CONTINENTAL LIAISON

1. The Continental Liaison procedures used within the UKWMO allow for the dissemination of the information between NATO Civil Warning and Detection Organisations concerning:

a. Meteorological forecast reports; (WD1).

b. First public warning and/or first attack reports; (WD2).

c. Report of NBC strike in frontier areas; (WD3).

d. Conventional, nuclear, biological and chemical strikes; (WD4).

e. Fallout predictions and warnings; (WD5, WD6, WD7).

f. Radiation dose rate measurements and areas of contamination; (WD8, WD9).

2. The information is passed from the United Kingdom to the Continental Controls by Continental Liaison Officers based at appropriate Sector Controls. All the information transmitted or received is recorded on FORM CONTINENTAL LIAISON in duplicate, one copy retained by the Liaison Officer, the other is passed as detailed in the following procedures.

3. The Continental Liaison Officers will be working on ZULU time so all information must be converted to or from ZULU time as appropriate before being transmitted, or converted to Local time before being used within UKWMO.

NOTE: ZULU time is British Standard Time, and a subtraction of 1 hour will need to be made whilst British Summer Time is in operation. British Summer Time may also be referred to as Local Time.

4. The information passed under each type (WD1 etc) is coded using either a letter or number. Where no information is applicable to a particular code N/A is to be entered on the form. There are a number of conventions used when completing FORM CONTINENTAL LIAISON and these are as follows:

a. Under DATE/TIME - a reference giving the date (2 figures) and ZULU time (4 figures + Z) at which the message is sent or received eg 011140Z; 230830Z.

b. Under FROM/TO indicate sender/recipient, using the standard NATO identity code for the appropriate countries (eg GE-UK UK-FR). See Annex L for the list of identifying letters.

c. Under CODE - type of report ie WD1, WD5 etc.

d. Map references must whenever possible be expressed in UTM Grid Reference coordinates (box designations and six figures), or National Grid or Irish Grid coordinates (box designations and four figures). GEOREF Grid coordinates (box designations and four figures) may be used by way of exception. The grid system used must be indicated in the text.

e. Distances and speeds will be measured in kilometres or Km/h as appropriate and given as a 3-figure group.

f. Bearings and directions will be indicated in degrees using a 3-figure group.

g. Reference in these procedures to incoming or outgoing messages relate to the passage from or to the continent.

h. Dose rates may be in centigrays per hour, rads per hour or roentgens per hour, state which.

Procedures for Handling Continental Liaison essages

5. Meteorological Forecast Reports (WD1)

a. The Meteorological Forecast information is coded as follows:

Number	Meaning
1	Area designation or name of Upper Air Station
2	Time of ascent (the date/time group)
3	Effective downwind direction and windspeed (Km/h) for 100kt (six figure group)
4	Effective downwind direction and windspeed (Km/h) for 300kt (six figure group)
5	Effective downwind direction and windspeed (Km/h) for 1000kt (six figure group)
6	Effective downwind direction and windspeed (Km/h) for 3000kt (six figure group)

b. Notes:

(1) All windspeeds will be expressed in kilometres per hour (Km/h).

(2) Meteorological reports should be exchanged at least every six hours (based on the 0001:0600:1200:1800 Z hour ascents) or as necessary between UK Sector Controls and their adjacent Continental Controls.

(3) The effective downwind direction will be the direction towards which the wind is blowing.

c. Message Handling - Incoming Information

On receipt of a WD1 Meteorological Forecast Report message the Liaison Officer is to complete the Form Continental Liaison in duplicate. An example is shown at Appendix 5a. The original is to be passed to the Meteorological Officer, the duplicate being retained by the Liaison Officer. The Meteorological Officer and Sector Controller will decide if WD1 information is to be disseminated to other Sector Controls and home groups. Information for dissemination to other Sector Controls will be entered on a non-routine message form as shown at Appendix 5b.

d. Message Handling - Outgoing Information

The Meteorological Officer will complete the Form Continental Liaison in duplicate from information contained in the HOMET message. The Meteorological Officer will enter on the form:

(1) The date/time (eg 241430Z) of observation/ascent.

(2) The originator and addressee.

(3) The code (WD1).

(4) The text in the format shown in paragraph a. above. An example is shown at Appendix 5c.

(5) The date/time of transmission/receipt.

(Details of not more than two areas are to be entered on each form.)

The Meteorological Officer should then retain the copy and pass the original to the Liaison Officer who will send the message.

6. First Public Warning and/or First Attack (WD2)

a. The information is coded as follows:

Number	Meaning
1	Details of first public warning of Attack (state which) including date/time group.
2	Cancellation of first public warning of Attack (state which) including date/time group.
3	First conventional, nuclear, biological, chemical attack (state which).

b. Notes:

(1) Notice of the issue (and any subsequent cancellation) of the first public warning or air or missile attack should be disseminated to all countries.

(2) Cancellation of this report of first public warning of attack is required only if no attack takes place.

(3) The appropriate Sector Controller is responsible for informing the Director at Western Sector Control, the Deputy Directors at UK RAOC and Midland Sector Control and other Sector Controllers of all WD2 information.

(4) Detailed procedures for the processing of messages relating to biological and chemical attacks within the United Kingdom are at present in abeyance.

c. Message Handling - Incoming Information

On receipt of a WD2 First Public Warning and/or First Attack message, the Liaison Officer will complete Form Continental Liaison in duplicate. Examples are shown at Appendix 6a and d. The originals are to be passed to the Sector Controller who will disseminate the contents of the WD2 message to the Director at Western Sector Control, the Deputy Directors at UK RAOC and Midland Sector Control and all other Sector Controllers by speech or by a Non-Routine message as the situation demands. The duplicate forms are to be retained by the Liaison Officer. Examples of inter-sector messages are shown at Appendix 6b and e.

d. Message Handling - Outgoing Information

The Sector Controller is responsible for informing the Liaison Officer of the necessary details of the WD2 message. The Liaison Officer should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The code (WD2).

(4) The text in the format shown in paragraph a. above. An example is shown at Appendix 6c.

(5) The date/time of transmission/receipt.

The Liaison Officer should then send the message, retaining the copy for reference and passing the original to the Sector Controller.

7. Report of NBC Strikes in Frontier Areas (WD3)

a. The information is coded as follows:

Number	Meaning
1	Type of NBC strike (state which).
2	Date/time of nuclear detonation, or date/time biological or chemical attack started.
3	Estimated location or area attacked (place name or co-ordinates).
4	Means of delivery if known.

b. Notes:

(1) Notice of NBC strikes in frontier areas to adjacent countries will be exchanged as necessary between all countries. However this type of message is likely to be less vital to the UK than to countries with a common land barrier, and it is for Sector Controllers to decide on the need to issue a WD3 message.

(2) Detailed procedures for the processing of messages relating to biological and chemical attacks within the UK are at present in abeyance.

(3) The appropriate Sector Controllers will be responsible for informing the Director at Western Sector Control and the Deputy Directors at UK RAOC and Midland Sector Control and all other Sector Controllers of all WD3 information.

c. Message Handling - Incoming Information

The Liaison Officer will complete the Form Continental Liaison in duplicate. An example is shown at Appendix 7a. The original is to be passed to the Sector Controller. The Sector Controller will disseminate the contents of the WD3 message to the Director at Western Sector Control, the Deputy Directors at UK RAOC and Midland Sector Control and all other Sector Controllers by speech or non-routine message as the situation demands. An example of a non-routine message is shown at Appendix 7b.

d. Message Handling - Outgoing Information

The Sector Controller is responsible for informing the Liaison Officer of the necessary details. The Liaison Officer should complete Form Continental Liaison in duplicate and enter the following details:

(1) The date/time group (eg 201515Z).

(2) The originating and addressee countries (eg UK-NE).

(3) The code (ie WD3).

(4) The text in the format shown in paragraph a. above. An Example is shown at Appendix 7c.

(5) The date/time of transmission/receipt.

The Liaison Officer should then send the message, retaining the copy for reference, and passing the original to the Sector Controller.

8. The Passing of Evaluated Data (Nuclear)

a. The information is coded as follows:

Letters	Meaning
A	Strike serial number.
D	Date/time of detonation.
F	Location of attack; co-ordinates (state which) or place or area attacked, actual or estimated (State which).
H	Type of burst (air, surface, or unknown - state which) including height of burst if known.
N	Estimated yield (kt).

b. Note

Reports of nuclear bursts will be exchanged between those countries likely to be affected, or as required routinely.

c. Message Handling - Incoming Information

On receipt of a WD4 (NUCLEAR) message the Liaison Officer will complete the Form Continental Liaison in duplicate. An example is shown at Appendix 8a. The Liaison Officer will pass the original to the Continental Liaison Orderly, who will convert the times to local time. he Continental Liaison Orderly will plot the burst details and hand the form to the Display E Officer. If the Display E Officer confirms that the burst may pose a threat or that the information needs to be disseminated within the UK a check will be made to ensure the form is correct and instruct the Continental Liaison Orderly to prepare and issue a BX message. The Continental Liaison Orderly is responsible for ensuring that both UTM and GEOREF grid references are entered on the form. An example is shown at Appendix 8b. If it is decided that the burst does not pose a threat to the United Kingdom at that time or is not required as routine the Form Continental Liaison should be filed.

d. Message Handling - Outgoing Information

The Display E Officer is responsible for informing the Liaison Officer of the details of any burst in the United Kingdom which poses a threat to adjacent Continental countries.

The Liaison Officer will complete the Form Continental Liaison in duplicate, as a WD4 Message. The Liaison Officer should enter on the form:

(1) The date/time.

(2) The originator and addressee.

(3) The code (WD4).

(4) The text in the format shown in paragraph a. above. An example is shown at A.

(5) The date/time of transmission/receipt.

After sending the message the Liaison Officer will retain the copy and pass the original back to the Display E Officer for his reference.

9. The Passing of Evaluated Data (Chemical and Biological) (WD4)

a. The information is coded as follows:

Letter	Meaning
A	Strike serial number.
D	Date/time the attack started.

F	Location of attack; co-ordinates (state which) or place or area attacked, actual or estimated (state which).
H	Type of agent or type of attack, including means of delivery if known.
N	Not applicable.

b. Note

Reports of chemical and biological attacks will be exchanged between those countries likely to be affected.

c. Message Handling - Incoming Information

(1) On receipt of a WD (Chemical) or (Biological) message the Liaison Officer will complete the Form Continental Liaison in duplicate. An example is shown at Appendix 9. The original is to be passed to the Sector Controller.

(2) Detailed procedures for the processing of BW and CW messages within the United Kingdom are at present in abeyance.

d. Message Handling - Outgoing Information

Until detailed procedures have been promulgated (see para c. ii. above), the Sector Controller will decide the necessary action to be taken.

10. Alert Situation Reports in Frontier Areas (WD5)

a. The information is coded as follows:

Number	Meaning
1	Type of NBC threat.
2	Date/time warning issued.
3	Warning district(s) to which issued (Name or Code).
4	Cancellation(s).

b. Note

All alert measures (nuclear, biological and chemical) in frontier areas should be exchanged between adjoining countries as a matter of high priority. However WD5 information is not required to be exchanged between the UK and other Continental countries.

c. Message Handling - Incoming Information

On receipt of a WD5 Alert situation message the Liaison Officer will complete the Form Continental Liaison in duplicate. An example is shown at Appendix 10. The original is to be handed to the Continental Liaison Orderly, who will convert the time to local time and then pass the form to the Sector Controller, who will decide the action to be taken.

d. Message Handling - Outgoing Information

The Sector Controller will be responsible for informing the Liaison Officer of the details for this type of report. The Liaison Officer should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The Code (WD5).

(4) The text in the format shown in paragraph a. above.

(5) The date/time of transmission/receipt.

The Liaison Officer will send the message, retaining the copy for reference and pass the original to the Sector Controller.

11. Fallout Prediction (WD6)

a. The information is coded as follows:

Number	Meaning
1	Strike serial number.
2	Estimated downwind direction in degrees of the hotline at frontier or coastline of departure.
3	Estimated speed (Km/h) on hotline.
4	Estimated position and Estimated Time of Arrival (ETA) at frontier or coastline of departure for extreme edges of prediction area.

b. Notes:

(1) Fallout predictions for those bursts likely to affect one or more adjoining countries should be passed between those countries. This should be an immediate assessment of the time and position of arrival of fallout at the originator's frontier or coastline.

(2) The estimated downwind direction is the direction towards which fallout is moving and is to be given in degrees as a 3-figure group.

(3) Windspeeds will be expressed in kilometres per hour (Km/h) as a 3-figure group.

c. Message Handling - Incoming Messages

On receipt of a WD6 fallout prediction message the Liaison Officer will complete Form Continental Liaison in duplicate. An example is shown at Appendix 11a. The original is to be passed to the Display E Officer. The Display E Officer will check whether the prediction is in fact likely to pose a threat to the United Kingdom, and if so, is to assess the

likely position and time of arrival on the UK coastline and instruct the Continental Liaison Orderly to issue a Form Continental Threat Data (TX) for dissemination within the UK. An example is shown at Appendix 11b. The threat front will be described in the same way as the normal threat service procedure within the United Kingdom (ie by National Grid References). Once fallout from continental bursts has been identified at monitoring posts in the UK it should be treated in the same way as fallout from UK bursts (ie hourly threat front messages should be included in the normal TT messages produced in Sector Controls). The Display E Officer is to ensure that the Display A Officer is aware of all relevant threats to the UK.

d. Message Handling - Outgoing Messages

The Display E Officer is responsible for informing the Liaison Officer of the relevant details for issuing WD6 reports for UK bursts. The Liaison Officer should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The code (WD6).

(4) The text in the format shown in paragraph a. above. An example is shown at Appendix 11 c.

(5) The date/time of transmission/receipt.

The Liaison Officer will send the message, retaining the copy and passing the original to the Display E Officer for reference.

12. Fallout Warning (WD7)

a. The information is coded as follows:

Number	Meaning
1	Strike serial number.
2	Actual downwind direction in degrees of hotline at frontier or coastline of departure.
3	Actual speed (Km/h) on hotline.
4	Position and times of arrival (TOA) at frontier or coastline of departure for extreme edges of contaminated area.

b. Notes:

(1) Fallout warnings for those bursts likely to affect one or more adjoining countries should be exchanged between those countries. This type of report should follow a WD6 report and will be a revised assessment made as soon as possible of the time of arrival and position of the front on the originator's frontier or coastline.

(2) The effective downwind direction is the direction towards which fallout is moving and towards which the wind is blowing, and is to be given in degrees as a 3-figure group.

(3) Wind speeds will be expressed in kilometres per hour (Km/h) as a 3-figure group.

c. Message Handling - Incoming Information

On receipt of a WD7 fallout warning message the Liaison Officer is to complete Form Continental Liaison in duplicate. An example is shown at Appendix 12 a. The original is to be passed to the Display E Officer. The Display E Officer will compare the WD7 with any appropriate WD6 and any TX issued therefrom. If the new threat is significantly different or if no WD6 has previously been received the Display E Officer is to instruct the Continental Liaison Orderly to issue either an amendment to the original or a new TX as appropriate. An example of an amendment is shown at Appendix 12 b. Once fallout from Continental bursts has been identified at monitoring posts in the UK it should be treated in the same way as fallout from UK Bursts (ie hourly threat front messages should be included in the normal TT messages produced in Sector Controls). The Display E Officer is to ensure that the Display A Officer is aware of all relevant threats to the UK.

d. Message Handling - Outgoing Information

The Display E Officer will be responsible for informing the Liaison Officer of the necessary details required for issuing WD7 reports for United Kingdom bursts. The Display E Officer should ensure where possible that each WD6 report originated is followed up by a WD7 report or, if the situation no longer presents a threat, by a cancellation. The Liaison Officer should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The code (WD7).

(4) The text in the format shown in paragraph a. above. An example is shown at Appendix 12 c.

(5) The date/time of transmission/receipt.

The Liaison Officer will send the message retaining the copy and passing the original to the Display E Officer for reference.

13. Radiological Monitoring Measurements or Survey Results (WD8)

a. The information is coded as follows:

Letter	Meaning
H	Type of agent.
Q	Location of reading or location and type of sampling.

likely position and time of arrival on the UK coastline and instruct the Continental Liaison Orderly to issue a Form Continental Threat Data (TX) for dissemination within the UK. An example is shown at Appendix 11b. The threat front will be described in the same way as the normal threat service procedure within the United Kingdom (ie by National Grid References). Once fallout from continental bursts has been identified at monitoring posts in the UK it should be treated in the same way as fallout from UK bursts (ie hourly threat front messages should be included in the normal TT messages produced in Sector Controls). The Display E Officer is to ensure that the Display A Officer is aware of all relevant threats to the UK.

d. Message Handling - Outgoing Messages

The Display E Officer is responsible for informing the Liaison Officer of the relevant details for issuing WD6 reports for UK bursts. The Liaison Officer should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The code (WD6).

(4) The text in the format shown in paragraph a. above. An example is shown at Appendix 11 c.

(5) The date/time of transmission/receipt.

The Liaison Officer will send the message, retaining the copy and passing the original to the Display E Officer for reference.

12. Fallout Warning (WD7)

a. The information is coded as follows:

Number	Meaning
1	Strike serial number.
2	Actual downwind direction in degrees of hotline at frontier or coastline of departure.
3	Actual speed (Km/h) on hotline.
4	Position and times of arrival (TOA) at frontier or coastline of departure for extreme edges of contaminated area.

b. Notes:

(1) Fallout warnings for those bursts likely to affect one or more adjoining countries should be exchanged between those countries. This type of report should follow a WD6 report and will be a revised assessment made as soon as possible of the time of arrival and position of the front on the originator's frontier or coastline.

Letter	Meaning
R	Dose Rate (centigrays per hour, rads per hour or roentgens per hour - state which). The words "Initial", "Increasing", "Peak" or "Decreasing" may be added. When decay rates are reported, the words "Decay Normal", "Decay Fast" or "Decay Slow" or the actual value of the decay constant may be inserted.
S	Date/time of reading, or date/ ime of detection.

b. Notes:

(1) Monitoring or survey results for specific locations will be supplied only on request and any subsequent up-dating of the information will be supplied only if requested by the original demander.

(2) Requests for this type of information for continental locations will be passed to the Liaison Officer by the Display E Officer.

c. Message Handling - Requests

If the Display E Officer needs this type of information a Form Continental Liaison is to be completed in duplicate as a WD8 but substituting the details of his request for the normal text. An example is shown at Appendix 13a. He will then pass the original to the Liaison Officer for transmission. The originator should enter on the form:

(1) The date/time group (eg 241600Z).

(2) The originator and addressee.

(3) The code (WD8).

(4) Either the format as shown in paragraph a. above or the details of the request as explained immediately above.

(5) The date/time of transmission/receipt.

d. Message Handling - Reply

On receipt of a WD8 reply the Liaison Officer is to complete Form Continental Liaison in duplicate. An example is shown at Appendix 13b. The Liaison Officer is to check the message by referring it to the original request message, and then pass the original of the reply to the Display E Officer, retaining the copy for reference.

14. Areas of Contamination (WD9 Nuclear)

a. The information is coded as follows:

Letter	Meaning
A	Strike serial number(s) causing contamination (if known).
O	Reference date/time for estimated contours when not H + 1 hour.
T	H + 1 date/time or date/time of the latest survey of contamination in the area.
U	1000 Rph or rad/hr or cGy/hr (state which) co tour line co-ordinates.
V	300 Rph or rad/hr or cGy/hr (state which) contour line co-ordinates.
W	100 Rph or rad/hr or cGy/hr (state which) contour line co-ordinates.
X	30 Rph or rad/hr or cGy/hr (state which) contour line co-ordinates, or area of actual contamination.

b. Notes

(1) Fallout intensity contours which are of interest to other countries will be exchanged between adjoining countries on request.

(2) When contamination arises from a single burst or bursts at the same time, the dose rate always refers to the H + 1 hour and the letter item 'T' is used. But when there have been several detonations at different times or on different days and no single H + 1 is possible, then the dose rates are reported as at a specified time using the letter item 'O'. Letter items 'O' and 'T' are alternative and cannot be used in the same report. In Appendix 143 'O' is omitted.

(3) It is not necessary or even desirable to report all 4 of the contours of different dose rates. Four are given to provide flexibility. Contours of other dose rates can be requested and reported without a specific letter reference, provided that the values are stated.

(4) When a contour closes to form a complete ring, the first co-ordinate is repeated at the end (see example for letter item X at Appendix 14c).

(5) When dose rates, other than the four shown, are requested they should be sent under the letter item 'R' in the first column (see Code WD8) and the precise dose rate value stated.

(6) When requested decay rates are to be transmitted in accordance with letter item 'R'.

(7) Detailed procedures for the passing of BW and CW messages within the United Kingdom are at present in abeyance.

c. Message Handling - Requests

The originator should enter on the form:

(i) The date/time group (eg 241600Z).

(ii) The originator and addressee.

(iii) The code (WD9).

(iv) The format as shown in paragraph a. The format for requests is explained below. An example is shown at Appendix 14a.

(v) The date/time of transmission/receipt.

If the Display E Officer needs this type of information he is to complete Form Continental Liaison is to be completed in duplicate as a WD9, but substituting the details of the request for the normal text, as shown in paragraph a. above. The Display E Officer will pass the original to the Liaison Officer who will transmit the message, retaining the original for reference. An example is shown at Appendix 14a.

d. Message Handling - Reply

On receipt of a WD9 message the Liaison Officer is to complete Form Continental Liaison in duplicate. The Liaison Officer is to check the message by referring to the request. The copy of the reply is to be retained for reference and the original passed to the Display E Officer. An example is shown at Appendix 14b.

15. Appendices

Appendix 1 - Duties and Responsibilities - Sector Controller

Appendix 2 - Duties and Responsibilities - Liaison Officer

Appendix 3 - Duties and Responsibilities - Display E Officer

Appendix 4 - Duties and Responsibilities - Continental Liaison Orderly

Appendix MESSAGE EXAMPLES - WD1
- 5a - Incoming Information - Form Continental Liaison
- 5b - Incoming Information - Form Non-Routine
- 5c - Outgoing Information - Form Continental Liaison

Appendix MESSAGE EXAMPLES - WD2
- 6a - Incoming Information - First Public Warning - Form Continental Liaison
- 6b - Incoming Information - First Public Warning - Form Non-Routine
- 6c - Outgoing Information - First Public Warning - Form Continental Liaison
- 6d - Incoming Information - First Attack - Form Continental Liaison
- 6e - Incoming Information - First Attack - Form Non-Routine