

**EAST SUFFOLK COUNTY COUNCIL.**

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**WARDENS  
HANDBOOK**

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**July, 1943.**



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# WARDENS HANDBOOK

## Part I. Organisation of Civil Defence.

The putting into operation of the whole of the Civil Defence Organisation originates with the action taken by the Wardens. It is for the Wardens to notify the Report Centre of any incident and to give sufficient information to ensure that the necessary assistance will be sent. On receipt of a message from the Warden the Report Centre can bring into operation any of the following branches of the Civil Defence Organisation to meet the requirements of the situation:—

### *Rescue Service.*

Rescue Parties and First Aid Parties are now amalgamated into one organisation known as the Rescue Service. This service is formed into parties of seven men, trained to give First Aid to the injured, to remove trapped persons and to deal with buildings which are dangerous to the public.

### *Ambulance Service.*

Ambulances are manned by a driver and attendant, who are responsible for the removal of the casualties after they have been loaded.

### *Mobile First Aid Post.*

This is a motor van fully equipped with dressings, surgical instruments, etc., and manned by a Doctor and Trained Nurses, and will proceed to major incidents to set up a temporary First Aid Post on the spot.

### *Decontamination Squad.*

A party trained in the decontamination of sites which have been contaminated by persistent gas.

### *Road, Bridge and Sewer Repair Parties.*

Parties trained in the clearing and repair of roads and bridges, or erection of temporary bridges, and in the clearing and repair of damaged sewers.

### *National Fire Service.*

The National Fire Service, which is responsible for sending the necessary appliances to fight any outbreak of fire.



### *Telephone, Electric Cable, Water and Gas Main Repair Parties.*

These parties are sent out by the Departments or Companies concerned to effect repairs to their installations.

### *Mobile Canteens.*

These are stationed in various localities to proceed at once to an incident to provide hot drinks and refreshments to the homeless and to Civil Defence workers.

### *Gas Identification Officers.*

There are six of these Officers in the County, highly qualified in chemistry, who will proceed when Gas is reported to investigate and report on the exact nature of the Gas.

### *Food Decontamination Officers.*

These are members of the Sanitary Inspection Department, with special training, who will take the necessary steps to deal with food contaminated with Gas.

### *Veterinary Officers.*

Certain Veterinary Officers have been listed, who will render First Aid to injured animals, or, if necessary, arrange for slaughter.

*The above are what may be termed mobile sections of Civil Defence and it cannot be too strongly emphasised that until a message is received from a Warden reporting the incident and stating that any of these services are required no steps can be taken to call out these services, and thus the whole organisation of Civil Defence breaks down at the very outset.*

In addition to the above there are what may be termed the Static Branches of Civil Defence. These are as follows:—

### *Fixed First Aid Posts.*

In twelve towns in the County First Aid Posts are located in buildings suitably adapted and supplied with the necessary medical and surgical equipment. Each Post is under the supervision of a Doctor, assisted by a Trained Nursing Staff, and is intended to deal with casualties whose injuries are not of such a serious nature as to necessitate their treatment in Hospital.

### *Hospitals.*

In normal circumstances casualties suffering from serious injuries will be taken direct to the Hospital covering the area in which the incident occurs, but circumstances may render it necessary for the casualty to be taken to and retained at the First Aid Post.

### *First Aid Points.*

In 111 parishes where the population is over 400 these points have been set up where minor casualties can be treated, and major casualties can receive attention before removal to hospital. These points have been issued with a limited amount of equipment. In certain parishes, where from a military point of view it is considered that a First Aid Point is of extra importance, further equipment has been issued and in some cases special blast protection has been provided. In addition to these 111 official First Aid Points, unofficial Points have been set up and equipped by local effort in practically every parish in the County.

### *Rest Centres.*

Suitable premises have been earmarked in every town and in most parishes wherein temporary accommodation for the homeless can be provided together with food and refreshment, and if necessary, clothing. It is intended that the homeless should remain at these Rest Centres only until such time as permanent billeting arrangements can be made for them, or they can make arrangements to stay with their own friends.

### *Mortuaries.*

Each Local Authority is responsible for the provision of a suitable mortuary and for making the necessary arrangements for the collection and removal thereto of the dead.

### *Decontamination Laundries.*

In the event of Gas being used six laundries can be put into operation; detailed arrangements have been made for the collection, marking and transport of both civilian and protective clothing to these laundries for decontamination.

*Here again it must be emphasised that unless a message is received from Wardens giving the necessary details it is impossible to warn any of the above Services to stand by for action.*

### *Report Centres.*

There are 12 Report Centres in the County to which are sent all reports of incidents arising out of enemy activity. It is the duty of these Report Centres to take such action as is necessary with regard to any of the above services in order to deal with any situation which may arise. A Report Centre notifies services within its own Area but if these are insufficient it then calls upon the Control Centre for assistance.



### *Control Centre.*

The County Control Centre is at the County Hall, Ipswich. All reports are forwarded by the Report Centres; these are summarised and sent to Regional H.Q. and thence to the Ministry of Home Security, Ministry of Information, B.B.C., etc.

There is also a Sub-Control at Lowestoft to which certain Report Centres in the northern area forward their messages; these are passed on from Lowestoft to County Control. In the case of a serious situation arising County Control can call on Regional H.Q. for assistance.

## **Part II. Wardens' Duties.**

### *(a) Message Sending.*

The following shows the sequence and nature of reports which are required:—

**Snap Report.** Great importance is attached to the immediate reporting of the fall of the first bomb or flare. This report need only consist of three items—Time..... Approximate Place..... Type of bomb, i.e. H.E., I.B., etc., or flare, but it must be sent at once.

This should be followed as soon as possible by a report giving brief facts and asking for necessary assistance.

Later when the Warden has had time to investigate and when his urgent duties are performed he should send in a full report of what has occurred, damage caused, number of dead and injured, public services interrupted, assistance that is on the spot, and progress made in clearing up the incident.

Attention is called to the following points in message sending:—

When telephoning start with the words "Air Raid Damage" and finish with the words "Message ends".

Make Report Centre repeat message to ensure that it is taken down correctly.

Use Report Forms; important items are less likely to be forgotten and they form a record of what information has been given.

Requests for assistance should not be excessive, ask for the minimum at first and for more if found necessary after sizing up the situation more fully.

When asking for a party to rescue trapped persons, to search for persons thought to be missing in a damaged building, or render safe a building imminently dangerous to the public, ask for a Rescue Party and not a Demolition Party; the latter is intended to deal with demolition and clearance work which is not urgent; therefore there will be a delay in sending a Demolition Party.

Reports should contain the following information when relating to:—

**Bombs.** State how many bombs have fallen and of what type.

**Blocked Roads.** State why blocked—by debris or crater; also if completely blocked or if passable for one-way traffic.

**Unexploded Bombs.** State how many, also the type. Define clearly the location of all unexploded bombs.

**Damage to Mains, Electric Cables and Sewers.** Indicate extent of damage. This information is important. Broken water mains may impede the work of the Fire Brigade; also there is risk of contamination to water supply. Broken gas mains may cause explosions.

**Casualties.** Indicate how many dead, how many stretcher and how many sitting cases, and how many with minor injuries.

**Damage to Property.** State how many houses are demolished or damaged that arrangements may be made for billeting homeless and for first aid repairs to houses.

Faults in a Report are shown in Appendix A.1, and the same Report corrected is shown in Appendix A.2.

### *(b) Other Duties of Wardens, arising out of an Incident.*

After the occurrence of an incident, and before the arrival of parties to render assistance there is much work for the Warden to perform.

He must make a thorough reconnaissance, in order to assess the damage, locate the injured and render such First Aid as may be necessary to maintain the casualties until skilled assistance is available.

He must endeavour to locate any persons who may be trapped in order to be able to direct the leader of the Rescue Party at once to the spot.

Homeless persons must be directed to the Rest Centre.

Broken sewers, water and gas mains, electric or telephone cables must be located. Where there is any danger of a water supply becoming contaminated because of a broken sewer this must be specially reported urgently.

Any outbreak of fire must be located and dealt with by means of a stirrup pump. Care must be taken not to touch broken cables or to play water on them.

A search must be made for any U.X.H.E. suspected to have fallen.

### *(c) Arrival of Services as result of message which has been sent by Warden.*

The value of the work carried out by services who have been called in to assist at an incident greatly depends upon the action taken by the Wardens.

Wardens co-operating with the police must take steps to divert services round blocked streets to the incident.

They must meet the leaders of the parties and explain the situation



to them, pointing out which is the most urgent work to be tackled.

They must halt ambulances, rescue vehicles, etc., at sufficient distance from the incident for them to have room to turn and back into a position which still leaves room for gear to be unloaded and for stretchers to be deposited well clear of the site on which operations are in progress.

Ambulance drivers and attendants are usually women. Women should not act as stretcher bearers, so that often Wardens will have to act as stretcher bearers. The carrying of a loaded stretcher is not easy and Wardens should practice this under the guidance of a skilled first-aid.

It cannot be too strongly emphasised that Wardens, by reason of their expert local knowledge must co-operate with all services coming to their assistance and help them in every possible way and must not become mere spectators.

Dead bodies must be placed out of view of the public, until their removal to the mortuary. It is most important that labels are attached to the bodies giving name and address, cause of death, and place where body was found. Printed labels have been issued to Police and the Rescue Service.

It is most important that Wardens, in co-operation with the Police, keep the area in which an incident has occurred clear of all persons except those with duties to perform, and that the senior Warden present takes charge of the incident until the Incident Officer arrives. By taking charge is meant co-ordinating the work of all the Services, not, of course, that the Warden is to tell the specialist services how each is to do their own particular job.

It should be realised that situations may arise whereby there will be great delay in the arrival of parties coming to give assistance, and much will then depend on how much the Wardens can act on their own initiative, which in turn depends largely on how much training they have received.

(d) *Duties of a Warden in normal times, as distinct from those arising out of an Incident.*

In order that he may be able to deal efficiently with a situation arising out of enemy activity the Warden must in normal periods carry out the following routine work:—

He must know the members of the public in his Sector, especially the old and infirm and those most likely to need help.

He must know what arrangements each householder makes for shelter accommodation, whether in a protected room, in a basement or in an Anderson shelter, or in some cases whether at nightfall he takes his family to another dwelling, thus leaving his house empty. This information may be of vital importance to Rescue Parties searching for missing persons.

He must do all in his power to induce the public to wear their respirators at regular intervals. He should see that the respirators fit correctly and that the public know how to anti-dim them and keep them in good condition.

He must encourage self-help and mutual help amongst the public, and for this purpose he should get to know and co-operate with local members of the W.V.S. and Housewives Association.

He must get to know the location of Rest Centres and the speediest means of getting them opened up.

He should obtain a knowledge of elementary First Aid, that he may maintain a casualty until the arrival of skilled assistance.

He should know the location of all the stirrup pumps in his Sector and should assist the Fire Guard Organisation with instruction of the public and forming of Fire Parties.

He should know the position of all fire hydrants in his Sector.

He should study the layout of his Sector and endeavour to visualise situations which may arise, and the action which he would take.

### Part III. Main Features of War Gases.

There are two types of Gas, non-persistent, of which the typical gas is Phosgene; and persistent, of which the typical gas is Mustard.

#### *Phosgene.*

A phosgene bomb forms a cloud of relatively brief persistence (except in an enclosed area), which drifts along before the wind. This cloud can cause numerous casualties, with many fatalities amongst those who are unprotected at the time of the passage of the cloud, unless they know how to put on their respirators properly and rapidly.

Except in abnormal places and conditions the effect of a Phosgene bomb will not last beyond 20 minutes; but a dangerous concentration may be drawn into basements, ground-floor rooms and enclosed spaces which will last longer. In a fog the cloud will also take longer to disperse.

Under normal conditions there will be two zones of danger:—

1. In which the concentration is so high that it will be fatal to unprotected persons.
2. In which the concentration is so high that the risks will be very great, but within this zone there will be ample time for effective warning to put on respirators. Outside this zone the gas will produce lachrymation and coughing.

With the wind blowing down a residential area consisting of separate or semi-detached houses the length of Zone 1 may be 300 yards, but in narrow streets with continuous lines of high buildings this may be increased to as much as 1,200 yards.

In open country the gas will in most cases disperse rapidly, but may remain longer in valleys and low-lying ground, and if a bomb falls in a wood the danger may last appreciably longer.



It must be remembered that a cloud of Phosgene gas may be invisible, except for white vapour when the bomb explodes.

#### *Mustard Gas.*

Mustard gas while not so lethal as Phosgene can put many persons on the casualty list by reason of the burns which it causes, some of them of a serious nature.

When a Mustard gas bomb (50 kilos) falls in a street it may form a shallow crater, but this is likely to be small in comparison with the craters formed by H.E. bombs of similar size. At the point of burst there will be an area of about 120 square yards heavily splashed and contaminated. Three dangers arise from such an event:—

1. A cloud of Mustard gas vapour and fine droplets at once fills the street and is carried along by the wind just like a Phosgene cloud. At first this cloud is extremely dangerous, but becomes progressively less so as the droplets fall out, which occurs in about 100 yards. Within this zone the respirator will protect the face, eyes and lungs, but the outer clothing will be contaminated with the fine droplets. The victim must remove such clothing and obtain a bath as quickly as possible.
2. The area at the point of burst is splashed with liquid and will contaminate anything that touches it. This area will remain dangerous for several days or until it has been decontaminated.
3. The contaminated area, especially in warm weather, will give off vapour which will travel down wind. Prolonged exposure to this vapour will cause injury though the victim may not always know that he is in gas.

#### *Indication of Fall of Persistent Gas Bombs.*

These can be distinguished from H.E. in the following ways:—

- (a) Smell.
- (b) Splashes or pools of oily liquid.
- (c) Large oily fragments of bomb.
- (d) Either no crater or very small one.
- (e) Very little blast effect.
- (f) Dull explosion.
- (g) Paint on Detector Boards turning red.

### **Part IV. Action in the presence of Gas.**

#### **I. GENERAL.**

Deal with all gas incidents as either Mustard or Phosgene. Other gases may be used but probably to mask Mustard or Phosgene.

Put on respirator and sound rattle. See that respirators are worn by everyone in those areas where gas is detected.

The hand rattles should be sounded through the whole of the Sector likely to be affected. A Warden upwind of this Sector should not take up the warning if he hears the rattles sounding unless he knows of danger in his own Sector. A Warden downwind who hears

rattles sounding should move towards the affected area and be prepared to sound his rattle at the first sign of gas. A gas warning should not be passed downwind for an unnecessary distance.

Report the presence of gas to the Report Centre, stating whether it is persistent or non-persistent gas.

The Report Centre will notify the G.I.O. that gas has been used or is suspected and will ask him to attend to identify the gas. As there are only six G.I.O.s for the whole of the County it may be some time before one arrives.

#### **2. PERSISTENT GAS.**

##### *(a) Action.*

Close the road 100 yards downwind and 50 yards upwind.

Evacuate houses within 35 yards of the point of burst of the bomb.

Shut all doors and windows of houses within the remainder of the closed area and evacuate any houses which may be damaged by bomb blast.

When all the contaminated areas in the Sector have been roped off and closed to the public the Warden in charge should report this fact to the Report Centre and ask whether the "All Clear" can be sounded. When the Report Centre has been notified that all contaminated areas have been barricaded off instructions will be given by them to the Wardens for the "All Clear" to be sounded and Wardens will then ring the handbells which indicate that respirators may be removed although the danger areas remain closed.

In the majority of cases the "All Clear" will be sounded long before the area is decontaminated.

Decontamination will seldom be done immediately and will practically never be done at night. In many cases the area will remain roped off and left to weather. When decontamination work is carried out it will make the area reasonably safe for normal purposes; for example a street which has been treated thus would be safe to walk or drive over but would not be safe to sit or lie on. When the Decontamination Squad have finished their work the foreman will hand a certificate of completion to the Warden and the Warden will notify the Report Centre that the roadway may be opened for traffic if there is no other reason to prevent it. The Report Centre will give the necessary instructions. The re-occupation of houses in the affected area will not be permitted until a later stage, after thorough inspection by an official duly authorised by the A.R.P. Controller.

##### *(b) Protective Clothing.*

There appears to be undue fear of entering vapour contamination without anti-gas clothing. Unless the vapour concentration is exceptionally strong no injury will result from exposure for a short period of time, if a respirator is worn. While, therefore, it is essential that those whose work compels them to remain for some time in



vapour contamination should be properly protected, those merely entering vapour for a few minutes (for example, to remove a casualty) may have to take the slight risk doing so in ordinary clothing, provided they wear respirators.

Similarly, a persistent gas-bomb crater can safely be approached quite closely from the upwind side without any protection, provided the person concerned does not stand on ground contaminated by liquid. For example, Wardens whose duty it is to prevent the public approaching the site of an incident from the upwind side need not wear anti-gas clothing nor respirators so long as the smell of the gas cannot be detected. Do not, however, stand about downwind in ordinary civilian clothes.

On the other hand liquid contamination is much more liable to cause injury, and while in an emergency a person who has to handle contaminated persons or things can obtain reasonable protection by the previous use of No. 2 Ointment on the hands, anyone who is liable to come into contact with liquid gas must wear anti-gas clothing whenever possible.

Anti-gas clothing should never be worn unnecessarily owing to the exhaustion which is caused to the wearer. If at any time it is put on when not actually in the presence of blister gas it should be worn open or loosely so as not to cause discomfort, and gloves, etc., should not be put on until absolutely necessary.

When anti-gas clothing is worn it must be put on correctly, viz:—

Light and heavy jackets (except Simplex) should be worn inside trousers unless it is raining. Belts must be pulled up uncomfortably tight when the clothing is first put on. Trousers to be worn plus fours fashion, with full overlap over the boots. To avoid damage to oilskin trousers, before the cord is drawn tight the two ends should be folded over each other in a half-reef knot and then pulled steadily in the direction in which they lie.

Eyeshields must be worn whenever there is a risk of gas being used—until the facepiece is put on.

Gloves to be very tightly fastened to prevent them slipping off and to give adequate protection.

If on account of excessive heat or exhaustion it is necessary to obtain ventilation under the clothing, care must be taken in lowering the trousers that no contamination on the outside of the trousers gets on to the inside of the coat.

Civil Defence personnel, although wearing protective clothing, must avoid the contaminated area as much as possible.

#### *Respirators.*

If sufficient practice is carried out in wearing respirators there should be no need for these to be lifted from time to time to get fresh air, unless the work is very heavy or the day very hot. If it is necessary

to lift the respirator, the wearer must get well away from the vapour danger area and he must take care not to contaminate his face with the contaminated gloves.

Respirators must be worn by everyone in any area where the smell of gas can be detected. Wardens must see that this rule is obeyed.

#### *(c) Control of Movement.*

No persons are to approach nearer the contaminated area than is necessary. Danger Gas boards should be placed sufficiently far back, to give motorists time to stop. If possible a Warden or Special should guard each approach road to stop vehicles, and nearer the incident others should be stationed to turn back pedestrians.

All Civil Defence vehicles should be halted well clear of the contaminated area, and, if possible, upwind; if downwind, drivers must wear respirators. Vehicles should be turned ready for moving off.

#### *(d) Cleansing Arrangements.*

##### *(i) Persons contaminated with liquid gas.*

Cleansing units have been provided in a number of places where persons so contaminated may go to wash. Remember, however, that speed is essential if cleansing treatment is going to do any good, so unless a person can get to a cleansing unit very quickly, he or she should go to the nearest house, take off outer clothing and have a thorough wash there. Speedy treatment of liquid gas in the eye is essential. Hold the eye open and pour water (e.g. from a jug or water bottle) freely into the eye at once.

Clothing suspected of being contaminated by liquid gas should first be hung in the open to air for at least 24 hours. It should only be sent to the laundry if the smell persists after this period.

Clothing definitely splashed by liquid gas should be left at the cleansing unit or outside the house at which the person washes. It should be put in a closed receptacle, such as a bin, or out of harms way in a corner of the garden. When the Warden is informed that there is contaminated clothing to be collected, he should ring the Report Centre and inform them of the name and address of the owner and arrangements will be made for the Decontamination Laundry to collect.

In addition to cleansing units there are cleansing stations at many of the rescue and decontamination depots. These cleansing stations are not for use by the public but only by Civil Defence personnel who have been subject to liquid contamination when wearing anti-gas clothing.

##### *(ii) Persons who have been exposed to vapour contamination.*

Such persons should not go to Cleansing Units; they should take off their clothing and have a wash down or bath as quickly as possible at the nearest house available.



Clothing contaminated by vapour should be hung in the open for about 24 hours or until there is no further smell of gas. If the smell persists the clothing must be treated as contaminated by liquid and sent to the Decontamination Laundry.

### 3. NON-PERSISTENT GAS.

See that all doors and windows of houses in the affected area are closed.

When the air has been tested and found to be free from gas, instruct the public to open all doors and windows, light fires, etc., to create draughts and ventilate their houses, the Warden being responsible to those that are temporarily unoccupied.

Make sure that there are no pockets of gas remaining, e.g. in basements, courtyards, etc.

When the Warden is satisfied that the whole of the area and premises are free from gas, inform the Report Centre and await instructions for sounding the "All Clear".

### Part V. Respirator Drill.

When there is a likelihood of gas being encountered the C.D. respirator is carried in the **Alert** position, i.e. with the haversack swung to the front of the body and opened to the fullest extent (except when raining). The tucks in the sling should be to the front and the respirator eyepieces should be properly treated with anti-dim.

Immediately gas is encountered or the alarm "gas" is received, the respirator is put on as quickly as possible, as follows:—

Stop breathing, and immediately place chin strap under chin with right hand, placing helmet at back of head with left hand. **Remove** eyeshield if worn.

Seize face-piece with right hand by binding securing container to face-piece.

Pull the respirator out and turn it towards face.

Place thumbs inside two lower elastics on each side and slide wide apart.

Bring face-piece towards face.

Dig chin into it and pull harness over head with thumbs.

Adjust face-piece squarely and comfortably on face.

Run fingers over it to make sure edges are not doubled inwards nor elastics twisted.

When protection has been obtained, blow out and breathe normally.

Pad of harness to be centrally positioned at back of head.

Replace helmet and adjust chin strap.

**Note.**—Steel helmets should be worn with chin strap on point of chin.

Before the face-piece is taken off, the air must be tested as follows:—

Take a fairly deep breath.

Insert two fingers of the right hand between cheek and face-piece.

Lift face-piece slightly away from face and sniff gently.

If gas is detected, or if there is any doubt, remove fingers and blow out hard.

### Part VI.

#### Rescue Work by Wardens in absence of Rescue Service.

Owing to the need for economizing in man-power the number of full-time members of the Rescue Service has been greatly reduced and it is only possible to maintain whole-time parties at Lowestoft and Saxmundham. Other Rescue Depots are manned at night by part-time members but during the day-time these members are dispersed over the district in which they work.

Wardens have therefore been given instruction in elementary rescue work so that they will know how to carry on at an incident when there is no rescue party immediately available. This will occur more frequently in rural areas than in towns, where rescue men will be more quickly on the scene.

Wardens have been instructed that one of them should take charge of the rescue work at a particular site and organise the working on the civilians, troops, etc., who are always willing helpers at an incident but who need to be directed in their work.

The following summary of the lecture gives the main points for Wardens to remember:—

Keep Report Centre informed of situation.

Take charge of Rescue Work and **direct operations**.

Make others do what you want.

Make your own decisions as to dangerous buildings—take skilled advice if available of course—stick to your decision if you think it right.

Make your men take care of themselves.

Keep people off heaps of debris and out of dangerous buildings.

Beware of settling of debris.

#### Five Stages of Rescue Work.

##### 1. Reconnaissance.

Check up who is missing and where.

Check up injured persons taken to neighbours or hospital.

Impose silence from time to time.

##### 2. Rescue persons whose whereabouts are known.

Talk to trapped persons.

Use voids to get to casualty.

Move the minimum to reach casualty.

Use tools with great care.

Label casualties.

##### 3. Search all likely places for missing people to be alive.

When clearing site organise work carefully—no **double handling**, no dumping on site where casualties still **buried**.

##### 4. Search all other places where victims may be, alive or dead.

##### 5. Strip site.



Rescue work **must** go on without stopping or easing up.  
 Arrange for disposal of valuables.  
 Above all **impose discipline and organise the work.**  
 You are in charge of rescue work until the Rescue Service arrives.

### Part VII. Objects dropped from the Air.

#### 1. HIGH EXPLOSIVE BOMBS.

There are three types of H.E. bombs used by the enemy.

(a) *General Purpose.* Ranging from 50 kg. to 1800 kg. in weight. These have a comparatively light case and are generally fitted with an impact or slightly delayed action fuse.

(b) *Semi-armour piercing or armour-piercing.* Ranging from 50 kg. to 1400 kg. in weight. These have a much thicker case, a steel nose-cap and a delay action fuse. The main object of this type is penetration before explosion.

(c) *Anti-personnel.* (i) Weight 4 lbs. The outer casing, usually coloured dark grey-green, is a cylinder of sheet-metal in two halves which open to form a parachute; the ends of the cylinder become vanes. The cast-iron bomb hangs on a cable about 5-in. long. The vanes rotate as the bomb falls and renders the fuse live.

There are three types of fuses:—

- (a) 1. To function in air at fixed distance from plane, or on impact.
2. Which may explode 5-30 minutes after falling.
3. Which is not fully sensitive till it has hit the ground, when it remains ready to function on the slightest movement or vibration.

(c) These bombs are dropped in two ways:—

(a) In containers holding 23.

(b) From containers attached to the plane holding 24.

If containers are found therefore search should be made for multiples of 23.

If no containers are found search should be made for multiples of 24.

(ii) Pear-shaped bomb, 4½-in. long, maximum diameter 2-in., tapering to 1½-in. at the nose. It has eight metal fins supported at end by circular metal band. All the specimens so far examined are painted yellow all over and are fitted with an impact nose fuse.

#### 2. INCENDIARY BOMBS.

(a) 1 Kilo Magnesium.

Thick walled tube 9-in. long, 2-in. diameter, made of an alloy of magnesium. Tube filled with a composition of thermite type. Tail fin about 5-in. long. Percussion cap.

The bomb functions on impact, the striker overcoming a spring ignites the priming composition and this in turn ignites the thermite. The thermite burns violently and with some spluttering for about half a minute and the terrific heat ignites the magnesium. This burns for 10-15 minutes at a great heat but less actively.

(b) 1 Kilo with Explosive in Tail. (Ex. I.B.).

Identical in appearance to the 1 kilo magnesium but a small explosive charge is screwed in to the taper end and covered by the tail unit. The charge is fired by the heat of the bomb and may be expected to explode from 1 to 2 minutes after the bomb has started burning. Particles of burning magnesium and fragments of steel are thrown in all directions.

(c) *Steel-nosed I.B.*

Identical in appearance with the 1 kilo magnesium but to give it greater penetrative power the light magnesium nose is replaced by a steel nose. This adds 12 ozs. to the weight of the bomb.

(d) *Red and Green I.B.*

This has the same characteristics as the 1 kilo magnesium but is slightly different in pattern. It is 13½-in. in length and the tail has eight cast vanes or six sheet metal vanes enclosed in a strengthening hoop. The body is painted red and the tail blue-green. (Slight variations in these colours have been observed.)

(e) *Sodium Bombs.*

Identical in appearance to the 1 kilo magnesium but it has a permanganate filling instead of thermite.

(f) *I.B. with Explosive Nose (I.B.E.N.).*

This is a 1 kilo magnesium with the ordinary type of nose removed and in its place is fitted a steel nose about 7½-in. in length containing a slow-burning fuse and an explosive charge. The total weight is increased to 5 lbs. which gives the bomb great penetrative power. The incendiary part functions on impact and in addition the slow fuse leading to the main explosive charge is ignited. The detonation may be delayed for any length of time up to 7 minutes.

(g) *I.B. with Separating Explosive Nose (I.B.S.E.N.).*

This is a modification of the I.B.E.N., a small explosive charge deliberately blowing the incendiary portion and the explosive nose apart on impact.

(h) *Oil Bomb.*

This bomb has the same external dimensions as a 250 kg. and contains 16 gallons of oil or oil and petrol mixture. The bomb is intended to burst and ignite shortly before reaching the ground but if it fails to do so it will function on impact.

A larger type has the external dimensions of a 500 kg.

(j) *Phosphorus Oil Bomb (Ph. I.B.).*

This bomb contains a solution of phosphorus, oil, benzene and rubber in a casing similar to that of a 50 kg. H.E. The contents ignite



spontaneously in contact with air. Do not touch the bomb or any ground or equipment splashed with the filling.

(k) *Sprengband—Bomb containing H.E. and Firepots. (Firepot).*

This bomb is the same size and shape as a 50 kg. H.E. On impact it throws out six pre-ignited firepots and 60 triangular metal containers about 3-in. long. The firepots and segments are magnesium type filled with thermite composition. The detonation of the 12 lb. charge of T.N.T. in the nose of the main bomb follows almost immediately.

*Methods of Attack.*

Oil, phosphorus and firepot bombs are dropped in the same way as H.E.

The other types of I.Bs may be dropped directly from planes or in containers of the following types:—

- (a) Rod with bracket—carries 36.
- (b) Cylinder in three side-pieces—carries 36.
- (c) Cylinder in two side-pieces—carries 36.
- (d) Rectangular canister—carries 15.
- (e) Cylinder divided into compartments:

Type I carries 702.

Type II carries 360.

These cylinders are attached to the plane and are not normally dropped, the bombs being released through electrically controlled doors.

- (f) ABB500; casing of oil bomb—carries 120.

3. MINES DROPPED ON LAND.

(a) *Parachute Mines.*

Type "C", 8-ft. 6-in. by 2-ft. 2-in.

Type "D", 6-ft. by 2-ft. 2-in.

The parachute is usually of mixed green and white artificial silk about 27-ft. in diameter with thick silk cords attached.

The fuse may be detonated magnetically or by vibration.

(b) *"G" Type Mines.*

Size 6-ft. 4-in. by 2-ft. 2-in.

It has no parachute attached.

Usually painted light blue with fins of brown bakelized material painted light blue.

The fuse is detonated magnetically.

4. GERMAN SMALL ARMS AMMUNITION.

The most commonly used German small arms ammunition are the 7.92 mm. and 20 mm. Each calibre is divided into several types, e.g. ball, armour-piercing, tracer, incendiary, or a combination of these. The 7.92 mm. is of gilding metal with black or black and red markings.

The 20 mm. is 3-in. to 4-in. in length,  $\frac{3}{8}$ -in. to  $\frac{1}{2}$ -in. diameter and may be yellow, with or without black bands, green with various coloured bands or black with yellow band.

5. MISCELLANEOUS.

Various miscellaneous objects are also dropped from the air. Any of these found by Wardens should not be touched but should be reported either to the Police or Report Centre as early as possible.

**Part VIII.**

**Unexploded Bombs, Mines and Shells. Evacuation Areas and Safety Precautions.**

*U.X.H.E.*

*Indications.*

- (i) Clean cut hole with no blackening on sides.
- (ii) No traces of blast.
- (iii) No splinters or splinter marks on surrounding property.
- (iv) No raising of earth round hole.
- (v) Windows over 20-ft. distant unbroken.
- (vi) History, i.e. what residents can tell you. No flash by night or no smoke by day when bomb fell and/or no explosion.

*Initial Evacuation.*

The area to be immediately evacuated depends on whether the bomb is buried or unburied. It is considered buried unless it is above ground or unless some part is still visible, with this exception that if the rear end of tail vanes is visible more than 2-ft. below the surface the bomb is treated as buried.

*Buried U.X.H.E.* For all sizes evacuate all buildings up to 50 yards, and, beyond this distance, rooms on the side of houses facing the bomb and within 100 yards.

*Unburied U.X.H.E.* For all sizes up to 250 kilos evacuate all buildings up to 50 yards and, beyond this distance, rooms on the side of houses facing the bomb and within 150 yards.

For sizes over 250 kilos and under 1800 kilos the distances given in the preceding paragraph are increased to 100 yards and 300 yards respectively.

For sizes over 1800 kilos these distances are increased to 200 yards and 400 yards respectively.

*U.X.P.M.*

*Initial Evacuation.*

All buildings within 200 yards of an unexploded parachute mine are to be immediately evacuated, and any unscreened rooms of buildings within 400 yards.

*Safety Precautions.* Detonation may be caused by magnetism or



vibration. No metal objects are to be brought within 5 yards, nor traffic allowed within 400 yards, and no stakes for making barriers to be driven into the ground within 400 yards.

Windows within 800 yards to be opened wide.

P.Ms are usually dropped in pairs, both must be located.

#### *U.X. "G" Mine.*

##### *Initial Evacuation.*

If *Buried* evacuate all buildings up to 50 yards, and, beyond this distance, rooms on the side of houses facing the mine and within 100 yards.

If *Unburied* as for U.X.P.M.

*Safety Precautions.* As for U.X.P.M. Also torches or similar lights must not be directed on these mines at night as they may cause detonation.

#### *U.X. Sprengband (Firepot Bomb).*

*Initial Evacuation,* as for 50 kg. H.E.

#### *U.X. Phosphorous-Oil Bomb.*

*Initial Evacuation* as for 50 kg. H.E.

*Safety Precautions.* Shock of impact may cause leakage, if so, bomb must be kept wet until removal by B.D.S.

#### *U.X.A.P.B.*

##### *Initial Evacuation.*

Inhabitants of nearby houses to be warned to keep away from windows within 50 yards of Small Anti-personnel Bombs. If bomb comes to rest in a building rooms adjacent to and immediately above or below that in which the bomb is lying are to be vacated. If bomb is lying in the open close all unscreened access within 100 yards.

*Safety Precautions.* Do not approach bomb till 30 minutes after time of falling. Avoid causing any vibration, for instance by handling sandbags roughly while building enclosure round bomb, or driving in stakes. **On no account touch the bomb.** If necessary to build a sandbag enclosure round bomb, this should be 1-ft. from bomb, 20-in. high and 10-in. thick.

#### *U.X.A.A. Shells.*

*Evacuation not necessary.*

*Indications.* Holes of less than 6-in. diameter will indicate the presence of a buried U.X.A.A. Shell.

*Safety Precautions.* Surround with sandbags to prevent interference. Do not attempt to remove these shells.

#### *U.X. Cannon Shell.*

*Safety Precautions.* Pointed end not to be touched. If necessary to move them they are to be carried carefully by the middle, kept horizontal and not jolted. Their collection is the responsibility of the Police.

#### *U.X. Gas Bombs.*

*Initial Evacuation* as for unburied U.X.H.E.

*Safety Precautions.* Warn occupants of houses adjacent to this area to close doors and windows and to have their respirators ready to put on, day or night.

#### *U.X.I.Bs.*

Unignited I.Bs of the 1 kg. type, or any of its variants, lying on the surface should be picked up carefully, carried horizontally and placed in a shallow trench in open ground away from the public. They must be reported immediately through the usual channels and the B.D.S. will arrange for collection.

U.X.I.Bs which are dry must **not** be immersed in water but any which have fallen in water or become wet should be kept in water until they are collected by the B.D.S.

U.X.I.Bs found with nose buried should not be pulled out of the ground but should be reported and left for the B.D.S.

### **Part IX. Camouflets.**

A Camouflet is an underground cavity formed by the explosion of a bomb when the force of the explosion is insufficient to disperse the soil above.

#### *Indications.*

1. Soil raised around hole of entry.
2. Blackening on sides of hole.
3. Slight hump on surface and radial cracks.
4. Formation of loose earth over hole or in shallow crater.
5. Cracking of walls or buildings in vicinity but no signs of blast damage.

#### *Safety Precautions.*

Report the suspected presence of a camouflet at once.

Do not probe with a rod; the rod striking a flint may explode certain gases which have been formed. Put up warning notices and rope off affected area.

Cases have occurred when persons walking over a camouflet have caused the crust to collapse, with fatal results as the cavity of a camouflet is filled with **Carbon Monoxide** gas.



## Part X. Fire Fighting.

### *Incendiary Bombs.*

All I.B.s must be regarded as the most dangerous type, i.e. the I.B.E.N. and should be treated as such.

1. Bombs falling where they may start a fire must be tackled resolutely and at once as follows:—

- (a) Until the bomb has exploded or seven minutes have elapsed, fire fighters must take the best possible cover. This cover should be substantial, if possible a brick wall 4½-in. thick.
- (b) The jet of a stirrup pump should be used and not the spray.
- (c) If a stirrup pump is not available water should be thrown from a pint pot or tin can in the direction of the bomb, the fire-fighter taking the same cover as if using a stirrup pump.
- (d) Fight the fire in a prone position wherever possible.
- (e) On no account use sandmats for putting on the bomb.

2. Bombs falling where they will do no harm should be left to burn themselves out.

3. The fire and not the bomb should be attacked first.
4. All floors of a building should be searched for bombs.

An I.B.S.E.N. should be treated in the same way except that where a room cannot be evacuated every endeavour should be made to pick up the explosive part and place it in safety. This part will not be too hot to pick up for 2 minutes.

### *Phosphorus Oil Bomb.*

When the bomb has burst and contents scattered attack with stirrup pump, buckets of water, wet sand, etc. Phosphorus will re-ignite when dried out and must all be cleaned up. An immediate report should be sent to the N.F.S.

## Part XI. First Aid.

It is realised that all Wardens will not be able to undergo full training courses in First Aid but it is essential that all of them should have enough knowledge to maintain a casualty until skilled attention is possible.

If a casualty is in a position endangering life, e.g. near fire, buildings on the point of collapse or liquid gas contamination, etc., he must be moved at once.

Do just enough to relieve the immediate danger and make the patient warm and comfortable; be very gentle; think before you act and try to display confidence.

### **Bleeding.**

#### 1. *Visible.*

- Types*—(i) Arterial—bright red and spurts with pulsation of heart;  
(ii) Venous—dark red.

*Symptoms.* Patient is pale, sweaty, cold and has a rapid and weak pulse.

*Treatment.* Apply a pad to the bleeding part and bandage tightly. You can apply pressure either direct or on the recognised Pressure Point according to the position of the injury.

A tourniquet should practically never be used.

#### 2. *Invisible.*

In addition to symptoms above the patient will be very restless and complain of thirst.

*Treatment.* Patient must have absolute rest and lie down; must be kept warm; no drink should be given.

### **Shock.**

*The importance of treating shock cannot be over-emphasised.*

All casualties whether showing shock or not, if unable to walk or obviously suffering must at once be treated for **Shock**.

Primary shock—may develop at once.

Secondary shock—may develop later as the result of pain, injury or cold and is much more dangerous than primary.

If the patient is treated at once for shock it will prevent or lessen the severity of secondary shock.

*Symptoms.* Extreme pallor, pulse feeble and rapid, breathing shallow and fast, skin cold and clammy.

*Treatment.* Warmth and rest.

Make the patient lie down.

Put blankets or rugs above and below him.

Use hot water bottles.

Give hot drinks with plenty of glucose or sugar.

**Note.**—Before putting blankets below the patient find out if he has any broken limbs and if so fix them but do not delay applying blankets over the patient and hot water bottles before looking for fractures.

### **Fractures.**

*Signs.* Loss of movement; deformity; pain.

If in doubt treat as a fracture.

Two main kinds:—

**Simple.**—When there is no wound connected with the broken bone;

**Compound.**—When the fracture perforates the skin or a wound leads down to the broken bone.

*Treatment.*—First treat for shock. Before a patient is moved a broken limb must be rendered immobile. Fix it to a splint long enough to include the joints above and below the fracture and/or tie it to opposite leg or side of body.



If there is a wound put a pad on it and bandage round the splint.  
If nothing else is available place sandbags on each side of the limb.  
These may be made by filling stockings with sand or soil.  
In the case of a broken jaw support the jaw with folded handkerchiefs or bandages tied over the top of the head.

### Wounds.

First treat for shock.  
Cover with a wound dressing or clean handkerchief, then bandage.  
Do not wash with antiseptics.  
Do not give drinks in cases of abdominal wounds.  
Jaw wounds: let patient lie over on his face so that blood drains out of mouth and keeps throat clear.

### Burns.

Treat for **Shock** (this may be very great).  
Cover the burns with a clean dry dressing or cloth to exclude the air and lessen the pain.  
Do not attempt to remove clothing from burned flesh—leave this for the doctor or nurse to do.

### Phosphorus Burns.

Cover the burns with wet bandages and keep them wet.

### Unconscious Patients.

Treat for shock.  
Loosen all tight clothing; take out false teeth; turn head to one side. Do not attempt to give drinks.

### Treatment of Gas Casualties.

#### General.

Remove an unprotected person from the gas or gas from the person by fitting a respirator.  
Never leave casualties standing, sitting or lying where they will become contaminated.

#### Phosgene.

Immediate rest and warmth and early removal to hospital.  
Artificial respiration must not be carried out.  
Mild cases or cases of suspected poisoning may be sent home for rest and instructions to send for medical assistance.

#### Mustard Gas.

#### Vapour or Liquid Contamination in Eye.

Wash out immediately with water and send casualty to First Aid Post or Gas Cleaning Centre.

### Liquid Mustard Gas on Skin.

Wipe off loose liquid and either

- (a) Cover contaminated area with Anti-gas Ointment No. 2 and rub well in.
- (b) Apply bleach paste (pails of this paste will be found at Chemists if/when gas is used); rub in for at least 1 minute and then wash off.
- (c) Swab repeatedly with rags wetted with solvent, e.g. petrol, and wash thoroughly with soap and water.
- (d) Wash the affected part with soap and water, changing the water frequently.

### Electric Shock.

Persons who come in contact with live electrical equipment may suffer from shock and burns.

If necessary remove casualty from live wire using long dry sticks, non-metallic rope, etc.

If unconscious apply artificial respiration.

Treat for shock and burns and remove to hospital or F.A. Post.

### Marking of Casualties.

Certain types of casualties should be marked and the following symbols should be used on a label, piece of paper pinned to the clothing, etc. If possible the forehead of the casualty should also be marked with the same symbol.

#### Symbol.

#### Type of Casualty

- X** Requires priority of removal and examination. Used for all unconscious persons, cases of internal haemorrhage, wounds in abdomen and chest, etc.
- H** Severe haemorrhage has occurred.
- C** Contaminated by **Persistent Gas** (or suspected).
- XX** Poisoned by **Non-Persistent Gas** (or suspected).
- P** Burnt by Phosphorus.

In addition to the symbol **X** the label on all unconscious casualties should state name (if known) time, date and address where found.

This information must also be given in the case of dead bodies; printed labels have been supplied to the Police and Rescue Service. If these are not available use any label or piece of paper and ensure that the symbols "**C**", "**XX**" or "**P**" are put on the body if applicable.

### Part XII. Raids by Hostile Troops.

Certain code-words may be received by the police indicating that an enemy raid is in progress.

It will then be the duty of the police, with the assistance of the Wardens' Service, to communicate and enforce the general directions



to the public as set out at (a) to (e) below, and any special directions which become necessary during the raid. They will also give assistance as may be required to the Military.

If an enemy raid is in progress in their locality civilians should:—

- (a) Refrain from any action which might interfere with military operations.
- (b) Be ready to give prompt assistance in any way which their services may be required by either the military or civil authorities.
- (c) Keep off streets and roads, except when carrying out any instructions as in (b) above.
- (d) If at home remain under cover; or, if in street or road, take cover in nearest building, and not leave cover to go to public shelters.
- (e) If in public shelter when siren sounded, remain there.

The primary consideration is that the public should avoid any movement on the streets or roads unless under orders of police, wardens, or a responsible military officer or N.C.O.

#### B. Reports of Enemy Movements.

It is vitally important that enemy movements should be reported as quickly as possible. Reports must be accurate and should give the following information:—

- (a) *Strength.* What was the composition of the enemy force seen?
- (b) *Location.* Where was the enemy seen?
- (c) *Time.* When was he seen there?
- (d) *Direction.* Where did he appear to come from?  
Where did he appear to be going?
- (e) *Action.* What did you do about it?
- (f) *Reliability.* How reliable is your information?

In addition state:—

- (x) *Rank, Number and Name of Service reporting.*
- (y) *Place reporting from.*
- (z) *Time of origin of his report.*

Reports should be sent to the Local Military Commander or Police and if possible confirmed afterwards through the normal Report Centre channels.

#### APPENDIX "A1"—SHOWING FAULTY MESSAGE.

##### WARDEN'S REPORT FORM.

A.R.P.(M.I.)

Form of Report to Report Centres.

(Commence with the words)

"AIR RAID DAMAGE"

Designation of REPORTING AGENT  
(e.g., Warden's Sector Number)

*Jones.*

POSITION of occurrence *Smith's House, High Street.*

TYPE of bombs:—H.E. Incendiary.

Approx. No. of CASUALTIES:—20. (if any trapped under wreckage, say so).

If FIRE say so:—*Fire.*

Damage to MAINS:—Water. Coal Gas. Overhead electric cables.  
Sewers. *Unknown.*

Names of ROADS BLOCKED:—*High Street.*

Position of any UNEXPLODED BOMBS:—

Time of occurrence (approx.)—13.

Services already ON THE SPOT or COMING:—*Wardens. S.Ps.*

Remarks:—*Help wanted.*

(Finish with the words) "MESSAGE ENDS".

ORIGINAL { These words are for use with a report sent by mes-  
DUPLICATE { senger. Delete whichever does not apply.



### Comments.

*Reporting Agent.* Jones.

Presumed he is a Warden but does not say so.

Cannot tell where he is reporting from. Report Centre may want to telephone him later.

*Position of Occurrence.* High Street.

This street is a mile long, six families called Smith live in it; which Smith's house? A clearer definition should be given, such as "200 yards west of St. John's Church", or "near King Street".

*Fire.*

Fire may mean a small fire easily dealt with by stirrup pump, or a large fire requiring fire engines.

*Blocked Roads.* High Street.

No indication given of what portion of the mile length of High Street is blocked. Should say, for example, "King Street to Queen Street".

*Time of Occurrence.* 13.

Does the Warden mean 0103, i.e. just after 1 a.m.

1303, i.e. just after 1 p.m.

or 1300, i.e. 1 p.m.

So always use the 24-hour clock and give all four digits.

*Services on the Spot.* Wardens and S.Ps.

This refers to all Services, including Fire Brigade, etc.; these may have turned out on receipt of warning from another source.

What does S.P. mean? Stirrup Pump? Stretcher Party? Special Police? Do not use abbreviations.

*Remarks.* Help wanted.

May mean anything. State clearly what Service is wanted and how many of each Service.

### APPENDIX "A.2"—SHOWING IMPROVEMENTS IN MESSAGE GIVEN IN APPENDIX "A.1".

#### WARDEN'S REPORT FORM.

A.R.P.(M.I.)

Form of Report to Report Centres.

(Commence with the words) "AIR RAID DAMAGE"

Designation of REPORTING AGENT:—*Warden Jones.*  
(e.g., Warden's Sector Number):—*Newton Post No. 1.*

POSITION of occurrence:—*High Street, near King Street.*

TYPE of bombs:—H.E. Incendiary.

Approx. No. of CASUALTIES:—20. *Several Stretcher Cases.*  
(if any trapped under wreckage, say so). *Unknown.*

If FIRE say so:—*Large Fire.*

Damage to Mains:—Water. Coal Gas. Overhead electric cables.  
Sewers. *Unknown.*

Names of ROADS BLOCKED:—*High Street cratered between King Street and Queen Street.*

Position of any UNEXPLODED BOMBS:—*Unknown.*

Time of occurrence (approx.):—0103 hours.

Services already ON THE SPOT or COMING:—*Wardens. Special Police. Fire Brigade Notified.*

Remarks:—*Ambulance and Rescue Party wanted. Further details to follow. Time of origin;—0110 hours.*

(Finish with the words) "MESSAGE ENDS"

ORIGINAL { These words are for use with a report sent by mes-  
DUPLICATE { senger. Delete whichever does not apply.



**For use by Individual Wardens.**

TEL. NOS.

NOTES.