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**GEN 3.5 METEOROLOGICAL SERVICES****1. RESPONSIBLE SERVICE**

- 1.1. Met Eireann Aviation Services Division (of the Department of Housing, Planning and Local Government) is the meteorological Authority for Ireland.

Met Eireann Aviation Services Division is the designated meteorological services provider to air navigation in Ireland under the EU Services Provision Regulation.

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Met Eireann Headquarters,  
Glasnevin Hill,  
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AFS: EIDBYBYX

Email: met.eireann@met.ie

URL: <http://www.met.ie>

- 1.2. Applicable ICAO Documents  
ICAO Standards, Recommended Practices and Procedures contained in the following documents are applied:

- Annex 3 - Meteorology,
- DOC 7030 - Regional Supplementary Procedures,
- DOC 7754 EUR Regional Air Navigation Plan
- DOC 8400 - ICAO Abbreviations and Code
- DOC 9974 - [http://www.icao.int/publications/Documents/9974\\_en.pdf](http://www.icao.int/publications/Documents/9974_en.pdf)
- ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II)  
<https://www.icao.int/EURNAT/EUR%20and%20NAT%20Documents/EUR+NAT%20VACP.pdf>
- EASA Safety Information Bulletin (SIB) 2010 - 17R7

Differences to these provisions are detailed in subsection [GEN 1.7](#)

**2. AREA OF RESPONSIBILITY**

The meteorological office at Shannon Airport is the meteorological watch office (MWO) designated to maintain the meteorological watch in the flight information region for Shannon FIR/UIR

3. METEOROLOGICAL OBSERVATIONS AND REPORTS

| Station and Location Indicator | Type and Frequency of Observation | Types of Report                                       | Details of Observation System and Site |   | Hours of Operation | Climatological Information                             |
|--------------------------------|-----------------------------------|---|--|---|--------------------|--|
| 1                              | 2                                 | 3   | 4                                      |   | 5                  | 6  |
| Cork<br>EICK                   | ½ hourly<br>special               | Plain language<br>METAR<br>TREND<br>RVR<br>Wind shear | Wind                                   | Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield  | H24                | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |   | Temp                                   | Distant reading thermometer.  |                    |  |
|                                |                                   |   | RVR                                    | IRVR RWY16/34 - Touchdown, midpoint and stop-end  |                    |  |
|                                |                                   |   | Cloud Height                           | Ceilometer.   |                    |  |
|                                |                                   |   | Visibility                             | Visibility reported is minimum visibility.  |                    |  |
|                                |                                   |   | Wind shear                             | Not measured instrumentally   |                    |  |
| Dublin<br>EIDW                 | ½ hourly<br>special               | Plain language<br>METAR<br>TREND<br>RVR<br>Wind-shear | Wind                                   | Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield  | H24                | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |   | Temp                                   | Distant reading thermometer.  |                    |  |
|                                |                                   |   | RVR                                    | IRVR RWY 16 – Touchdown and midpoint.<br>RWY 10R/28L – Touchdown, midpoint and stop-end.  |                    |  |
|                                |                                   |   | Cloud Height                           | Ceilometer.   |                    |  |
|                                |                                   |   | Visibility                             | Visibility reported is minimum visibility.  |                    |  |
|                                |                                   |   | Wind shear                             | Not measured instrumentally   |                    |  |
| Shannon<br>EINN                | ½ hourly<br>special               | Plain language<br>METAR<br>TREND<br>RVR<br>Wind shear | Wind                                   | Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield. | H24                | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |   | Temp                                   | Distant reading thermometer.  |                    |  |
|                                |                                   |   | RVR                                    | IRVR RWY 06/24 - Touchdown, midpoint and stop-end.  |                    |  |
|                                |                                   |   | Cloud Height                           | Ceilometer.   |                    |  |
|                                |                                   |   | Visibility                             | Visibility reported is minimum visibility   |                    |  |
|                                |                                   |   | Wind shear                             | Not measured instrumentally   |                    |  |

| Station and Location Indicator | Type and Frequency of Observation | Types of Report                                | Details of Observation System and Site |   | Hours of Operation           | Climatological Information                             |
|--------------------------------|-----------------------------------|--|--|---|------------------------------|--|
| 1                              | 2                                 | 3  | 4                                      |   | 5                            | 6  |
| Ireland West<br>EIKN           | ½ hourly<br>Special               | Plain language<br>METAR<br>TREND<br>Wind shear | Wind                                   | Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield. | 0545-AD<br>CLSD (Local Time) | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |  | Temp                                   | Distant reading thermometer.  |                              |  |
|                                |                                   |  | Cloud Height                           | Ceilometer.   |                              |  |
|                                |                                   |  | Visibility                             | Visibility reported is minimum visibility   |                              |  |
|                                |                                   |  | Wind shear                             | Not measured instrumentally   |                              |  |
| Kerry<br>EIKY                  | Half Hour<br>Special              | METAR<br>Plain Language                        | Wind                                   | Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield                                 | AD Opening<br>Hours          | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |  | Temp                                   | Distant reading thermometer   |                              |  |
|                                |                                   |  | Cloud Height                           | Ceilometer  |                              |  |
|                                |                                   |  | Visibility                             | Visibility reported is minimum visibility   |                              |  |
| Sligo<br>EISG                  | Half Hour<br>Special              | METAR<br>Plain Language                        | Wind                                   | Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield                                 | AD Opening<br>Hours          | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |  | Temp                                   | Distance reading thermometer.   |                              |  |
|                                |                                   |  | Cloud Height                           | Ceilometer  |                              |  |
|                                |                                   |  | Visibility                             | Visibility reported is minimum visibility   |                              |  |
| Donegal<br>EIDL                | Half Hour<br>Special              | METAR<br>Plain Language                        | Wind                                   | Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield                                 | AD Opening<br>Hours          | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |  | Temp                                   | Distant reading thermometer   |                              |  |
|                                |                                   |  | Cloud Height                           | Ceilometer  |                              |  |
|                                |                                   |  | Visibility                             | Visibility reported is minimum visibility   |                              |  |
| Waterford<br>EIWF              | Half Hour<br>Special              | METAR<br>Plain Language                        | Wind                                   | Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield                                 | AD Opening<br>Hours          | Aeronautical<br>Climatological<br>summary<br>available |
|                                |                                   |  | Temp                                   | Distant reading thermometer   |                              |  |
|                                |                                   |  | Cloud Height                           | Ceilometer  |                              |  |
|                                |                                   |  | Visibility                             | Visibility reported is minimum visibility   |                              |  |

### 3.1 Surface Weather Reports

Reports of surface weather observations for the aerodromes at Cork, Dublin, Shannon and Ireland West consist of:

- **Routine:** half-hourly reports in METAR form are disseminated on AFTN and are issued, in plain language, to ATS. They are also included in VOLMET broadcasts.

- **Special:** reports are made whenever a significant deterioration or improvement of weather is observed between the routine observations. They are issued, in plain language, to ATS but are not disseminated beyond the aerodrome. Special reports may also be made on a specific occasion on request by ATS and/or operator.

### 3.2 Visibility

The visibility reported in all observations is the minimum visibility.

When there are important directional variations in visibility, other values, including in all cases the maximum, will be given in reports for take off and landing, by the addition of "REMARKS" to the reported minimum visibility in plain language messages.

### 3.3 Runway Visual Range (RVR)

At Cork, Dublin and Shannon Airports Instrumented Runway Visual Range Systems (IRVR) are installed. RVR values are reported when either the horizontal visibility or the runway visual range is observed to be less than 1500M.

The system at Cork, Dublin and Shannon has a lower limit of between 50M and 75M, dependent on the ambient conditions.

At Cork, Dublin and Shannon, RVR is reported in increments of 25M up to 400M, 50M between 400M and 800M, and 100M between 800M and 1500M, subject to the limiting values.

### 3.4 Cloud Height

Cloud height is measured by Ceilometer at Dublin, Cork, Shannon, Ireland West Airport, Kerry, Sligo, Donegal and Waterford. The Ceilometer readings are representative of cloud conditions over the landing area.

### 3.5 Surface Wind

Wind Speed and direction are measured at Cork, Dublin, Shannon, Ireland West, Kerry, Sligo, Donegal and Waterford Airports by cup anemometer with digital read-out. At all aerodromes the anemometers are installed 10M AGL. At each aerodrome the anemometer is located so as to give readings representative of conditions on the airfield. Indicators are located in the Meteorological Office and appropriate Air Traffic Service Units. Wind speeds are reported in knots. Wind values are provided in accordance with Annex 3

### 3.6 Temperature

Distant reading thermometers are installed at Dublin, Cork, Shannon, Ireland West, Kerry, Sligo, Donegal and Waterford Airports in locations, which give readings representative of free-air temperature over the landing area.

### 3.7 Wind Shear

Low level wind shear is not measured instrumentally at Irish Airports. Reports of wind shear from aircraft about to land or take-off, and/or evidence of its existence as deduced from other available information are, when of a non-transitory nature, included in METAR, and are, in all circumstances included in plain language reports disseminated locally.

## 4. TYPES OF SERVICE

4.1. All Met Eireann aeronautical meteorological forecast services are provided by the Central Aviation Office (CAO) based at Shannon Airport.

4.1.1. Aerodrome Minimum/Maximum Temperature The temperatures are calculated for each of the past 5 years, for each location, the month with the lowest mean Max and Min was obtained. For locations with climate stations (Dublin, Shannon, Cork, Ireland West and Casement) the actual measurements were used, for other locations the temperatures were interpolated from 1km Max/Min temperature grids derived using all available observations for each month. Max and Min temperature refer to the 0900 to 0900 period and are available at <https://www.iaa.ie/commercial-aviation/airspace/aeronautical-data>.

4.1.2. Aerodrome Magnetic Variation

Magnetic variation - is the angle on the horizontal plane between magnetic north (the direction the north end of a compass needle points, corresponding to the direction of the Earth's magnetic field lines) and true north (the direction along a meridian towards the geographic North Pole). It's used to convert between true and magnetic headings. Aeronautical charts usually show the magnetic variation.

URL: <https://www.iaa.ie/commercial-aviation/airspace/aeronautical-data>

4.1.3. The Objective of Met Eireann, as Met Service provider to the aviation sector in Ireland, is to contribute to the safety, regularity and efficiency of aviation in Ireland and its FIR/UIR.

Owing to the variability of meteorological elements in space and time, to limitations of forecasting techniques and to limitations caused by the definitions of some of the elements, the specific value of any of the elements given in a forecast shall be understood by the recipient to be the most probable value which the element is likely to assume during the period of the forecast. Similarly, when the time of occurrence or change of an element is given in a forecast, this time shall be understood to be the most probable time.

4.1.4. Forecast Services provided  
Met Eireann issues, as routine:

- Terminal Aerodrome Forecasts (TAF),
- low level significant weather charts,
- search and rescue forecast,
- live En-route briefing line service,
- bespoke forecast products,
- local warnings for Aerodromes  
and
- SIGMET services for Ireland's FIR/UIR.

| TAF issued by Airport |            |             |
|-----------------------|------------|-------------|
| Airport               | 9 hour TAF | 24 hour TAF |
| Dublin                |            | •           |
| Shannon               |            | •           |
| Cork                  |            | •           |
| Ireland West          |            | •           |
| Kerry                 | •          |             |
| Sligo                 | •          |             |
| Donegal               | •          |             |
| Waterford             | •          |             |
| Casement              | •          |             |

4.1.5. Not more than one TAF shall be valid for an aerodrome at any given time.

4.1.6. The issue of a new aerodrome forecast, such as a TAF, shall be understood to cancel automatically any forecast of the same type previously issued for the same place and for the same period of validity or part thereof.

4.2. The CAO may be contacted as follows:

Post: Central Aviation Office,  
Met Eireann,  
Wing 5,  
Shannon Airport,

Phone: + 353 (0)61 712 950

Fax: + 353 (0)61 712 960

Email: [avops@met.ie](mailto:avops@met.ie)

- 4.3. Meteorological self briefing  
Meteorological self briefing for operators and flight crew members is available via an internet based Meteorological Self Briefing (MSB) system. This system is available at

URL: <https://briefing.met.ie/>

To obtain registration on the system, users are required to provide the following data via email to

Email: [briefing@met.ie](mailto:briefing@met.ie)

- contact details;
- area of activity (e.g. private pilot, airline etc)
- username (user defined)
- password (user defined)

The following up to date information is provided:

- SIGWX charts
- Upper wind and Temperature charts
- METAR (including TREND as issued) for the aerodromes of departure and intended landing, and for en-route and destination alternate aerodromes.
- TAF or Amended TAF for the aerodromes of departure and intended landing, and for en-route and destination alternate aerodromes.
- SIGMET information
- Aerodrome warnings for the local aerodrome

Personal briefing on en-route weather conditions is available from the duty aviation forecaster. This briefing service is provided via premium rate telephone service (see [GEN 3.5.9](#) for telephone numbers)

- 4.4. Meteorological services, including briefing consultation and documentation, is provided in accordance with arrangements made between the operator and the relevant meteorological office at Cork, Dublin, Shannon and Ireland West airports.
- 4.5. Warnings, in accordance with local arrangements for the protection of parked aircraft and aerodrome facilities and services, are issued by the Central Aviation Office. These warnings relate to strong winds, occurrence of snow and ground temperature below 00 degrees Celsius.

## 5. NOTIFICATION REQUIRED FROM OPERATORS

- 5.1. Flights Originating at Shannon, Cork and Dublin Airports:

If meteorological documentation and/or briefing are required for a flight to a destination not well serviced by the online MET Self Briefing, then notification should be furnished to the aerodrome meteorological office, by the operator, as soon as possible and not less than three hours before ETD of the flight.

Flights originating at Ireland West Airport:

Notification should be furnished to the aerodrome meteorological office by the operator as soon as possible and not less than three hours before ETD of the flight. This notification applies equally to scheduled and non-scheduled flights.

- 5.2. If the operator has not a representative at the aerodrome concerned, messages from the operator's representative at another aerodrome or from the aircraft commander in flight containing the required information will be accepted as notification (provided they are received at the times indicated in paragraph [GEN 3.5.5.1](#) above). Communications should be specifically addressed to the meteorological office at Cork, Dublin, Shannon or Ireland West as

appropriate.

- 5.3. When notification as specified above is not given to the aerodrome meteorological office, every endeavour will be made to provide the best service possible in the time available, but in such circumstances no guarantee can be given that the services will include more than a briefing without documentation.

## 6. AIRCRAFT REPORTS

Reports are required to be issued by aircraft whenever the following conditions are encountered during the climb-out, en-route or approach phases of the flight:

- Severe icing
- Moderate and severe turbulence
- Thunderstorms with or without hail (that are obscured, embedded, widespread or in squall lines)
- Volcanic ash cloud observed/encountered
- Wind shear
- Other meteorological conditions which in the opinion of the pilot-in-command may affect the safety or markedly affect the efficiency of other aircraft operations

## 7. VOLMET SERVICE

| Name of Station | CALLSIGN/<br>IDENT/<br>abbreviation<br>(EM) | Frequency   | Broadcast<br>Period | Hours of<br>Service | Aerodromes /<br>Heliports<br>included  | REP, SIGMET<br>INFO FCST &<br>Remarks |
|-----------------|---|---|---------------------|---------------------|--|---------------------------------------|
| 1               | 2   | 3   | 4                   | 5                   | 6  | 7                                     |
| SHANNON         | SHANNON<br>VOLMET                           | 3413 kHz HN<br>(during night<br>propagation<br>conditions)<br>5505 kHz H24<br>8957 kHz H24<br>13264 kHz HJ<br>(during day<br>propagation<br>conditions) | 00-05               | H24                 |  | SIGMETS                               |
|                 |   |   |                     |                     | Bruxelles National,<br>Amsterdam<br>Schipol,                                       | TAFS                                  |
|                 |   |   |                     |                     | Bruxelles National,<br>Amsterdam<br>Schipol,<br>Frankfurt,<br>Hamburg,<br>Munchen, | METARS                                |
|                 |   |   | 05 - 10             | H24                 | London Heathrow,<br>London Gatwick,<br>Stansted,                                   | TAFS                                  |
|                 |   |   |                     |                     | London Heathrow,<br>London Gatwick,<br>Stansted,<br>Prestwick,<br>Glasgow,         | METARS                                |
|                 |   |   | 10 - 15             | H24                 |  | SIGMETS                               |
|                 |   |   |                     |                     | Dublin,<br>Shannon,  | TAFS                                  |
|                 |   |   |                     |                     | Dublin,<br>Shannon,<br>Manchester,<br>Keflavik,                                    | METARS                                |

| Name of Station | CALLSIGN/<br>IDENT/<br>abbreviation<br>(EM) | Frequency | Broadcast<br>Period | Hours of<br>Service | Aerodromes /<br>Heliports<br>included  | REP, SIGMET<br>INFO FCST &<br>Remarks |
|-----------------|---|-----------|---------------------|---------------------|--|---------------------------------------|
| 1               | 2   | 3         | 4                   | 5                   | 6  | 7                                     |
|                 |   |           | 15 - 20             | H24                 | Santa Maria,<br>Lisboa,<br>Madrid,   | TAFS                                  |
|                 |   |           |                     |                     | Santa Maria,<br>Lisboa,<br>Madrid,<br>Lajes,   | METARS                                |
|                 |   |           | 20 - 25             | H24                 |  | SIGMETS                               |
|                 |   |           |                     |                     | Paris Charles De<br>Gaulle,<br>Paris Orly,   | TAFS                                  |
|                 |   |           |                     |                     | Paris Charles De<br>Gaulle,<br>Paris Orly,<br>Zurich,<br>Geneve,<br>Milano Malpensa,                                 | METARS                                |
|                 |   |           | 25-30               | H24                 | Stockholm<br>Arlanada,<br>Manchester,<br>Shannon,<br>Kobenhavn<br>Kastrup,<br>Bergen,<br>Dublin,<br>Helsinki Vantaa, | METARS                                |
|                 |   |           | 30 -35              | H24                 |  | SIGMETS                               |
|                 |   |           |                     |                     | Frankfurt,<br>Koln Bonn,   | TAFS                                  |
|                 |   |           |                     |                     | Frankfurt,<br>Koln Bonn,<br>Dusseldorf,<br>Munchen,<br>Luxembourg,   | METARS                                |
|                 |   |           | 35 - 40             | H24                 | Keflavik,<br>Glasgow,<br>Manchester,   | TAFS                                  |
|                 |   |           |                     |                     | London Heathrow,<br>London Gatwick,<br>Keflavik,<br>Glasgow,<br>Manchester,  | METARS                                |



| Name of Station | CALLSIGN/<br>IDENT/<br>abbreviation<br>(EM) | Frequency | Broadcast<br>Period | Hours of<br>Service | Aerodromes /<br>Heliports<br>included  | REP, SIGMET<br>INFO FCST &<br>Remarks |
|-----------------|---|-----------|---------------------|---------------------|--|---------------------------------------|
| 1               | 2   | 3         | 4                   | 5                   | 6  | 7                                     |
|                 |   |           | 40 - 45             | H24                 |  | SIGMETS                               |
|                 |   |           |                     |                     | Oslo Gardemoen,<br>Cobenhagen<br>Kastrup,  | TAFS                                  |
|                 |   |           |                     |                     | Oslo Gardemoen,<br>Cobenhagen<br>Kastrup,<br>Goteborg<br>Landvetter,<br>Stockholm<br>Arlanda,<br>Bergen,<br>Helsinki Vantaa, | METARS                                |
|                 |   |           | 45 - 50             | H24                 | Zurich,<br>Geneve,   | TAFS                                  |
|                 |   |           |                     |                     | Zurich,<br>Geneve,<br>Paris Charles de<br>Gaulle,<br>Paris Orly,   | METARS                                |
|                 |   |           | 50 - 55             | H24                 |  | SIGMETS                               |
|                 |   |           |                     |                     | Hamburg,   | TAFS                                  |
|                 |   |           |                     |                     | Bruxelles National,<br>Amsterdam<br>Schipol,<br>Frankfurt,<br>Koln Bonn,<br>Hamburg,   | METARS                                |
|                 |   |           | 55-00               | H24                 | Roma Fiumicino,<br>Milano Malpensa,  | TAFS                                  |
|                 |   |           |                     |                     | Roma Fiumicino,<br>Milano Malpensa,<br>Torino,<br>Lisboa,<br>Lajes,<br>Santa Maria,  | METARS                                |

| Name of Station | CALLSIGN/<br>IDENT/<br>abbreviation<br>(EM) | Frequency                        | Broadcast<br>Period | Hours of<br>Service | Aerodromes /<br>Heliports<br>included   | REP, SIGMET<br>INFO FCST &<br>Remarks   |
|-----------------|---|----------------------------------|---------------------|---------------------|---|---|
| 1               | 2   | 3                                | 4                   | 5                   | 6   | 7   |
| DUBLIN          | Dublin VOLMET                               | 127.005<br>(8.33 kHz<br>Channel) | Continuous          | H24                 | Reports for:<br>Dublin,<br>Shannon,<br>Cork,<br>Belfast,<br>Glasgow,<br>Preswick,<br>Manchester,<br>London/Heathrow,<br>London/Gatwick, | Plain Language<br>(En)<br>Broadcast<br>continuous through<br>the 24 hours.<br>Reports, plus<br>landing forecasts in<br>the TREND form<br>are broadcast in<br>the sequence<br>listed. The reports<br>broadcast are the<br>latest available.<br>If a new report is<br>not available the<br>earlier one will be<br>reported for one<br>hour only, together<br>with time of<br>observation. |

The above table indicates the current VOLMET Broadcast content and sequence.

*SIGMET denotes the time-blocks during which SIGMET'S are broadcast.*

## 8. SIGMET SERVICE

### 8.1 General

Post: Central Aviation Office,  
Met Eireann,  
Wing 5,  
Shannon Airport,  
Co. Clare,

Phone: + 353 (0)61 712 950

Fax: + 353 (0)61 712 962

Email: [avops@met.ie](mailto:avops@met.ie)

### 8.2 Meteorological Watch

The meteorological watch for the Shannon FIR/UIR is performed by Meteorological Office based at Shannon Airport (EINN).

The MWO issues SIGMET information to ATS units within the Shannon FIR and agreed adjacent FIRS.

A meteorological warning (SIGMET) will be issued by the meteorological watch office when the following weather phenomena are occurring or expected to occur in the flight information region EISN FIR/UIR:

#### 8.2.1 At subsonic levels

1. Obscured or embedded thunderstorms (with or without heavy hail)
2. Frequent thunderstorms (with or without heavy hail)
3. Thunderstorms in squall line (with or without heavy hail)
4. Severe turbulence
5. Severe icing
6. Freezing rain.
7. Tropical cyclones with 10 minute mean surface wind speed of 63?/HR (34 ?) or more.
8. Severe turbulence
9. Severe icing

10. Heavy dust storm
11. Heavy sand storm
12. Volcanic ash

#### 8.2.2 At transonic and supersonic

1. Moderate turbulence
2. Severe turbulence
3. Isolated cumulonimbus
4. Occasional cumulonimbus
5. Frequent cumulonimbus
6. Hail
7. Volcanic ash

SIGMET for supersonic and transonic levels (SIGMET SST) are issued by London for the Shannon *FIR/UIR*..

ATS Units provided with SIGMET information includes ATS units within the Shannon FIR and agreed adjacent FIR's.

### 8.3 Local Warnings for Aerodromes

Met Eireann Central Aviation Office issues warnings for aerodromes for the following phenomena:

1. Frost Warning:  
Issued when the ground and/or air temperature are expected to fall below zero degrees Celsius at the following airports - EINN, EIDW, EICK, EIKN, EIME.
2. Gale and Squall warning:  
Issued whenever the mean speed of the surface wind is expected to exceed 34kts or when gusts in excess of 39kts are expected at the following airports- EINN, EIDW, EICK, EIKN, EIME.
3. Snow Warning:  
Issued whenever snow is likely to occur at the following airports- EINN, EIDW, EICK, EIKN, EIME.
4. Wind Shear:  
Issued for the following airports - EINN, EICK, EIDW, EIKN.
5. Turbulence Warning:  
Issued for EINN only.
6. Low-Level inversion warnings:  
Issued for the following airports - EINN, EIDW, EICK, EIKN.

### 8.4 Aircraft Meteorological Observations and Reports

#### 8.4.1 Routine Aircraft Observations

Routine Aircraft Observations are not required in the Shannon *FIR/UIR*.

#### 8.4.2 Special Aircraft Observations

Special Aircraft Observation are required in the Shannon *FIR/UIR* whenever:

- i. Severe turbulence or severe icing is encountered;  
or
- ii. Moderate turbulence, hail or cumulonimbus clouds are encountered during transonic or supersonic flight;  
or
- iii. other meteorological conditions are encountered which, in the opinion of the pilot in command, might affect the safety or markedly affect efficiency of other aircraft operations, for example, other en-route weather phenomena specified for SIGMET messages, or adverse conditions during the climb –out or approach not previously forecast or reported to the pilot in command. Observations are required if volcanic ash cloud is observed or encountered, or if pre-eruption volcanic activity or a volcanic eruption is observed;  
or
- iv. Exceptionally, they are requested by the meteorological office providing meteorological service for the flight: in which event the observation should be specifically addressed to that meteorological office.

**9. OTHER METEOROLOGICAL SERVICES PROVIDED**

| Service Name             | Information Available  | Area, route and aerodrome coverage | Telephone, telex and Telefax numbers and remarks |
|--------------------------|--|------------------------------------|--|
| 1                        | 2  | 3                                  | 4  |
| En-route briefing        | Personal briefing by duty forecaster detailing expected en-route weather conditions. |                                    | Phone: 1570 23 42 34                             |
| OPMET data not published |  |                                    | Phone: 1570 20 21 22                             |

**10. GUIDANCE ON AIRCRAFT OPERATIONS WHERE VOLCANIC ASH CONTAMINATION MAY BE A HAZARD FOR FLIGHT OPERATIONS**

**10.1 Key Principles**

- Airline operators are responsible for the safety of their operations under the oversight of their respective State regulatory authority. The guiding principle for such operations is the use of a safety risk management approach, as described in ICAO Doc 9974 and EASA Safety Information Bulletin (SIB) 2010-17R7
- In order to make decisions whether or not to operate in airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the operator should have an identifiable safety risk assessment (SRA) developed within its Safety Management System (SMS).
- In order to decide whether or not to operate in airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the operator's SRA must be accepted by its State regulatory authority.
- The safety control measures set out in ICAO Doc 9974 and EASA Safety Information Bulletin (SIB) 2010-17R7 are intended to be sufficiently robust that they facilitate acceptance, without further investigation, by a State whose airspace is forecast to be affected by volcanic ash. The State can - based on the implementation of internationally accepted Safety Management principles - be confident in the ability of operators from other States to undertake operations safely in its airspace.

**10.2 Terminology**

The following definitions of contamination are applicable in Ireland regarding operations of aircraft in airspace contaminated with volcanic ash.

- Area of Low Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations equal to or less than  $2 \times 10^{-3}$  g/m<sup>3</sup>. (Cyan)
- Area of Medium Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations greater than  $2 \times 10^{-3}$  g/m<sup>3</sup>, but less than  $4 \times 10^{-3}$  g/m<sup>3</sup>. (Grey)
- Area of High Contamination: Airspace of defined dimensions where volcanic ash may be encountered at concentrations equal to or greater than  $4 \times 10^{-3}$  g/m<sup>3</sup>, or areas of contaminated airspace where no ash concentration guidance is available. (Red)

These definitions are aligned with the ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II) and EASA Safety Information Bulletin (SIB) 2010 - 17R7.

**10.3 SRA application in Ireland**

10.3.1 Areas of ash contamination In Ireland Aircraft Operators will be allowed to make decisions based on their SRA in the forecast areas of low, medium and high ash contamination. Therefore, Ireland will allow operators to make decisions based on their SRA, as accepted by their respective State regulatory authority, in forecast areas of low, medium and high ash contamination.

10.3.2 Common SRA recognition

As part of its overall decision making process regarding the operation of aircraft in airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, Ireland will allow aircraft operators registered in other States to base their decisions on their SRA, as accepted by their State regulatory authority, in accordance with the above mentioned approach ([Ref. GEN 3.5.10.3.1](#)) to decision making in Ireland