carried out with some dignity as near as possible approaching that which is considered suitable in a Christian Society, possibly of necessity in mass graves. The Directors of Environmental Health of the Districts would have the responsibility for organising on behalf of the District Controller the disposal of the dead in accordance with these precepts. One of the things to be remembered is that as far as possible there would be a need to record casualty details (see chapter 17).

Refuse Collection

5. There will also be a need post attack to organise some form of refuse disposal since it is unlikely that the normal peacetime destructor plants will be operable, nor will fuel be readily available for a refuse collection service as in normal times. It may therefore be necessary depending on the circumstances at the time to designate within urban areas suitable tip sites where rubbish may be taken for burial or for burning. Any large plastic bags that are available would clearly be useful for this purpose, but it is not at present policy to authorise expenditure on such items as a contingency measure.

Sanitation

6. In undamaged areas it is likely that water carried sewerage services could be restored after not too long an interval but lack of power for sewage treatment plants will mean that it would have to be discharged in untreated form causing serious health hazards. In areas which have been subject to severe damage it may be months before normal sanitation can be resumed. During the interim it will be necessary for people to use field toilets. The District Environmental Health Department should be ready to advise people on the methods of constructing field toilets, and to supervise the construction of communal field toilets at Rest Centres and Feeding Centres as necessary.

The Risk to Health

7. Apart from sickness due to radiation, it is clear from the above notes that the relatively primitive sanitation, refuse disposal, water supply and feeding arrangements will cause hazards to health of the populace on a scale undreamt of in modern society. It will therefore be essential that all Environmental Health staff are aware/

aware of the risk and know what action to take and advice to give on whatever preventative and remedial measures can be taken, bearing in mind that the normal means of dealing with such problems, i.e. disinfectants, etc. will be virtually unobtainable.

CENTRAL REGION HOME DEFENCE PLAN

Chapter 17

Casualty Information

1. The Chief Registrar of the Region is responsible for the co-ordination of all casualty information. To this effect the District Controller when organising burial parties should issue instructions that as far as possible the name, sex, approximate age group, and the place found should be recorded for each corpse and the details transmitted to the Registrar for the District.

2. Since it will be impossible to arrange for the collection and cremation or interment of human remains until the radio-activity level has fallen to a sufficient extent to allow movement no provision will be made for the Registrar's Staff in the District War HQs. They should, however, be instructed to report to their normal offices once radiation levels allow some movement.



Chapter 22 - Assistance from the Armed Forces

Reference: SHED Circular ES(Scot) 6/76

1. Up to the time of the nuclear exchange it may be expected that the armed forces will be fully committed under M.O.D. control with their primary role of conducting operations in support of the NATO Alliance and securing the United Kingdom Base. After the nuclear exchange it may well be that the armed forces would be deployed on other tasks for which their discipline, skills and training have befitted them.

Organisation and Control

2. In peacetime the co-ordination of Home Defence Planning for the three Services is the responsibility of the M.O.D. Each service maintains its own separate command structure in peacetime and it will continue to do so up to the time of nuclear attack. However once a nuclear attack is threatened and armed Forces H.Q. covering all three Services in Scotland would be set up under the General Officer Commanding Scotland (Army) as the Military Commander.

3. Under the Military Commander Scotland, Zone Military H.Q.s would be set up in each zone under a Zone Military Commander. The latter would also be on the Zone Commissioner's Staff and would advise him on matters concerned with the availability and deployment of Service personnel and resources. The Zone Military Commander would also exercise military command of all units of the Armed Forces within his zone. The address of the Zone Military Commander designate of the Western Zone is:-

Western Zone Military Commander (designate)  
Headquarters Lowlands,  
The Castle,  
Edinburgh (031-336-1761 Ext. 200)

Liaison with Regions and Districts

4. A joint Services Liaison Officer will be appointed to the Regional War H.Q. His function is to advise the Regional Controller on military matters and to liaise with military units operating within the Region. He would not be in command of any units. J.S.L.O.s will not be appointed to any districts in the Central Region. Should District Controllers require any military advice or assistance requests should be made through the Regional Controller's War H.Q. The J.S.L.O. nominated for the Central Region is Lt Col R F Rodger TD, 6 Langoreth Avenue, HAMILTON. Tele No. 06984 - 22000 In peacetime only the J.S.L.O. is designated but in wartime it may be expected that he would be assisted by a small tri-service staff including a communications element.

Use/

RESTRICTED

## Use of Armed Forces

5. Subject to any overriding military commitment after the nuclear attack and with the general approval of the Commissioner for Scotland, or the Zone Commissioner, units of the armed forces could be deployed on the orders of the Military Commander or the Zone Military Commander, in response to requests for assistance by the Regional Controller or the Chief Constable. It is not possible to predict the actual tasks on which military personnel would be employed after a nuclear attack but the sort of tasks that come to mind is the guarding of key installations, food depots, ports, warehouses, factories, and escorts for supply convoys, as well as particular tasks appropriate to Service professional skills, for example, clearance driving, field cooking, etc. Wherever possible Military Units deployed in this role would use their own transport and communications. In all cases they would be under their own officers.

## Communications

5. Armed forces H.Q.s will be linked by radio and landlines to Scottish Central Control and to Zone Controls. Radio links will also be established from Zone Military H.Q.s to field units and J.S.L.O.s. It may also be that sections of the Defence Communication Net will remain operable. The system will be used primarily to meet operational military needs, but in the post attack phase could be used to fill gaps in the civil communications system.

## Zone Air Squadrons

7. Ministry of Defence plans provide for the establishment by the R.A.F. of a zone air squadron in each zone consisting of light aircraft and helicopters. These would be available for reconnaissance and communication tasks at the discretion of the Zone Controller.