

# IRELAND

**AIP**

**AERONAUTICAL INFORMATION SERVICES  
IRISH AVIATION AUTHORITY  
BALLYCASEY CROSS  
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CO. CLARE**

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**AIRAC  
AMENDMENT  
NR 008/17  
14 SEP**

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## PAGE REVISIONS

AIRAC Changes incorporated in this Amendment are

<b>GEN 0.3</b>	<b>RECORD OF AIP SUPPLEMENTS:</b> Supplement Nr 10/17 and Nr 11/17.
<b>GEN 1.5</b>	<b>AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS:</b> New section 8.33 kHz added.
<b>GEN 3.2</b>	<b>AERONAUTICAL CHARTS:</b> Revised text associated with 1:500, 00 AND 1:250, 00 VFR Chart.
<b>GEN 3.5</b>	<b>METEOROLOGICAL SERVICES:</b> Types of Services - New Text.
<b>EIWF AD 2.22</b>	<b>EIWF AD 2.22 FLIGHT PROCEDURES:</b> Removal of Holding Procedures Table.
<b>EIIM AD</b>	<b>EIIM AD:</b> Updated times to UTC, Updated Mag Variation Value.

Remove Pages	Insert Pages	
GEN 0.2-1/GEN 0.2-2	GEN 0.2-1/GEN 0.2-2	14 SEP 2017/14 SEP 2017
GEN 0.3-1/GEN 0.3-2	GEN 0.3-1/GEN 0.3-2	14 SEP 2017/14 SEP 2017
GEN 0.4-1/GEN 0.4-6	GEN 0.4-1/GEN 0.4-6	14 SEP 2017/14 SEP 2017
GEN 1.5-1/ GEN 1.5-14	GEN 1.5-1/ GEN 1.5-14	14 SEP 2017/14 SEP 2017
GEN 3.2-1/GEN 3.2-12	GEN3.2-1/GEN 3.2-10	14 SEP 2017/14 SEP 2017
GEN 3.5-1/GEN 3.5-12	GEN 3.5-1/GEN 3.5-14	14 SEP 2017/14 SEP 2017
EIWF AD 2-1/EIWF AD 2-10	EIWF AD 2-1/EIWF AD 2-10	14 SEP 2017/14 SEP 2017
EIIM AD 2-1//EIIM AD 2-6	EIIM AD 2-1/EIIM AD 2-6	14 SEP 2017/14 SEP 2017

New Supplements for this Amendment :	Nr 10/17,11/17
Supplements cancelled in this Amendment :	Nr 13/16, 09/17
New AIC for this Amendment :	Nr 08/17, 09/17
AIC's cancelled in this Amendment :	Nr 07/17
PERM NOTAM incorporated in this Amendment :	NIL

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**GEN 0.3 RECORD OF AIP SUPPLEMENTS**

NR/Year	Subject	AIP Section(s) Affected	Period of Validity	Cancellation Record
11/2017	Checklist of Valid AIP Supplements	GEN	14-SEP-2017	-
10/2017	Dublin Airport (EIDW) Runway 10/28 Upgrade - Phase 1	EIDW AD	14-SEP-2017	-
09/2017	Checklist of Valid AIP Supplements	GEN	25-MAY-2017	14-SEP-2017
08/2017	EIKN - Radio Navigation and Landing Aids	EIKN AD	25-MAY-2017	-
07/2017	Checklist of Valid AIP Supplements	GEN	27-APR-2017	25-MAY-2017
06/2017	Kerry Airport (EIKY) Construction Work to Terminal frontage adjoining Main Parking stands	EIKY AD	27-APR-2017	-
05/2017	Construction of Hangar, Construction of Aircraft Parking Fillets and Taxiline Markings	EIKY AD	27-APR-2017	-
04/2017	Checklist of Valid AIP Supplements	GEN	02-MAR-2017	27-APR-2017
03/2017	Shannon Airport (EINN) Runway 06/24 Rehabilitation	EINN AD	02-MAR-2017	-
02/2017	Checklist of Valid AIP Supplements	GEN	02-FEB-2017	02-MAR-2017
01/2017	Dublin Airport (EIDW) Alterations to Apron Taxiways, South Apron	EIDW AD	02-FEB-2017	25-MAY-2017
17/2016	Cork Airport (EICK) Runway Pavement Repairs	EICK AD	10-NOV-2016	-
16/2016	Cork Airport (EICK) Fireground Access Roadway	EICK AD	10-NOV-2016	-
14/2016	Dublin Airport (EIDW) Construction of Engine Test Site	EIDW AD	13-OCT-2016	-
13/2016	Dublin Airport (EIDW) Runway 10/28 Upgrade-Phase 1	EIDW AD	13-OCT-2016	14-SEP-2017
12/2016	Dublin Airport (EIDW) Apron Rehabilitation Project 2016	EIDW AD	13-OCT-2016	-
01/2016	Dublin Airport (EIDW) Construction of Fuel Pipeline	EIDW AD	03-MAR-2016	-
20/2015	Cork Airport (EICK) Airfield Roadway	EICK AD	15-OCT-2015	-
01/2015	EINN-Radio Navigation and Landing Aids	EINN AD	05-FEB-2015	-

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**GEN 0.4 Check list of AIP Pages****New Pages**

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2 - 13	20 JUL 2017	2.24 – 14.1	18 AUG 2016	2 - 4	04 FEB 2016
2 - 14	20 JUL 2017	2.24 – 14.2	18 AUG 2016	2 - 5	04 FEB 2016
2.24 - 1	28 JUN 2012	2.24 – 15.1	18 AUG 2016	2 - 6	04 FEB 2016
2.24 - 2	28 JUN 2012	2.24 – 15.2	18 AUG 2016	2 - 7	04 FEB 2016
2.24 - 3	05 APR 2012	2.24 – 16.1	18 AUG 2016	2 - 8	04 FEB 2016
2.24 - 4	05 APR 2012	2.24 – 16.2	18 AUG 2016	2 - 9	04 FEB 2016
2.24 - 5	05 APR 2012	2.24 – 17.1	18 AUG 2016	2 - 10	04 FEB 2016
2.24 - 6	23 JAN 2003	2.24 – 17.2	18 AUG 2016	2.24 - 1	16 FEB 2006
EIKN AD		EIKY AD		2.24 - 2	20 MAR 2003
2 - 1	22 JUN 2017	2 – 1	13 OCT 2016	2.24 - 3	20 MAR 2003
2 - 2	22 JUN 2017	2 – 2	13 OCT 2016	2.24 - 4	20 MAR 2003
2 - 3	22 JUN 2017	2 – 3	13 OCT 2016	2.24 - 5	20 MAR 2003
2 - 4	22 JUN 2017	2 - 4	13 OCT 2016	2.24 - 6	20 MAR 2003
2 - 5	22 JUN 2017	2 - 5	13 OCT 2016	EIWF AD	
2 - 6	22 JUN 2017	2 - 6	13 OCT 2016	2 - 1	14 SEP 2017 *
2 - 7	22 JUN 2017	2 - 7	13 OCT 2016	2 - 2	14 SEP 2017 *
2 - 8	22 JUN 2017	2 - 8	13 OCT 2016	2 - 3	14 SEP 2017 *
2 - 9	22 JUN 2017	2 - 9	13 OCT 2016	2 - 4	14 SEP 2017 *
2 - 10	22 JUN 2017	2 - 10	13 OCT 2016	2 - 5	14 SEP 2017 *
2 – 11	22 JUN 2017	2 - 11	13 OCT 2016	2 - 6	14 SEP 2017 *
2 - 12	22 JUN 2017	2 - 12	13 OCT 2016	2 - 7	14 SEP 2017 *
2 - 13	22 JUN 2017	2 – 13	13 OCT 2016	2 - 8	14 SEP 2017 *
2 – 14	22 JUN 2017	2 - 14	13 OCT 2016	2 - 9	14 SEP 2017 *
2.24 - 1	18 AUG 2016	2.24 - 1	13 NOV 2014	2 - 10	14 SEP 2017 *
2.24 - 2	18 AUG 2016	2.24 - 2	28 OCT 2014	2.24 - 1	30 OCT 2003
2.24 - 3	28 APR 2016	2.24- 3.1	25 MAY 2017	2.24 - 2	30 OCT 2003
2.24 4.1	28 APR 2016	2.24-3.2	25 MAY 2017	2.24-3.1	20 JUL 2017
2.24 – 4.2	28 APR 2016	2.24 -4.1	25 MAY 2017	2.24-3.2	25 MAY 2017
2.24 – 5.1	28 APR 2016	2.24 -4.2	25 MAY 2017	2.24 - 5	30 OCT 2003
2.24 – 5.2	28 APR 2016	2.24-5.1	25 MAY 2017	2.24- 6.1	08 DEC 2016
2.24 – 6.1	18 AUG 2016	2.24-5.2	25 MAY 2017	2.24-6.2	08 DEC 2016
2.24 – 6.2	18 AUG 2016	2.24–6.1	18 AUG 2016	2.24 - 7	30 OCT 2003
2.24 – 7.1	25 MAY 2017	2.24-6.2	18 AUG 2016	EIWT AD	
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2 - 1	27 APR 2017	2 - 6	05 FEB 2015	2 - 2	16 OCT 2014
2 - 2	27 APR 2017		EICA AD	2 - 3	16 OCT 2014
2 - 3	27 APR 2017	2 - 1	24 JUL 2014	2 - 4	16 OCT 2014
2 - 4	27 APR 2017	2 - 2	24 JUL 2014	2 - 5	16 OCT 2014
2 - 5	27 APR 2017	2 - 3	24 JUL 2014	2 - 6	16 OCT 2014
2 - 6	27 APR 2017	2 - 4	24 JUL 2014		EIMN AD
2 - 7	27 APR 2017	2 - 5	24 JUL 2014	2 - 1	16 OCT 2014
2 - 8	27 APR 2017	2 - 6	24 JUL 2014	2 - 2	16 OCT 2014
2 - 9	27 APR 2017		EICL AD	2 - 3	16 OCT 2014
2 - 10	27 APR 2017			2 - 4	16 OCT 2014
2 - 11	27 APR 2017	2 - 1	24 JUL 2014	2 - 5	16 OCT 2014
2 - 12	27 APR 2017	2 - 2	24 JUL 2014	2 - 6	16 OCT 2014
2.24 - 1	07 JUN 2007	2 - 3	24 JUL 2014		EIMS AD
2.24.3 - 1	04 APR 2013	2 - 4	24 JUL 2014		
2.24.3 - 2	04 APR 2013	2 - 5	24 JUL 2014	2 - 1	30 MAY 2013
2.24.4 - 1	07 MAR 2013	2 - 6	24 JUL 2014	2 - 2	30 MAY 2013
2.24.4 - 2	07 MAR 2013		EICN AD	2 - 3	30 MAY 2013
2.24.5 - 1	04 APR 2013	2 - 1	05 FEB 2015	2 - 4	30 MAY 2013
2.24.5 - 2	04 APR 2013	2 - 2	05 FEB 2015		EINC AD
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2 - 3	05 MAR 2015	2 - 6	16 OCT 2014	2 - 4	16 OCT 2014
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**GEN 1.5      AIRCRAFT INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS****1.      GENERAL**

- 1.1. Flight under IFR in Shannon FIR/UIR [Class A](#), [Class C](#) and [Class G](#) airspace must as a minimum be equipped with and use the following radio navigation equipment
- VHF RTF with Appropriate Frequencies available
  - VOR receiver
  - DME
  - ILS
- 1.2. No general exemption from these requirements will be granted, but relaxation of the requirement to have an ILS may be granted by the appropriate ATC unit for a single flight.
- 1.3. Non ACAS equipped aircraft must be equipped with an SSR transponder Modes A and C for flight in controlled airspace [Class A](#) and [Class C](#). Aircraft with transponder temporarily U/S may be admitted to airspace [Class C](#) only, at discretion of ATS Unit responsible for ATS provision in that airspace, provided the aircraft concerned immediately vacates such airspace when so instructed.
- 1.4. As required by ICAO SUPPS DOC 7030/4 EUR /RAC Chapter 4.0 on “*Air-Ground Communications and In-Flight Reporting*”, The carriage and operation of 8.33kHz channel spacing radio equipment is mandatory throughout the ICAO EUR Region for aircraft operating above FL195.
- 1.5. Non-equipped aircraft which are flight planned to enter any FIR/UIR in the EUR Region where no exemption has been published, except for UHF equipped State Aircraft, must flight plan to operate below FL195 throughout the entire EUR Region
- 1.6 8.33 kHz Radio Equipment.

With the exception of State aircraft, there are no exemptions to the requirements for the carriage and operation of 8.33 kHz spacing radio equipment above FL195 in the Shannon FIR/UIR.

Non-equipped flights must flight plan to operate below FL195, or outside [Class C](#) Airspace. State aircraft, which are exempted from the above requirement, are permitted provided that they are capable of communicating on UHF, where available.

Where UHF is not available, State aircraft exempted from the carriage of 8.33kHz channel spaced communications equipment will be handled on a tactical basis through the provision of an alternative VHF channel, the details of which will be given at time of use.

**2.      RVSM**

- 2.1. This entry for Reduced Vertical Separation Minimum (RVSM) is published in accordance with European RVSM (EUR RVSM) implementation
- 2.2. Introduction
- 2.2.1. RVSM is the generic term for a reduction in vertical separation from 2000 ft to 1000 ft that can be applied to approved operators of approved aircraft operating between FL290 and FL410 inclusive. RVSM operations are mandated in the upper airspace of the Shannon FIR/UIR, NOTA and SOTA. RVSM airspace in the adjacent North Atlantic (NAT) region covers the same flight levels as in the EUR RVSM area. With the exception of State aircraft, non-RVSM Approved aircraft are not permitted to operate within the EUR RVSM airspace which includes the Shannon FIR/UIR, NOTA and SOTA,
- 2.2.2. The requirements for RVSM are published in the ICAO Regional Supplementary Procedures (Doc 7030 -EUR), Doc 9574 — Manual on Implementation of a 300 M (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive. and Procedures for Air Navigation Services Air traffic Management (PANS ATM Doc 4444) plus JAA Temporary Guidance Leaflet No. 6 Revision 1 (TGL 6). Detailed information on RVSM NAT/EUR ENTRY/EXIT points are published in ENR 4.4

2.3. Means of Compliance

2.3.1. Except for State aircraft, operators intending to conduct flights within the EUR RVSM airspace require a RVSM approval from the State in which the operator is based or from the State in which the aircraft is registered. To obtain such an RVSM approval operators shall satisfy the said State that:

- a. aircraft for which an approval is sought have the vertical navigation performance capability required for RVSM operations through compliance with the criteria of the RVSM minimum aviation system performance standards (MASPS);
- b. they have instituted procedures in respect of continued airworthiness (maintenance and repair) practices and programmes; and
- c. they have instituted operational procedures and a programme of flight crew training so that they have an in depth knowledge of the criteria for operating in RVSM airspace and this should include both initial and recurrent training

2.3.2. Once obtained the RVSM approval is not restricted to a specific region. Instead it is valid globally, where RVSM procedures are applied, on the understanding that any operating procedures specific to a given region should be stated in the operations manual or appropriate crew guidance.

2.3.3. Aircraft that have received State approval for RVSM operations will be referred to as 'RVSM approved aircraft' while those aircraft that have not received such approval will be referred to as 'non-RVSM approved aircraft'. State aircraft that have not been granted RVSM approval should be granted access to RVSM airspace and ATC will apply a 2000 ft separation from other traffic.

2.4. Flight Crew Operating Practices and Procedures

2.4.1. All RVSM airspace is defined by ICAO as 'special qualification airspace'. Accordingly it is important that all operators provide their flight crews with a resume of any special procedures or phraseology applicable to a given RVSM operation. Holders of AOCs are required to have an 'operations manual' in which all pertinent details and procedures are specified. Non-AOC holders are required to submit to the IAA for approval RVSM operations instructions/ procedures for use by flight crews.

2.4.2. Operations manuals should include sections on:

- a. Equipment Requirements and Minima;
- b. Flight Planning;
- c. Pre-Flight, In-Flight and Post-Flight Procedures;
- d. Contingencies;
- e. TCAS/ACAS Alerts;
- f. R/T Phraseology;
- g. Height Monitoring Requirements;

2.5. Contingencies - Applicable to all RVSM Airspace

2.5.1. General

2.5.1.1. Flight crews are to report to ATC as soon as practicable any event that may affect their ability to comply with the ATC clearance, examples being: severe turbulence, loss of thrust, loss of pressurisation, need to divert, uncertainty of present position, etc. If, at any time, it is not possible to notify ATC immediately that a problem has occurred and obtain a new clearance before departing from the old, comply as accurately as possible with any procedures that may be specified for the airspace, e.g. IAA contingency Procedures. In all cases a good lookout should be maintained and if the aeroplane is equipped with TCAS/ACAS the visual display should be used to assist in the sighting of proximate traffic.

2.5.1.2. The following equipment failures must be reported to ATC:

- a. Loss of thrust on one or more engines necessitating descent;

- b. b. Loss of one or more altimetry systems;
  - c. c. Failure of all automatic altitude control systems;
  - d. d. Failure of any other equipment that could affect the ability of the aeroplane to maintain flight as cleared.
- 2.5.1.3. In RVSM airspace it is expected that all aeroplanes will be in continuous radio contact with ATC either on the assigned frequency or on the distress and emergency frequency (121.500 MHz). They will therefore be able to advise ATC of any abnormal circumstances where RVSM performance requirements cannot be met, including encounters with turbulence greater than 'moderate'. ATC will then respond and issue an appropriate revised clearance before the pilot initiates a deviation from the original clearance. It is recognised, however, that there may be some circumstances (such as emergency descent following the loss of cabin pressurisation) where deviations may have to occur with little or no prior notice to ATC. In such cases the pilot will need to obtain a revised clearance as soon as possible after the deviation.
- 2.5.1.4. North Atlantic and other Oceanic or Remote RVSM Airspace (if applicable)
 

For oceanic and remote area RVSM application, where continuous direct controller-pilot communication may not always be possible, a range of contingencies have been considered which allow independent action by flight crews. In general they permit crews, in exceptional circumstances, to deviate from assigned clearances by selecting flight levels and/or tracks where other aeroplanes are least likely to be encountered. During such deviations crews are required to make maximum use of aeroplane lighting and to transmit relevant information on all appropriate frequencies, including the distress and emergency frequency. Once contact with ATC has been re-established, the crew will be assisted and issued with new clearances as required. Offset track procedures may be permitted if an encounter with turbulence is considered to be due to wake vortex in accordance with PANS ATM (Section 15.2.4).
- 2.6. TCAS/ACAS Alerts and Warnings
 

Procedures for dealing with TCAS/ACAS Alerts and Warnings are contained in Procedures for Air Navigation Services Aircraft Operations (PANS OPS, ICAO Doc 8168), Part 3, Section 3, Chapter 3. Where fitted, TCAS should be operated in the TA/RA mode during all operations. Any TA/RA should be treated as genuine. Flight crews should respond and report them as specified in their Operations Manual.
- 2.7. RT Phraseology
 

Phraseology associated with RVSM operations has been developed for European wide use. All flights must use this phraseology whilst operating, or intending to operate, between FL 290 and FL 410 inclusive in the Shannon FIR/ UIR, NOTA and SOTA. Aircraft operators are reminded that, within Irish airspace, when responding to ATC the pilot is to append the callsign at the end of the message and not at the beginning. ATC are to use the controller-controller RVSM phraseology for co-ordination between Air Traffic Service Units (ATSUs). In the event of ATC being advised by the pilot that the aircraft is no longer capable of RVSM operations, it is particularly important that the first ATSU that is made aware of the failure generates the appropriate co-ordination, e.g. the pilot calls for start-up and declares 'unable RVSM due equipment' and the airport ATSU then passes this message on to the first Air Traffic Control Centre involved with the flight.
- 2.8. Irish Specific RVSM Exemptions
- 2.9. Completion of Flight Plans - Additional Flight Planning Requirements (see ICAO Doc 7030 - EUR Regional Supplementary Procedures)
  - 2.9.1. For all Flights, in Item 15 file a maximum level of FL 280 to the point where the flight wishes to enter RVSM airspace (otherwise if GAT the FPL will be rejected by CFMU). Do not enter RFL details at FL 290 or above anywhere in item 15. A verbal request to ATC for flight above FL 280 will ensure the FPL is not rejected by CFMU.
  - 2.9.2. For all flights, in Item 18 include the RVSM Status and Exemption Serial No. in the Remarks, i.e.: **'STS/NONRVSM' 'RMK/(STATE) RVSM EXEMPT... Serial No.'**

**Note 1:** Operators of Non-RVSM Approved aircraft are not to enter 'W' in item 10 even with this specific exemption.

**Note 2:** Having an RVSM Exemption does not confer any right to enter RVSM airspace as GAT unless specifically agreed by the appropriate ATC agency on the day. Any such penetration of RVSM airspace must be subject to the prevailing traffic conditions and controller workload.

- 2.9.3. Flight Testing or IAA Airworthiness Test Flights by Non-RVSM Approved Aircraft - In Item 15, enter route details within the area in which the flight intends to operate, then the return joining point for the ATS route structure to destination at a level not above FL 280. If aerodrome of departure is outside the ATS route structure insert the appropriate routing; if the final intention is to re-join the ATS route structure, file to re-join at the appropriate point not above FL 280. In Item 18, insert RVSM Status and Exemption Serial No. (if applicable) and 'RMK/Flight Testing' or 'RMK/IAA Airworthiness Flight Test' as appropriate with requested flight level in RVSM airspace.

2.10. Air Traffic Control (ATC) Procedures for all Flights

When Non-RVSM aircraft are ready to enter RVSM airspace, the appropriate clearance is to be obtained from ATC. Note that, due to the need to provide 2000 ft separation, controllers need to co-ordinate the flight with other RVSM approved aircraft. These flights therefore create extra workload and a slight delay in receiving such clearances should be anticipated. It would therefore be helpful if pilots can provide as much notice as possible prior to requesting flight levels above FL280. Pilots must comply with any requirements stated in the RVSM Exemption unless otherwise instructed by ATC. Pilots are also reminded to include their Non-RVSM status (callsign: NEGATIVE RVSM) in the initial call on any frequency within RVSM airspace and subsequent frequency changes, when requesting level changes pertaining to flight levels in RVSM airspace and in all read backs to flight level clearances pertaining to flight levels in RVSM airspace.

2.11. Height Monitoring Requirements

- 2.11.1. There is an on-going requirement for height monitoring within the EUR RVSM airspace in order to monitor safety levels of RVSM operations. Aircraft operators are therefore required to continue participating in on-going monitoring activities and this may involve the re-monitoring of aircraft that have previously gone through the process. Non-participation can result in the withdrawal of RVSM approval. This monitoring requirement is, in its current form, applicable for EUR RVSM operations specifically to fulfil the requirements for on-going EUR RVSM Safety Assessments. However, activities are under way to harmonise the detailed monitoring requirements globally. The IAA is obliged, by ICAO, to keep a database of all Irish registered RVSM approved aircraft. Therefore, operators are to inform the IAA (RVSM Approvals) both when they add aircraft to their fleet and of any aircraft they intend to remove from their fleet of RVSM approved aircraft. The IAA will pass this information to the appropriate Regional Monitoring Agency (RMA). For EUR RVSM, Eurocontrol will act as the RMA. This is in addition to any requirements to comply with any Eurocontrol notification procedures.

- 2.11.2. In order to have sufficient confidence in safety assessment results sufficient monitoring data is required. Due to the potential changes to altimetry performance over time, there is a limitation on the age of data that can be used for the assessments. Therefore there is a need to obtain new data and this may result in the re-monitoring of certain aircraft types and airframes. Data will be obtained through monitoring by the existing ground based Height Monitoring Units (HMUs) near STRUMBLE (United Kingdom) and GANDER (Canada). Since much of the data is obtained automatically, no specific action is required from operators unless they are approached by the RMA. Where such an approach is made, the operator is required to cooperate by arranging a special flight to over-fly an HMU. Lack of co-operation by an operator would be reported to the state issuing the approval and could result in the withdrawal of RVSM approval for the aircraft and/or operator in question. For aircraft operator specific information, such as how many of his/her aircraft of a particular type need to be monitored and within what time frame, the operator may contact the RMA direct.

2.12. Organisation of Monitoring Activities

On behalf of ICAO the EUROCONTROL Agency acts as the RMA. The information which will be obtained through the monitoring programme on aircraft compliance status and measured height keeping performance will be combined with the information available from monitoring agencies in other regions. The RMA will support operators and approval authorities on any issue related to RVSM approval and monitoring. The RMA will require information on the aircraft which are intended to operate in EUR RVSM airspace, and which will, therefore, need to be monitored



on a periodic basis as part of the continuing safety assessment. To this end the RMA will also be in contact with State approval authorities. The RMA is based at the EUROCONTROL headquarters in Brussels, Belgium. The RMA will ensure the continuous operation of the monitoring systems and will manage the measured height keeping performance data. The RMA will identify any height deviations that are outside the specifications of the ICAO RVSM performance requirements, and will follow-up as required.

## 2.13. Wake Vortex Issues

2.13.1. The purpose of this section is to present information in respect of wake vortex and to notify pilots and controllers of the relevant procedures in the event of a wake vortex encounter with specific regard to EUR RVSM operations. The Eurocontrol scheme is recording those encounters that take place in RVSM airspace and does not in any way replace the Irish reporting scheme which records all wake vortex encounters in Irish airspace (including those at RVSM levels).

## 2.13.2. Wake Vortices in EUR RVSM Airspace

Prior to the implementation of RVSM in the EUR region an independent study concluded that the 'probability of hazardous encounters with wake vortices are not expected to increase but that nuisance encounters would increase'. Since August 2000 EUROCONTROL has been collating wake vortex encounters in the European airspace at FL 245 and above. These encounters have been subject to further independent analysis which has confirmed the findings of the above mentioned study. It is vital, however, that pilots continue to provide reports of wake vortex encounters in RVSM airspace. Any pilot who encounters a wake turbulence incident when flying in EUR RVSM airspace or within an adjacent RVSM transition area should ensure that a detailed report is provided to EUROCONTROL and State Regulation Authorities.

## 2.13.3. Wake Vortices Encounters

ICAO Document 7030 'Regional Supplementary Procedures' recognises wake turbulence as a factor in European and North Atlantic RVSM operations. In the North Atlantic, due to the special nature of the airspace and frequent poor communications, procedures have been developed which allow action by flight crews independent of ATC involvement. These procedures are not applicable to EUR RVSM airspace, where direct pilot/controller communication exists together with sufficient radar coverage to enable ATC to manage required flight deviations. In addition the vertical separation between aircraft can be increased tactically should this be necessary.

## 2.13.4. Pilot Actions:

2.13.4.1. When an aircraft is operating in the EUR RVSM airspace and encounters severe turbulence due to weather or wake vortex, and the Pilot-in-Command believes the vertical navigation performance requirements for EUR RVSM airspace cannot be maintained, the pilot shall:

- a. inform ATC as soon as possible ('UNABLE RVSM DUE TURBULENCE');
- b. obtain a revised ATC clearance prior to initiating any deviation from cleared route or flight level;
- c. where such revised ATC clearance could not be obtained prior to such a deviation, obtain a revised clearance as soon as possible thereafter.

2.13.4.2. These procedures should not be interpreted in any way that prejudices the final authority and responsibility of the Pilot-in-Command for the safe operation of the aircraft.

## 2.13.5. Controller Actions:

The ATC controller:

- a. shall establish either an appropriate horizontal separation or an increased vertical separation of 600 M (2000ft);
- b. shall, to the extent possible, accommodate the pilot's request for flight level and/or route changes and pass traffic information as required;
- c. confirm that the pilot is ready to resume RVSM operations ('REPORT READY TO RESUME RVSM').

### 3. PERFORMANCE BASED NAVIGATION (PBN)

#### 3.1. Introduction

3.1.1. Performance-Based Navigation (ICAO Doc 9613) specifies that aircraft RNAV and RNP system performance requirements be defined in terms of the accuracy, integrity, continuity and functionality, which are needed for the proposed operations in the context of a particular airspace concept. The PBN concept represents a shift from sensor based to performance-based navigation. Performance requirements are identified in navigation specifications, which also identify the choice of navigation sensors and equipment that may be used to meet the performance requirements.

3.1.2. Whilst the ICAO PBN Manual was published in 2008, the navigation specifications contained within the manual have captured a number of existing navigation applications e.g., ECAC Basic RNAV (en-route) and Precision RNAV (terminal airspace), RNP 4 (oceanic) and RNP Approach (final approach).

3.1.3. At the 37th General Assembly held in 2010, Resolution A37-114 required States to implement navigation applications in accordance with the Assembly Resolution, which requires that States complete a PBN implementation plan (<http://www.iaa.ie>) as a matter of urgency to achieve:

1. Implementation of RNAV and RNP operations (where required) for en-route and terminal areas and;
2. Implementation of Approach Procedures with Vertical guidance (APV), either Barometric Vertical Navigation (Baro-VNAV) and/or augmented GNSS, including Lateral Navigation (LNAV) only minima for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016;
3. Implementation of straight-in LNAV only procedures (as an exception to 2. above) where the fleet is not APV capable.

#### 3.2. Flight planning of RNAV and RNP designations

Manual or automated notification of an aircraft's qualification to operate along an ATS route, on a procedure or in airspace is provided to ATC via the Flight Plan. Flight Plan procedures are addressed in Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM) (Doc 4444).

#### 3.3. Navaid infrastructure

The NAVAID Infrastructure refers to ground- or space-based NAVAIDs. Ground-based NAVAIDs include DME and VOR. Space-based NAVAIDs include GNSS elements as defined in Annex 10 — Aeronautical Telecommunications

#### 3.4. Airworthiness

The airworthiness element consists of ensuring that the aircraft meets the aircraft eligibility requirements for the functions and performance requirements defined in the navigation specifications (or other referenced certification standards) as well as the installation meeting the relevant airworthiness standards. The airworthiness element may also include applicable non-navigation equipment required to conduct the operation such as communications and surveillance equipment (US 14 CFR / EASA CS Part 25).

#### 3.5. Continued Airworthiness

For the continued airworthiness operational approval, the operator is expected to be able to demonstrate that the navigation system will be maintained compliant with the type design. For navigation system installations there are few specific continued airworthiness requirements other than database and configuration management, systems modifications and software revisions but the element is included here for completeness and consistency with other CNS / ATM operational approvals e.g. RVSM. The continued airworthiness element of the operational approval is not directly addressed in the PBN Manual since it is inherent in the aircraft airworthiness approval through the airworthiness requirements (US 14 CFR / EASA CS Part 25).

#### 3.6. Operational Approval

The operational approval assessment takes account of the following:

- a. Aircraft eligibility and airworthiness compliance;
- b. Operating procedures for the navigation systems used;
- c. Control of operating procedures (documented in the operations manual);
- d. Flight crew initial training and competency requirements and continuing competency requirements.
- e. Dispatch training requirements;
- f. Control of navigation database procedures. Commercial operators need to have documented procedures for the management of navigation databases. These procedures will define the data validation procedures for navigation databases and the installation of new databases into aircraft so that they remain current with the AIRAC cycle; and
- g. Continued Airworthiness. Operators should have procedures for assessing and incorporating instructions for continued airworthiness and maintenance or inspection information concerning system modifications, software revisions, etc.

### 3.7. Minimum navigation performance specifications (MNPS)

#### 3.7.1 Pre-PBN navigation Specifications

##### 3.7.1.1 Area of applicability

- 3.7.1.1.1 The MNPS shall be applicable in that volume of airspace between FL285 and FL420 within the Oceanic Control Areas of Santa Maria, Shanwick, Reykjavik, Gander Oceanic and New York Oceanic, excluding the area west of 60deg. W and South of 38deg 30'N.

*Note: - This volume of airspace is referred to as the 'MNPS airspace'*

- 3.7.1.1.2 Except for those flights specified in [3.7.1.1.8](#), aircraft operating within the volumes of airspace specified in [3.7.1.1.1](#) shall have lateral navigation performance capability such that:

- a. The standard deviation of lateral track errors shall be less than 11.7Km (6.3NM);
- b. The proportion of the total flight time spent by aircraft 56Km (30NM) or more off the cleared track shall be less than  $5.3 \times 10^{-4}$ ; and
- c. The proportion of the total flight time spent by aircraft between 93 and 130Km (50 and 70 NM) off the cleared track shall be less than  $1.3 \times 10^{-4}$

- 3.7.1.1.3 The State of Registry or the State of the Operator, as appropriate, should verify that the lateral navigation capability of approved aircraft meets the requirements specified in [3.7.1.1.2](#).

*Note.-Guidance material of use to those involved in the initial achievement and continued maintenance of the navigation capability set forth in [3.7.1.1.2](#) has been issued by ICAO under the title North Atlantic Operations Manual (NAT Doc 007) and will be supplemented and updated as required and as new material becomes available*

- 3.7.1.1.4 Aircraft that have been approved by the State of Registry or the State of the Operator, as appropriate, for RNP 10 (PBN application of RNAV10) or RNP4 are considered to meet the requirements specified in [3.7.1.1.2.a\)](#)

*Note.- The performance -based Navigation (PBN) Manual (Doc 9613) provides guidance on aircraft approval, operations and maintenance programmes for initial achievement and continued compliance with RNAV 10 (Designated and Authorised as RNP) 10 and RNP 4*

- 3.7.1.1.5 From 1 January 2015 the means of compliance for demonstrating performance to [3.7.1.1.2.a](#) above shall be in accordance with the RNAV 10 or RNP 4 navigation specifications as detailed in the *Performance Based Navigation Manual* (Doc 9613). Aircraft that have been MNPS approved by the State of Registry or the State of the Operator based on standard deviation of lateral track error of 11.7Km (6.3NM) before 1 January 2015 shall be permitted to operate in NAT MNPS airspace until 1 January 2020.

- 3.7.1.1.6 When granting approval for operations in MNPS airspace, States should take account of the RNP 10 time limits for aircraft equipped with dual INS or inertial reference unit (IRU) systems.

*Note. - RNP 10 time limits are discussed in (DOC 9613) Part B, Volume II Chapter 1.*

3.7.1.1.7 When granting approval for operations in MNPS airspace, State of Registry shall ensure that in-flight operations drills include mandatory navigation cross-checking procedures which will identify navigation errors in sufficient time to prevent the aircraft inadvertently deviating from the ATC-cleared route. Guidance on procedures are detailed in NAT Doc 007.

3.7.1.1.8 Flights not subject to an Oceanic Clearance, which flight plan to route through Brest Oceanic Transition Area (BOTA) and/or Shannon Oceanic Transition Area (SOTA), are not subject to MNPS approval.

*Note 1. - SOTA is defined as that airspace from DINIM (510000N 0150000W) - LESLU (510000N 0080000W) - 483000N 0080000W - BEDRA (490000N 0150000W) to DINIM (510000N 0150000W)*

*Note 2. - BOTA is defined as that airspace from 483400N 0084500W - 483000N - 0080000W - 450000N 0080000W - 450000N 0084500W to 483400N 0084500W.*

The requirements for MNPS are set out in the Guidance concerning Air Navigation in and above the North Atlantic MNPS Airspace (NAT Doc 007) (available at <http://www.paris.icao.int>). ([Refer to MNPS](#))

### 3.8. Area Navigation (RNAV)

#### Background

3.8.1. RNAV is defined as “a method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced NAVAIDs or within the limits of the capability of self-contained aids, or a combination of these.” This removes the restriction imposed on conventional routes and procedures where the aircraft must overfly referenced NAVAIDs, thereby permitting operational flexibility and efficiency. RNAV is the less capable of the two families of PBN navigation specifications. RNAV is suited to current and legacy aircraft operations however as a stand-alone specification it is insufficient to support many of the new Air Traffic Management (ATM) applications envisaged in strategic plans (e.g. 3D, 4D ATM concepts). RNAV specifications do not require on board navigation performance monitoring and alerting. RNAV tracks (e.g.: RNAV 5, RNAV 2, RNAV 1) will normally require monitoring by ATC surveillance systems to achieve desired performance and separation safety standards. This requirement implies near universal surveillance coverage for RNAV specifications. A network of radar systems (PSR & MSSR) is employed to facilitate ATS provision in airspace designated to Irish ANSPs (PSRs providing primary coverage for the Dublin, Shannon and Cork terminal areas supported by longer range Mode S capable SSRs covering en-route airspace). In addition, an ASMGCS is deployed at Dublin airport.

#### 3.8.2. Accommodation of non RNAV Approved Aircraft in the Terminal Airspace

Attention is drawn to the fact that aircraft which are not RNAV approved, may be subject to less optimal routeings, track mileage, fuel burn, and increased delays.

### 3.9. Required Navigation Performance (RNP)

#### Basic Functions

3.9.1. An RNP system is an RNAV system whose functionality supports on-board performance monitoring and alerting. Current specific requirements include:

- a. Capability to follow a desired ground track with reliability, repeatability and predictability, (including optional curved path); and
- b. Where vertical profiles are included for vertical guidance, use of vertical angles or specified altitude constraints to define a desired vertical path.

3.9.2. On-board performance monitoring and alerting capabilities may be provided in different forms depending on the system installation, architecture and configurations, including:

- a. Display and indication of both the required and the estimated navigation system performance;

- b. Monitoring of the system performance and alerting the crew when RNP requirements are not met; and
  - c. Cross track deviation displays scaled to RNP, in conjunction with separate monitoring and alerting for navigation integrity.
- 3.9.3. An RNP system utilizes its navigation sensors, system architecture and modes of operation to satisfy the RNP navigation specification requirements. It must perform the integrity and reasonableness checks of the sensors and data, and may provide a means to deselect specific types of NAVAIDs to prevent reversion to an inadequate sensor. RNP requirements may limit the modes of operation of the aircraft, e.g. for low RNP, where flight technical error is a significant factor, manual flight by the crew may not be allowed. Dual system/sensor installations may also be required depending on the intended operation or need

3.10. Required Navigation Performance Authorisation required (RNP AR)

Background

RNP AR APCH is a “high-end” instrument approach navigation specification. RNP AR provides an added level of assurance over standard operations and as the designation indicates, a special authorisation is required. ICAO has identified specific instrument approach design criteria in the RNP AR Manual (Doc 9905) and whilst criteria in this and the PBN Manual cater today for approach operations, work is underway to update both to address Departures. The advanced features of RNP AR include operations with navigation accuracy less than 0.3 NM, use of Radius to Fix (RF) Path Terminator in all flight segments and reduced obstacle assessment criteria reflecting the assurance accounted for in a Flight Operations Safety Assessment (FOSA).

3.11. Current Airspace Application / Navigation Specification and Applicable Regulatory Guidance

Airspace Application	Navigation Specification	Applicable Regulatory Guidance
<b>Oceanic &amp; Remote</b>	RNAV 10	FAA order 8400.12A / EASA AMC 20- 12
	RNP 4	FAA order 8400.33 / EASA Rule making Task No. MDM.062 (JAA CNS/ATM SG pp045)
	RNP 2	To Be Developed
	Advanced RNP	
<b>Continental En-route</b>	RNAV 5	FAA AC 20-138B, AC 90-96A / EASA AMC 20-4
	RNAV 2	FAA AC 90-100A
	RNAV 1 / P-RNAV	FAA AC 90-100A / JAA TGL 10 Rev 1
	RNP 2	To Be Developed
	Advanced RNP	To Be Developed
	RNP 0.3	To Be Developed
<b>Terminal Airspace</b>	RNAV 5	FAA AC 20-138B, AC 90-96A / EASA AMC 20-4
	RNAV 2	FAA AC 90-100A
	RNAV 1 / P-RNAV	FAA AC 90-100A / JAA TGL 10 Rev 1
	RNP 1	FAA AC 20-138B, AC 90-105
	Advanced RNP	To Be Developed
	RNP 0.3	To Be Developed

Airspace Application	Navigation Specification	Applicable Regulatory Guidance
<b>Approach Operations</b>	RNAV 1 / P-RNAV	FAA AC 90-100A / JAA TGL 10 Rev 1
	RNP 1	FAA AC 20-138B, AC 90-105
	Advanced RNP	To Be Developed
	RNP APCH (Initial, Intermediate and Missed Approach Segments, with or without RF legs)	FAA AC 20-138B, AC 90-105 / EASA AMC 20-27
	RNP APCH (Final Approach Segment of instrument approach procedure, designed to LNAV and/or LNAV/VNAV minima)	FAA AC 20-138B, AC 90-105 / EASA AMC 20-27
	RNP APCH (Final Approach Segment of instrument approach procedure, designed to LP or LPV minima)	FAA AC 20-138B, AC 90-107 / EASA NPA 2009-04 (AMC 20-28)
	RNP AR Operations	FAA AC 90-101A / EASA AMC 20-26
	RNP 0.3	To Be Developed

3.12. Contingency Procedures

ICAO Doc 7030 Regional Supplementary Procedures detail the contingency procedures.

**4. RNAV (GNSS) INSTRUMENT APPROACH PROCEDURES**

To be developed

**5. MNPS**

5.1. Application of Minimum Navigation Performance Specification (MNPS)

5.1.1. MNPS applies in that part of the Shanwick Oceanic Control Area from FL 285 to FL420 inclusive. Aircraft using the MNPS Airspace are required to have a navigation performance capability such that:

- The standard deviation of lateral track errors shall be less than 6.3 NM;
- The proportion of the total flight time spent by aircraft 30 NM or more off the cleared track shall be less than  $5.3 \times 10^{-4}$ ;
- The proportion of the total flight time spent by aircraft between 50 NM and 70 NM off the cleared track shall be less than  $13 \times 10^{-5}$ .

5.1.2. These mathematical standards can be approximated operationally as follows:

- Aircraft must be operated so that lateral deviations from track remain less than 12.6 NM for at least 95 per cent of the time the system is required for navigation;
- The navigation system must demonstrate a continuing capability to keep lateral deviations from cleared track in excess of 30 NM to less than 53 per 100 000 flight hours in the system; and
- Keep lateral deviations between 50nm and 70 NM from cleared track, to less than 13 per 100 000 flight hours in the system.

5.1.3. In order to ensure that the required navigation standards are being observed within the MNPS airspace, a continuous monitoring of the navigation accuracy of aircraft in this airspace takes place using land based radars in Canada, Ireland, France, Iceland and the UK. Where large navigation errors are observed the pilot of the aircraft concerned will be notified by the ATC Unit observing the error. The subsequent investigation to determine the cause of the error will involve the ATC Unit, the operator, and the State of Registry. On the basis of such monitoring it has been agreed that the lateral separation minimum for aircraft operating in the MNPSA shall be 60 NM. It is implicit in the concept of MNPS and essential to the application of this quoted lateral separation minimum, that all operations in the MNPSA - be they Public Transport or General Aviation - achieve the highest standards of navigation

performance accuracy. Thus all flights within the Irish MNPSA must have the specific approval of either the State of Registry of the aircraft, or the State of Registry of the Operator, for such operations. Irish Registered aircraft are approved by the IAA. Such approvals will encompass all aspects of the expected navigation performance accuracy of the aircraft; navigation equipment carried; installation and maintenance procedures and crew navigation procedures and training. The inherent obligations placed upon crews and operators of Irish registered aircraft by the Irish MNPSA requirements can be summarized as follows:

- a. The flight MUST have prior approval for operations in Irish MNPSA;
- b. The approved aircraft minimum navigation installation MUST be serviceable and MUST have been checked for accuracy prior to entry into MNPSA;
- c. Whilst in MNPSA the approved operating procedures MUST be adhered to. Except in emergency, diversions from the ATC cleared track MUST NOT be made without prior approval of the controlling ATC Unit;
- d. If subsequent un-serviceability reduces the navigational capability below the required minimum for MNPS operations after entry into MNPS Airspace then the controlling ATC Unit MUST be advised so as to allow for any adjustments of separation from adjacent aircraft;
- e. There MUST be a high standard of supervision, monitoring and cross checking of data inserted into automatic navigation system to prevent large errors arising from erroneous waypoint entries;
- f. There MUST be a high standard of co-ordination with ATC Units to ensure that misunderstandings over the route to be flown do not occur.

5.1.4. Westbound flights requesting clearance from Shanwick to enter North Atlantic (NAT) Minimum Navigation Performance Specification Airspace (MNPSA) may be invited to confirm that they have been approved for operating within MNPSA by their State of Registry or their State of Operator. The submission of a Flight Plan alone does NOT constitute NAT MNPS operating approval. Pilots/Operators unable to provide such confirmation will be issued an Oceanic Clearance to operate outside MNPSA (below FL 285 or above FL 420). Details of the flight will be passed to the relevant State Aviation Authority for follow-up action.

## 5.2. Navigation Equipment for Unrestricted MNPS Operations

5.2.1. In order to justify consideration for State approval for future unrestricted operation in the MNPSA an aircraft will be required to be equipped as follows:

- a. Two fully serviceable Long Range Navigation Systems (LRNS). A LRNS may be one of the following:
  - i. One Inertial Navigation System (INS);
  - ii. One Global Navigation Satellite System (GNSS); or
  - iii. One navigation system using the inputs from one or more Inertial Reference System (IRS) or any other sensor system complying with the MNPS requirement.
- b. Each LRNS must be capable of providing to the flight crew with a continuous indication of the aircraft position relative to desired track.
- c. It is highly desirable that the navigation system employed for the provision of steering guidance is capable of being coupled to the auto-pilot.

*Note 1:* Only two GNSSs currently exist: the Global Positioning System (GPS) and the Global Orbiting Navigation Satellite System (GLONASS).

*Note 2:* A GPS installation must be approved as follows:

If the two required LRNSs are both GPS, they must be approved in accordance with FAA Notice 8110.60 or equivalent JAA or national documentation and their operation approved in accordance with FAA HBA 95-09 or equivalent national or JAA documentation. If GPS serves as only one of the two required LRNSs, then it must be approved in accordance with FAA TSO-C129 as Class A1, A2, B1, B2, C1 or C2, or with equivalent national or JAA documentation.

*Note 3:* Equivalent approved material for GLONASS is under development and must be available prior to approval of any GLONASS equipped aircraft for MNPS operations.

## 5.3. Application of Reduced Vertical Separation Minima (RVSM) in Shanwick OCA

RVSM applies in the MNPS Area of the Shanwick Oceanic Control Area from FL290 to FL410 inclusive. Aircraft using this Area are required to have a height keeping performance capability as defined in the appropriate ICAO Documents/JAA Temporary Guidance Leaflet. In order to ensure that the overall standard of required height keeping is being achieved within RVSM airspace a technical height keeping monitoring program has been established in accordance with ICAO guidance. In order to ensure that the required altimetry standards are being observed within RVSM airspace, a technical height keeping monitoring programme has been initiated. For the task of monitoring technical height keeping accuracy, a hybrid system comprising of a Height Monitoring Unit (HMU) and GPS Monitoring Systems (GMS) is employed.

5.4. Flight plan

If the flight is certified as being in compliance with Minimum Navigation Performance Specification (MNPS) and intends to operate in MNPS airspace, for any portion of the flight, the letter 'X' shall be inserted after the letter 'S' in Item 10 of the flight plan to indicate that the flight has been approved for operations within the Minimum Navigation Performance Specification Airspace (MNPSA). It is the Captain's responsibility to ensure that specific approval has been given for such operations by the State of Registry of either the aircraft or of the operator.

## 6. USE OF INSTRUMENT LANDING SYSTEM (ILS) FACILITIES IN IRELAND

### 6.1 Introduction

The purpose of this section is to provide guidance on the limitations of ILS and to advise pilots of precautions to be taken during operational use.

### 6.2 General

6.2.1 Instrument Landing System (ILS) facilities in Ireland conform to ICAO Annex 10 Standards appropriate to the promulgated facility performance category unless otherwise indicated by NOTAM or contained in AIP Ireland. They can therefore be relied upon to provide navigational information to the required accuracy providing:

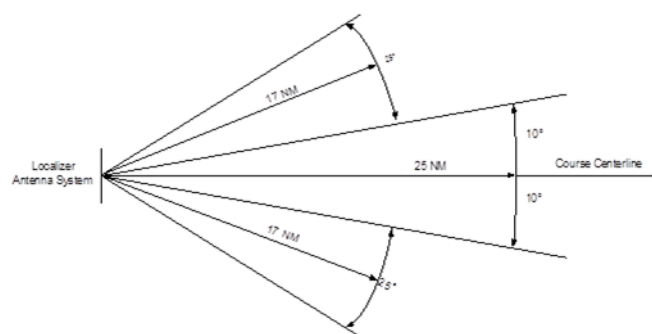
- they are only used inside specific coverage sectors;
- the signal-in-space is being adequately protected;
- due account is taken of any warnings or differences promulgated by NOTAM or contained in AIP Ireland.

6.2.2 An aerodrome's ILS facility should only be used when an Air Traffic Control Service is available for the airport. No attempt should be made to use the ILS outside the aerodrome's promulgated hours of operation, unless specific arrangements have been made with the aerodrome operating authority for this purpose which includes the provision of an Air Traffic Control Service.

### 6.3 Localizer

6.3.1 ICAO Annex 10 tolerances for ILS localizers provide for coverage from the centre of the antenna array;

- out to 25 NM within  $\pm 10^\circ$  of the front course centreline;
- out to 17 NM within  $\pm 35^\circ$  of the front course centreline;



6.3.2 The use of a localizer outside these areas can lead to false course and reverse sense indications being received and such use should not be attempted.

6.3.3 There is no provision for the use of localizer "back beam" in Ireland and any such indication should be ignored.

6.3.4 Certain combinations of localizer beam characteristics and modern receiver/autopilot combinations can cause premature localizer capture; flight crews should be alert to this possibility. Flight deck procedures should be designed to reduce the risk of premature capture by not allowing Flight Director/Autopilot capture modes to be armed too early. Flight crews are advised to confirm the validity of ILS capture by cross-checking with other sources of



navigational information where available.

#### **6.4 Glidepath**

6.4.1 The standard ILS Glide Path DOC provides coverage in the following areas:

- a. Coverage sectors of 8° in azimuth each side of the Localiser centre-line to a distance of at least 10 nm from threshold;
- b. Vertical Coverage is provided from 0.45Ø up to 1.75Ø above the horizontal where Ø is the promulgated Glide Path angle.

This equates to coverage from 1.35° to 5.25° above the horizontal for a 3° Glide Path.

6.4.2 Flight crews are warned that use of the Glide Path outside the coverage areas can lead to intermittent and incorrect indications being received.

6.4.3 Certain Glide Paths may not exhibit correct deflection sensitivity to one side of the Localiser course line. This effect is caused by terrain or other problems and can lead to inadequate 'Fly Up' indications being received. When this situation exists a warning will be notified in Irish AIP Part III – Aerodromes (AD), 2.19 RADIO NAVIGATION AND LANDING AIDS, specific to that facility or by NOTAM.

#### **6.5 Protection of ILS guidance signals**

6.5.1 The use of an ILS in its promulgated Category is subject to the signal in space being adequately protected from interference. Moving objects, particularly large ones like aircraft manoeuvring in close proximity to the runway, may disturb the ILS guidance signals. ATC will apply increased separation and such other methods considered necessary to prevent interference during Low Visibility Procedures (LVP).

6.5.2 Flight crews should be aware of the ILS interference effects that can occur while conducting auto-lands when LVP are not in force. The protection of ILS sensitive areas from intrusion by aircraft and vehicles is included within LVP.

6.5.3 In Category I conditions or better, LVP will not come into force unless specifically requested. Intrusion into the ILS critical and sensitive areas by taxiing aircraft, ground vehicles or overflight of the ILS localizer may cause interference to the ILS signal. This interference may result in deviations from the desired approach path and may be accompanied by a "LOC" warning flag appearing briefly.

6.5.4 When making auto-lands in conditions not necessitating the introduction of LVP, flight crews should closely monitor the flight path of their aircraft and be prepared to disconnect the autopilot immediately if excessive disturbances occur near to the ground.

#### **6.6 ILS/DME**

Distance Measuring Equipment (DME) is frequency paired with ILS channels to supplement or replace range information provided by ILS marker beacons. All range information from ILS/DME is zero referenced to the runway threshold but the use of such an ILS-paired DME outside of a promulgated procedure may result in erroneous distance information and/or corrupt or erroneous identification coding.

#### **6.7 Maintenance**

6.7.1 When an ILS is undergoing maintenance, or is radiating for test purposes only, the IDENTIFICATION coding will be removed completely or replaced with a continuous tone.

6.7.2 Under these conditions NO ATTEMPT should be made to use the ILS as erroneous indications may be received.

#### **6.8 Further Information**

Enquiries regarding the use of Instrument Landing Systems in Ireland should be addressed to:

Post: Aeronautical Services Department  
Safety Regulation Division  
Irish Aviation Authority  
The Times Building  
11-12 D'Olier St  
Dublin 2.

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## GEN 3.2 AERONAUTICAL CHARTS

### 1. RESPONSIBLE SERVICE

Aeronautical Charts for the territory of Ireland are published by

Post: The Irish Aviation Authority,  
The Times Building  
11-12 D'Olier Street  
Dublin 2  
D02 T449  
Ireland

Phone: + 353 1 671 8655

Fax: + 353 1 679 2934

Email: [info@iaa.ie](mailto:info@iaa.ie)

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

Charts based on ICAO documents: Annex 4, Doc 8697

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

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Charting service is available during Office hours 0930-1730 Local Time.

### 2. MAINTENANCE OF CHARTS

2.1. Aeronautical Charts included in the AIP are kept up to date by amendments to the AIP. Significant amendments or revisions in aeronautical information may be promulgated by NOTAM or Aeronautical Information Circular, as appropriate.

2.2. Corrections to Aeronautical Charts are promulgated as hand amendments to the AIP and listed in Sections [GEN 0.5](#) and [GEN 3.2.8](#). Items of information found after publication to have been incorrect at the aeronautical information date are corrected immediately by NOTAM if they are of operational significance.

### 3. PURCHASE ARRANGEMENTS

VFR Chart Scale 1:500,000

The Irish Aviation Authority has produced a visual flight rules (VFR) aeronautical encapsulated A4 folded chart Scale 1:500,000. This chart is for VFR navigation within the boundaries of the Shannon FIR. In addition to aeronautical information, the charts provide terrain contours, hydrographic, topographic, cultural and other visual features compatible with legibility at the scale of the chart - this information is supplied by Ordnance Survey Ireland and/or Ordnance Survey Northern Ireland. It is available to order at a cost of €30.00 including VAT from:

Post: OSI,  
Map Sales Shop,  
Phoenix Park,  
Dublin 8,

Phone: + 353 1 802 5379

URL: [http://shop.osi.ie/Shop/Products/StockedItemsWH03/Special+Interest\(StockedItems\)/Default.aspx](http://shop.osi.ie/Shop/Products/StockedItemsWH03/Special+Interest(StockedItems)/Default.aspx)

VFR Airspace Chart Scale 1:500,000

The Irish Aviation Authority has produced a visual flight rules (VFR) aeronautical airspace chart Scale 1:500,000. This chart is for VFR navigation within the boundaries of the Shannon FIR.

It is available free to download from the IAA Web Site,

URL: <https://www.iaa.ie/commercial-aviation/airspace-1/aeronautical-charts>

VFR Chart Scale 1:250,000

The Irish Aviation Authority has produced a visual flight rules (VFR) aeronautical encapsulated A4 folded chart Scale 1:250,000. It comprises two charts - front and back (East & West, North & South), covering the Shannon FIR. The charts are for VFR navigation within the boundaries of the Shannon FIR. In addition to aeronautical information, the charts provide terrain contours, hydrographic, topographic, cultural and other visual features compatible with legibility at the scale of the chart - this information is supplied by Ordnance Survey Ireland and/or Ordnance Survey Northern Ireland. It is available to order at a cost of €30.00 including VAT per chart from:

Post: OSI,  
Map Sales Shop,  
Phoenix Park,  
Dublin 8,  
  
Phone: + 353 1 802 5379  
  
URL: [http://shop.osi.ie/Shop/Products/StockedItemsWH03/Special+Interest\(StockedItems\)/Default.aspx](http://shop.osi.ie/Shop/Products/StockedItemsWH03/Special+Interest(StockedItems)/Default.aspx)

#### Digital Formats

For details on VFR charts in digital formats, please email;

Email: <mailto:vfrcharts@iaa.ie>

Aerodrome Obstacle Chart - ICAO Type B, where available can be obtained from individual aerodrome authorities. Ireland Sheet 2172 ABCD, 1:500,000 and 1:250,000 are available from:-

Post: OSI,  
Map Sales Shop,  
Phoenix Park,  
Dublin 8,  
  
Phone: + 353 1 802 5379  
  
URL: <http://www.irishmaps.ie>

All other aeronautical charts are available to download from:-

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

## 4. AERONAUTICAL CHART SERIES AVAILABLE

4.1 The following series of aeronautical charts are produced

1. Aeronautical Chart - ICAO 1:500,000
  2. Aeronautical Chart 1:250,000
  3. Instrument Approach Chart - ICAO \*
  4. Standard Departure Chart - Instrument (SID) - ICAO \*
  5. Standard Arrival Chart - Instrument (STAR) - ICAO \*
  6. Visual Approach Chart - ICAO\*
  7. Aerodrome Chart - ICAO \*
  8. Aircraft Parking/Docking Chart - ICAO \*
  9. Aerodrome Obstacle Chart - ICAO Type "A" (Operating Limitations) \*
  10. Aerodrome Obstacle Chart - ICAO Type "B"
  11. Precision Approach Terrain Chart – ICAO
  12. ATC Surveillance Minimum Altitude Chart \*
- (\*Included in AIP Ireland)

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

4.2 General Description of Series of Charts

4.2.1 Aeronautical Chart - ICAO 1:500,000

The Irish Aviation Authority has produced a visual flight rules (VFR) aeronautical encapsulated A4 folded chart Scale

1:500,000. This chart is for VFR navigation within the boundaries of the Shannon FIR. In addition to aeronautical information, the charts provide terrain contours, hydrographic, topographic, cultural and other visual features compatible with legibility at the scale of the chart - this information is supplied by Ordnance Survey Ireland and/or Ordnance Survey Northern Ireland.

#### 4.2.2 Aeronautical Chart 1:250,000

The Irish Aviation Authority has produced a visual flight rules (VFR) aeronautical encapsulated A4 folded chart Scale 1:250,000. It comprises two charts - front and back (East & West, North & South), covering the Shannon FIR. The charts are for VFR navigation within the boundaries of the Shannon FIR. In addition to aeronautical information, the charts provide terrain contours, hydrographic, topographic, cultural and other visual features compatible with legibility at the scale of the chart - this information is supplied by Ordnance Survey Ireland and/or Ordnance Survey Northern Ireland.

#### 4.2.3 Instrument Approach Chart – ICAO

These charts are designed to provide the pilot with a graphic presentation of the Instrument Approach, Missed Approach and Holding Procedures and to facilitate the transition from non-visual to visual flight at any point on the final approach.

#### 4.2.4 Visual Approach Chart – ICAO

These charts are designed to assist pilots making a visual approach and to provide pilots with designated holding patterns maintained by visual reference to the ground.

#### 4.2.5 Aerodrome Chart – ICAO

These charts provide flight crew with detailed information on runways, taxiways, lighting and other aerodrome features to facilitate the surface movement of aircraft.

#### 4.2.6 Aerodrome Obstacle Chart - ICAO - TYPE "A" (Operating Limitations)

These charts are designed to provide the operator with the data necessary to enable compliance with the operating limitations as contained in ICAO Annex 6.

#### 4.2.7 Aerodrome Obstacle Chart - ICAO - TYPE "B"

These charts are designed to provide the data necessary or determination of minimum safe altitudes/heights and procedures for use in the event of an emergency during take-off or landing.

#### 4.2.8 Precision Approach Terrain Chart – ICAO

These charts provide detailed terrain profile information within a defined portion of the final approach so as to enable aircraft operating agencies to assess the effect of terrain on decision height determination by the use of radio altimeter.

#### 4.2.9 ATC Surveillance Minimum Altitude Chart

This Supplementary Chart shall provide information that will enable flight crews to monitor and cross check altitudes assigned by a controller using an ATS surveillance system.

### 5. LIST OF CHART SERIES

Title of series and Scale	Series	Chart Ref	Chart name and/or Number	Date
Aeronautical Chart ICAO 1:500,000	ANC/500		Ireland Sheet 2172 ABCD	01 JUN 2017
Aeronautical Chart/West 1:250,000	ANC/250		Ireland Sheet 2172 ABCD	01 JUN 2017
Aeronautical Chart/East 1:250,000	ANC/250		Ireland Sheet 2172 ABCD	01 JUN 2017
Aeronautical Chart/North 1:250,000	ANC/250		Ireland Sheet 2172 ABCD	01 JUN 2017
Aeronautical Chart/South 1:250,000	ANC/250		Ireland Sheet 2172 ABCD	01 JUN 2017

Title of series and Scale	Series	Chart Ref	Chart name and/or Number	Date
Standard Departure Chart-Instrument (SID) ICAO 1:750 000	SID	EICK AD 2.24-7	EICK RNAV (GNSS) RWY 17 CAT A, B	13 MAR 2008
	SID	EICK AD 2.24-8	EICK RNAV (GNSS) RWY 17	13 MAR 2008
	SID	EICK AD 2.24-9	EICK RNAV (GNSS) RWY 35 CAT A, B	13 MAR 2008
	SID	EICK AD 2.24-10	EICK RNAV (GNSS) RWY 35	13 MAR 2008
	SID	EIDW AD 2.24-9	EIDW RNAV RWY 28 CAT A, B	13 DEC 2012
	SID	EIDW AD 2.24-10	EIDW RNAV RWY 28 CAT C,D	13 DEC 2012
	SID	EIDW AD 2.24-11	EIDW RNAV RWY 10 CAT A, B	02 APR 2015
	SID	EIDW AD 2.24-12	EIDW RNAV RWY 10 CAT C, D	02 APR 2015
	SID	EIDW AD 2.24-13	EIDW RNAV RWY 16 CAT A, B	13 DEC 2012
	SID	EIDW AD 2.24-14	EIDW RNAV RWY 16 CAT C, D	13 DEC 2012
	SID	EIDW AD 2.24-15	EIDW RNAV RWY 34 CAT A, B	13 DEC 2012
	SID	EIDW AD 2.24-16	EIDW RNAV RWY 34 CAT C, D	13 DEC 2012
	SID	EIKY AD 2.24-3	EIKY RWY 26 Cat A, B	25 MAY 2017
	SID	EIKY AD 2.24-4	EIKY RWY 26 Cat C	25 MAY 2017
	SID	EIKY AD 2.24-5	EIKY RWY 08 Cat A, B	25 MAY 2017
	SID	EIKY AD 2.24-6	EIKY RWY 08 Cat C	18 AUG 2016
	SID	EINN AD 2.24-7A	EINN RNAV RWY 24 Cat A, B, C, D	03 JUN 2010
	SID	EINN AD 2.24-8A	EINN RNAV RWY 06 Cat A, B, C, D	03 JUN 2010
Standard Departure Chart-Instrument (SID) ICAO 1:300 000	SID	EIKN AD 2.24-4	EIKN RNAV RWY26	28 APR 2016
	SID	EIKN AD 2.24-5	EIKN RNAV RWY08	28 APR 2016
Standard Departure Chart-Instrument (SID) ICAO 1:300 000	SID	EIME AD 2.24-8	EIME RWY 11,29,05,23 CAT A,B	30 APR 2015
	SID	EIME AD 2.24-9	EIME RWY 11,29,05,23 CAT C,D	30 APR 2015
Standard Arrival Chart-Instrument (STAR) ICAO 1:750 000	STAR	EICK AD 2.24-11	EICK RNAV (GNSS) RWY 17	13 MAR 2008
	STAR	EICK AD 2.24-12	EICK RNAV (GNSS) RWY 35	13 MAR 2008
	STAR	EIDW AD 2.24-17.1	EIDW RNAV RWY 28 (With Lateral Holding/Point Merge)	02 APR 2015
	STAR	EIDW AD 2.24-17.4	EIDW RNAV RWY 28 (without Lateral Holding/Point Merge)	02 APR 2015
	STAR	EIDW AD 2.24-19.1	EIDW RNAV RWY 10 (with Lateral Holding/Point Merge)	28 MAY 2015
	STAR	EIDW AD 2.24-19.5	EIDW RNAV RWY 10 (Without Lateral Holding/Point Merge)	23 JUL 2015
	STAR	EIDW AD 2.24-20	EIDW RNAV RWY 16	13 DEC 2012
	STAR	EIDW AD 2.24-21	EIDW RNAV RWY 34	13 DEC 2012
	STAR	EIME AD 2.24-29	EIME RWY 23/29	30 APR 2015
	STAR	EINN AD 2.24-9A	EINN RNAV RWY 24	03 JUN 2010
	STAR	EINN AD 2.24-10A	EINN RNAV RWY 06	03 JUN 2010
Standard Arrival Chart-Instrument (STAR) ICAO 1:400 000	STAR	EIKN AD 2.24-7	EIKN RNAV RWY08	20 JUL 2017
Standard Arrival Chart-Instrument (STAR) ICAO 1:300 000	STAR	EIKN AD 2.24-6	EIKN RNAV RWY26	18 AUG 2016

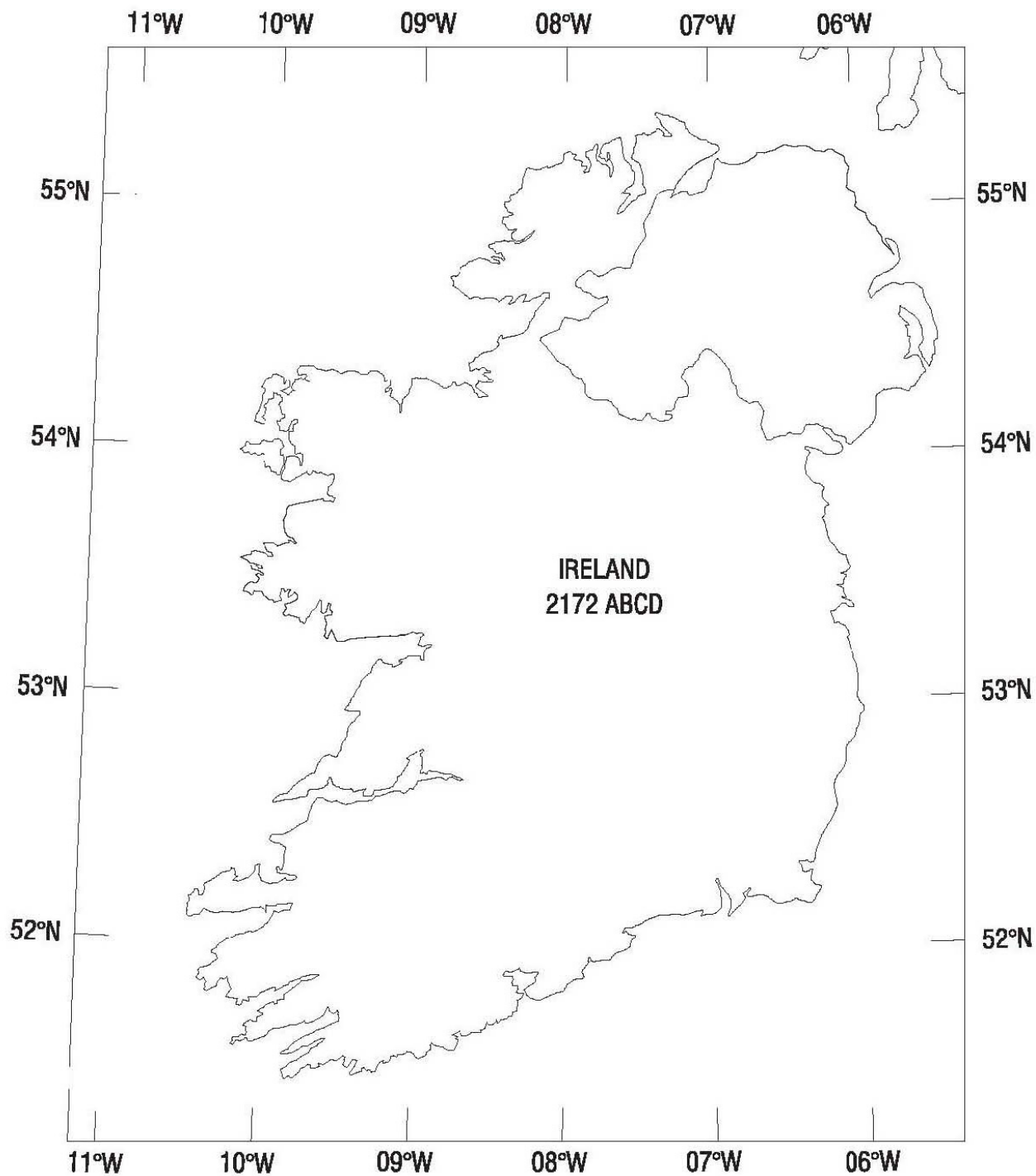
Title of series and Scale	Series	Chart Ref	Chart name and/or Number	Date
Instrument Approach Chart ICAO 1: 500 000	IAC	EIDW AD 2.24-22	EIDW RNP RWY 28	25 MAY 2017
	IAC	EIDW AD 2.24-23	EIDW ILS Cat I & II or LOC RWY 28	25 MAY 2017
	IAC	EIDW AD 2.24-24	EIDW VOR RWY 28	25 MAY 2017
	IAC	EIDW AD 2.24-25	EIDW RNP RWY 10	25 MAY 2017
	IAC	EIDW AD 2.24-26	EIDW ILS Cat I & II or LOC RWY 10	25 MAY 2017
	IAC	EIDW AD 2.24-27	EIDW VOR RWY 10	25 MAY 2017
	IAC	EIDW AD 2.24-29	EIDW ILS CAT I or LOC RWY 16	13 DEC 2012
	IAC	EIDW AD 2.24-30	EIDW VOR RWY 16	13 DEC 2012
	IAC	EIDW AD 2.24-32	EIDW RNAV (GNSS) RWY 34	28 MAY 2015
	IAC	EIDW AD 2.24-33	EIDW VOR RWY 34	28 MAY 2015
Instrument Approach Chart ICAO 1: 400 000	IAC	EIME AD 2.24-16	VOR/DME RWY 29 CAT A,B,C,D	30 APR 2015
	IAC	EIME AD 2.24-17	VOR DME RWY 23 CAT A,B,C,D	30 APR 2015
	IAC	EIWT AD 2.24.3	EIWT VOR - D	04 APR 2013
	IAC	EIWT AD 2.24.4	EIWT VOR - B	07 MAR 2013
	IAC	EIWT AD 2.24.5	EIWT VOR - C	04 APR 2013
	IAC	EIKN AD 2.24-14	EIKN RNAV (GNSS) Chart RWY08	18 AUG 2016
Instrument Approach Chart ICAO 1:350 000	IAC	EIKY AD 2.24-8	EIKY ILS OR LOC RWY 26 ACFT CAT A,B,C	08 DEC 2016
	IAC	EIKY AD 2.24-9	EIKY NDB RWY 26 CAT A,B,C	08 DEC 2016
	IAC	EIKN AD 2.24-8	EIKN RNAV (GNSS) Chart RWY26	18 AUG 2016
	IAC	EIKN AD 2.24-9	EIKN ILS A CAT I & CAT II or LOC RWY26	18 AUG 2016
	IAC	EIKN AD 2.24-11	EIKN VOR RWY26	18 AUG 2016
	IAC	EIKN AD 2.24-15	EIKN VOR RWY08	18 AUG 2016
	IAC	EIKN AD 2.24-16	EIKN NDB RWY08	18 AUG 2016
	IAC	EIKN AD 2.24-17	EIKN NDB RWY08	18 AUG 2016
Instrument Approach Chart ICAO 1: 330 000	IAC	EICK AD 2.24-13	EICK ILS/DME Cat I & II RWY 17	13 MAR 2008
	IAC	EICK AD 2.24-14	EICK ILS/DME RWY 35	13 MAR 2008
	IAC	EICK AD 2.24-15	EICK VOR/DME RWY 17	13 MAR 2008
	IAC	EICK AD 2.24-16	EICK VOR/DME RWY 35	13 MAR 2008
	IAC	EICK AD 2.24-17	EICK VOR/DME RWY 07	13 MAR 2008
	IAC	EICK AD 2.24-18	EICK VOR/DME RWY 25	13 MAR 2008
	IAC	EIDL AD 2.24-3	EIDL LOC RWY 21	05 APR 2012
	IAC	EIDL AD 2.24-4	EIDL NDB RWY 21	05 APR 2012
	IAC	EIDL AD 2.24-5	EIDL NDB RWY 03	05 APR 2012
	IAC	EIKN AD 2.24-10	EIKN ILS B CAT I & CAT II RWY26	28 APR 2016
	IAC	EIKN AD 2.24-12	EIKN NDB RWY26	28 APR 2016
	IAC	EIKN AD 2.24-13	EIKN NDB RWY26	28 APR 2016
	IAC	EIME AD 2.24-10	ILS RWY 11 CAT A,B	30 APR 2015
	IAC	EIME AD 2.24-11	ILS RWY 11 CAT C,D	30 APR 2015
	IAC	EIME AD 2.24-22	RADAR VECTORING CAT A,B,C,D	30 APR 2015
	IAC	EINN AD 2.24-11	EINN ILS Cat I & II R Or LLZ RWY 24	03 JUN 2010
	IAC	EINN AD 2.24-12	EINN ILS/DME RWY 06	03 JUN 2010
	IAC	EINN AD 2.24-13	EINN VOR RWY 24	03 JUN 2010
	IAC	EINN AD 2.24-14	EINN VOR/DME RWY 06	03 JUN 2010

Title of series and Scale	Series	Chart Ref	Chart name and/or Number	Date
	IAC	EISG AD 2.24-3	EISG NDB/DME RWY 29	20 MAR 2003
	IAC	EISG AD 2.24-4	EISG NDB/DME RWY 11	20 MAR 2003
	IAC	EISG AD 2.24-5	EISG NDB RWY 11	20 MAR 2003
	IAC	EIWF AD 2.24-3	EIWF ILS CAT 1 OR LOC RWY 21 CAT A,B,C	20 JUL 2017
	IAC	EIWF AD 2.24-5	EIWF NDB/DME RWY 21	30 OCT 2003
	IAC	EIWF AD 2.24-6	EIWF NDB RWY 03 CAT A,B,C	08 DEC 2016
Instrument Approach Chart ICAO 1:250 000	IAC	EIKY AD 2.24-7	EIKY RNAV (GNSS) RWY 26 CAT A,B,C	25 MAY 2017
	IAC	EIKY AD 2.24-10	EIKY RNAV (GNSS) RWY 08 CAT A,B,C	08 DEC 2016
	IAC	EIKY AD 2.24-11	EIKY NDB RWY 08 CAT A,B,C	26 MAY 2016
Instrument Approach Chart ICAO 1: 200 000	IAC	EIME AD 2.24-15	VOR/DME RWY 11 CAT A,B,C,D	30 APR 2015
	IAC	EIME AD 2.24-20	SRA RWY 11 CAT A,B,C,	30 APR 2015
	IAC	EIME AD 2.24-21	SRA RWY 23 CAT A,B,C	30 APR 2015
Visual Approach Chart ICAO 1: 250 000	VAC	EICK AD 2.24-19	CORK	13 MAR 2008
	VAC	EIDL AD 2.24-6	DONEGAL	23 JAN 2003
	VAC	EIDW AD 2.24-28	DUBLIN	18 NOV 2010
	VAC	EIKN AD 2.24-12	CONNAUGHT	14 FEB 2009
	VAC	EIKY AD 2.24-11	KERRY	28 OCT 2004
	VAC	EINN AD 2.24-15	SHANNON	28 SEP 2006
	VAC	EISG AD 2.24-6	SLIGO	20 MAR 2003
	VAC	EIWF AD 2.24-7	WATERFORD	30 OCT 2003
Aerodrome Chart ICAO 1: 25 000	AD	EICK AD 2.24-1	CORK	02 FEB 2017
	AD	EINN AD 2.24-1	SHANNON	26 MAY 2016
Aerodrome Chart ICAO 1: 20 000	AD	EIKN AD 2.24-1	IRELAND WEST	18 AUG 2016
	AD	EIKY AD 2.24-1	KERRY	13 NOV 2014
Aerodrome Chart ICAO 1: 15 000	AD	EIDL AD 2.24-1	DONEGAL	28 JUN 2012
	AD	EISG AD 2.24-1	SLIGO	16 FEB 2006
	AD	EIWF AD 2.24-1	WATERFORD	30 OCT 2003
	AD	EIWT AD 2.24-1	WESTON	07 JUN 2007
Aerodrome Chart ICAO As per Published Chart	AD	EIDW AD 2.24-1	DUBLIN	25 MAY 2017
	AD	EIME AD 2.24-1	BALDONNEL	30 APR 2015
Aerodrome Obstacle Chart ICAO – Type “A” Horizontal Scale 1:10 000 Vertical Scale 1:1000	AOC	EICK AD 2.24-3	EICK RWY 07/25	05 OCT 2000
	AOC	EICK AD 2.24-4	EICK RWY 17/35	08 JUN 2006
	AOC	EIDL AD 2.24-2	EIDL RWY 03/21	28 JUN 2012
	AOC	EIDW AD 2.24-3	EIDW RWY 10/28	10 NOV 2016
	AOC	EIDW AD 2.24-4	EIDW RWY 16/34	10 JUN 2004
	AOC	EIKN AD 2.24-2	EIKN RWY 08/26	18 AUG 2016
	AOC	EIKY AD 2.24-2	EIKY RWY 08/26	09 APR 2009
	AOC	EINN AD 2.24-4	EINN RWY 06/24	28 SEP 2006
	AOC	EISG AD 2.24-2	EISG RWY 11/29	20 MAR 2003
	AOC	EIWF AD 2.24-2	EIWF RWY 03/21	30 OCT 2003
Aerodrome Obstacle Chart ICAO – Type “B”	AOC	EICK/Type B/Ver 1	EICK	-
	AOC	EIDL/Type B/Ver 1	EIDL	-
	AOC	EIDW/Type B/Ver 1	EIDW	-



Title of series and Scale	Series	Chart Ref	Chart name and/or Number	Date
	AOC	EIKN/Type B/Ver 1	EIKN	-
	AOC	EIKY/ Type B/Ver 1	EIKY	-
	AOC	EINN/Type B/Ver 1	EINN	-
	AOC	EISG/Type B/Ver 1	EISG	-
	AOC	EIWF/Type B/Ver 1	EIWF	-
<i>"Aerodrome Obstacle Chart-ICAO Type B, where available can be obtained from individual Aerodrome Authorities"</i>				
Precision Approach Terrain Chart Horizontal Scale 1:2500 Vertical Scale 1:500	PATC	EICK AD 2.24-5	EICK RWY 17	18 APR 2002
	PATC	EIDW AD 2.24-6	EIDW RWY 10	10 NOV 2016
	PATC	EIDW AD 2.24-7	EIDW RWY 28	10 NOV 2016
	PATC	EIKN AD2.24-3	EIKN RWY 27	21 MAR 2002
	PATC	EINN AD 2.24-5	EINN RWY 24	18 JUN 1998
Aircraft Parking/Docking Chart – ICAO 1:5000	APDC	EICK AD 2.24-2	CORK	27 AUG 2009
	APDC	EINN AD 2.24-2	SHANNON	17 OCT 2013
Aircraft Parking/Docking Chart – ICAO 1:6000	APDC	EIDW AD 2.24-2	DUBLIN	20 JUL 2017
Other Charts		EICK 2.24-6	EICK (Missed Approach Radio Failure)	13 MAR 2008

6. INDEX TO WORLD AERONAUTICAL CHARTS – ICAO 1:500,000



**7. TOPOGRAPHICAL CHARTS**Refer to [GEN 3.2.3.](#)**8. CORRECTIONS TO CHARTS NOT CONTAINED IN THE AIP**

Chart	Location	Correction
-	-	-

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## GEN 3.5 METEOROLOGICAL SERVICES

### 1. RESPONSIBLE SERVICE

- 1.1. Met Eireann Aviation Services Division (of the Department of Environment, community 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.

Post: Met Eireann,  
Meteorological Service,  
Met Eireann Headquarters,  
Glasnevin Hill,  
Dublin 9,

Phone: +353 1 806 4200

Fax: +353 1 806 4247

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)  
- [http://www.paris.icao.int/documents\\_open/files.php?subcategory\\_id=63](http://www.paris.icao.int/documents_open/files.php?subcategory_id=63)
- EASA Safety Information Bulletin (SIB) 2010 - 17R6 - <http://ad.easa.europa.eu/ad/2010-17R6>

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 EICK	½ hourly special	Plain language METAR TREND RVR Wind shear	Wind	Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield	H24	Aeronautical Climatological summary available
			Temp	Distant reading thermometer.		
			RVR	IRVR RWY's 17/35 - Touchdown, midpoint and stopend		
			Cloud Height	Ceilometer.		
			Visibility	Visibility reported is minimum visibility.		
			Wind shear	Not measured instrumentally		
Dublin EIDW	½ hourly special	Plain language METAR TREND RVR Wind-shear	Wind	Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield	H24	Aeronautical Climatological summary available
			Temp	Distant reading thermometer.		
			RVR	IRVR RWY 16 – Touchdown and midpoint. RWY 10/28 – Touchdown, midpoint and stopend.		
			Cloud Height	Ceilometer.		
			Visibility	Visibility reported is minimum visibility.		
			Wind shear	Not measured instrumentally		
Shannon EINN	½ hourly special	Plain language METAR TREND RVR Wind shear	Wind	Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield.	H24	Aeronautical Climatological summary available
			Temp	Distant reading thermometer.		
			RVR	IRVR RWYs 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 EIKN	½ hourly Special	Plain language METAR TREND Wind shear	Wind	Cup anemometer with digital readout. Anemometer positioned 10M AGL and located to give readings representative of conditions at airfield.	0545-AD CLSD (Local Time)	Aeronautical Climatological summary available
			Temp	Distant reading thermometer.		
			Cloud Height	Ceilometer.		
			Visibility	Visibility reported is minimum visibility		
			Wind shear	Not measured instrumentally		
Kerry EIKY	Half Hour Special	METAR Plain Language	Wind	Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield	AD Opening Hours	Aeronautical Climatological summary available
			Temp	Distant reading thermometer		
			Cloud Height	Ceilometer		
			Visibility	Visibility reported is minimum visibility		
Sligo EISG	Half Hour Special	METAR Plain Language	Wind	Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield	AD Opening Hours	Aeronautical Climatological summary available
			Temp	Distance reading thermometer.		
			Cloud Height	Ceilometer		
			Visibility	Visibility reported is minimum visibility		
Donegal EIDL	Half Hour Special	METAR Plain Language	Wind	Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield	AD Opening Hours	Aeronautical Climatological summary available
			Temp	Distant reading thermometer		
			Cloud Height	Ceilometer		
			Visibility	Visibility reported is minimum visibility		
Waterford EIWF	Half Hour Special	METAR Plain Language	Wind	Anemometer positioned 10 meters AGL and located to give readings representative of conditions at airfield	AD Opening Hours	Aeronautical Climatological summary 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 and Ireland West Airports. 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.

URL: <https://www.iaa.ie/commercial-aviation/airspace-1/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-1/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 61 712 950

Fax: + 353 61 712 960  
Email: 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:

In general, meteorological documentation required by a flight crew is readily accessible from the self-briefing units based at Shannon, Cork and Dublin airports. However, if meteorological documentation and/or briefing are required for a flight to a destination not well serviced by the SBU, 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/ IDENT/ abbreviation (EM)	Frequency	Broadcast Period	Hours of Service	Aerodromes / Heliports included	REP, SIGMET INFO FCST & Remarks
1	2	3	4	5	6	7
SHANNON	SHANNON VOLMET	3413 kHz HN (during night propagation conditions) 5505 kHz H24 8957 kHz H24 13264 kHz HJ (during day propagation conditions)	00-05	H24		SIGMETS
					Bruxelles National, Amsterdam Schipol,	TAFS
					Bruxelles National, Amsterdam Schipol, Frankfurt, Hamburg, Munchen,	METARS
			05 - 10	H24	London Heathrow, London Gatwick, Stansted,	TAFS
					London Heathrow, London Gatwick, Stansted, Prestwick, Glasgow,	METARS
			10 - 15	H24		SIGMETS
					Dublin, Shannon,	TAFS
					Dublin, Shannon, Manchester, Keflavik,	METARS

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

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

Name of Station	CALLSIGN/ IDENT/ abbreviation (EM)	Frequency	Broadcast Period	Hours of Service	Aerodromes / Heliports included	REP, SIGMET INFO FCST & Remarks
1	2	3	4	5	6	7
DUBLIN	Dublin VOLMET	127.0MHz	Continuous	H24	Reports for: Dublin, Shannon, Cork, Belfast, Glasgow, Preswick, Manchester, London/Heathrow, London/Gatwick,	Plain Language (En) Broadcast continuous through the 24 hours. Reports, plus landing forecasts in the TREND form are broadcast in the sequence listed. The reports broadcast are the latest available. If a new report is not available the earlier one will be reported for one hour only, together with time of 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 61 712 950

Fax: + 353 61 712 962

Email: 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

- Obscured or embedded thunderstorms (with or without heavy hail)
- Frequent thunderstorms (with or without heavy hail)
- Thunderstorms in squall line (with or without heavy hail)
- Severe turbulence
- Severe icing
- Freezing rain.
- Tropical cyclones with 10 minute mean surface wind speed of 63?/HR (34 ?) or more.
- Severe turbulence
- 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 AUTOMATED SERVICES

Service Name	Information Available	Area, route and aerodrome coverage	Telephone, telex and Telefax numbers and remarks
1	2	3	4
Meteorological Service Databank	METAR 9HR TAF 18/24 HR TAF, SIGMET	Ireland, UK and neighbouring areas,	Data regarding this service is available from the Meteorological Service Provider
Met Fax			The customer specifies the products and dates of transmission. This service is provided by prior arrangement with the Central Aviation Office Operations Manager, Met Eireann, Shannon Airport. Phone: +353 61 712 950
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

- The operator is responsible for the safety of its 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) 2010-17R6
- In order to consider whether or not to operate into airspace forecast to be, or aerodromes known to be, contaminated with volcanic ash, the operator should have in place an identifiable safety risk assessment (SRA) within its Safety Management System (SMS).
- In order to decide whether or not to operate into 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) 2010-17R6 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 consistent ICAO EUR/NAT Volcanic Ash Contingency Plan (VACP) (ICAO EUR Doc 019/NAT Doc 006 Part II) and EASA Safety Information Bulletin (SIB) 2010 - 17R6.

### 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

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**EIWF AD 2.1AERODROME LOCATION INDICATOR AND NAME**

EIWF – WATERFORD

**EIWF AD 2.2AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

1	ARP coordinates and site at Aerodrome	521114N 0070513W Mid-point RWY 03/21
2	Direction and distance from the CITY	4NM SE of Waterford
3	Elevation/Reference temperature	119 ft /19.6°C (Max Temp) 1.5°C (MNM Temp)
4	Geoid undulation at AD ELEV PSN	184 ft
5	MAG VAR/Annual change	4° W (2014) / 11' decreasing
6	AD Administration, address, telephone, telefax, telex, AFS	Post: Waterford Airport Killowen, Co. Waterford  Phone:+ 353 51 84 66 00 Fax: + 353 51 87 78 09 [ADMIN] Fax: + 353 51 87 17 01 [ATC] Fax: + 353 51 87 56 23 [Operations] Email: atc@waterfordairport.net Email: operations@waterfordairport.net SITA: WATOPXH AFS: EIWFZTZX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Nil

**EIWF AD 2.3OPERATIONAL HOURS**

1	AD Administration	Summer: MON-FRI 0615-2000 SAT-SUN 0630-2000 Winter: MON-FRI 0715-2100 SAT-SUN 0730-2100
2	Customs and immigration	24 HR PN required to AD ADMIN.
3	Health and sanitation	As per AD ADMIN
4	AIS Briefing Office	See Remarks
5	ATS Reporting Office (ARO)	As per AD ADMIN
6	MET Briefing Office	See Remarks
7	ATS	As per AD ADMIN
8	Fuelling	As per AD ADMIN
9	Handling	As per AD ADMIN
10	Security	As per AD ADMIN
11	De-icing	As per AD ADMIN

12	Remarks	AD ADMIN AVBL outside published HR, 24 HR PN to AD ADMIN  ATS AVBL outside published HR, 24 HR PN to AD ADMIN  PIB AVBL from AIS, Shannon see <a href="#">GEN 3.1.5</a>  MET briefing AVBL from Central Aviation Office, Shannon Airport see <a href="#">GEN 3.5.4</a>
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## EIWF AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo handling facilities:	Contact airport operations
2	Fuel/oil types	JET A1; AVGAS
3	Fuelling facilities/capacity	2 JET A1 Trucks - Capacity 18,000L 1 AVGAS Mobile Unit 2,000L Storage capacity - Jet A1 100,000L Storage capacity - AVGAS 50,000L
4	De-icing facilities	Mobile unit available (Type II 75/25 Hot)
5	Hangar space available for visiting aircraft	Limited – Contact AD ADMIN
6	Repair facilities for visiting aircraft	Shamrock Aviation Phone: +353 51 87 28 09
7	Remarks	Handling services available, contact Waterford Operations

## EIWF AD 2.5 PASSENGER FACILITIES

1	Hotels	Waterford
2	Restaurants	Bar with Tea/Coffee/Sandwiches & Snacks.
3	Transportation	Taxis and Car Hire from the AD (Prior notice required). Train from Waterford.
4	Medical facilities	First Aid at AD. Hospitals in Waterford.
5	Bank and Post Office	Waterford
6	Tourist Office	Waterford
7	Remarks	Nil

## EIWF AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 2. Up to CAT 7 AVBL with 24 HR PN required to Operations
2	Rescue equipment	Operators to make own arrangements through IATA pool or other.  Assistance (unskilled) available through local contractors.  Contact the Co-ordinator as per AD ADMIN (Phone +35351846600)
3	Capability for removal of disabled aircraft	Contact Airport Authority
4	Remarks	Fire cover available during operating hours.  24 HR PN required to AD Duty Supervisor for services outside of operating hours.

**EIWF AD 2.7 SEASONAL AVAILABILITY - CLEARING**

1	Type(s) of clearing equipment	1 runway snow plough 1 runway sweeper 1 snow blower 1 runway de icer
2	Clearance priorities	Search and rescue apron and taxiway, then runway, then taxiway A and apron, then taxiway B
3	Remarks	Nil

**EIWF AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATION DATA**

1	Apron surface and strength	Surface: CONC / Strength: PCN 19/F/C/Y/T			
2	Taxiway width, surface and strength	TAXIWAY	WIDTH	SURFACE	STRENGTH
		A	15 M	ASPH	PCN 19/F/C/Y/T
		B	15 M	ASPH	PCN 19/F/C/Y/T
3	Altimeter checkpoint location and elevation	Location: Terminal Apron / Elevation: NIL			
4	VOR checkpoint	Nil			
5	INS checkpoint	Nil			
6	Remarks	Nil			

**EIWF AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing Guidance System Signboards at intersection of TWY and RWY and at the Holding Point.
2	RWY/TWY markings and LGT	RWY Marked: Designator, THR, TDZ, C/L Lighted: RWY edge, RWY end, PAPI, Displaced Thresholds TWY Marked: Centreline, Holding position. Lighted: Edge.
3	Stop bars	Nil
4	Remarks	Nil

**EIWF AD 2.10 AERODROME OBSTACLES**

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
03/APCH 21/TKOF	Tree 29.0 M / 96 ft Nil	521052.49N 0070531.80W	Reservoir Wall 85.0 M / 279 ft Nil	521242.73N 0070401.67W	

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
	Tree 29.0 M / 96 ft Nil	521049.52N 0070531.99W	Spot Height 119.0 M / 391T Nil	521110.23N 0070110.11W	
	Tree 36.0 M / 119 ft Nil	521040.46N 0070541.59W	Mast 144.5 M / 474 ft Nil	521109.61N 0070039.42W	
	Tree 35.0 M / 115 ft Nil	521041.79N 0070545.13W	Mast 149.0 M / 489 ft Nil	521108.45N 0070041.88W	
21/APCH 03/TKOF	Approach Light 38.0 M / 125 ft LGTD	521136.40N 0070459.00W	Aerial 149.5 M / 491 ft Nil	521108.01N 0070042.78W	
	Approach Light 39.5 M / 130 ft LGTD	521138.07N 0070457.96W	Mast 115.5 M / 379 ft Nil	521130.90N 0070809.21W	
	Approach Light 40.5 M / 133 ft LGTD	521141.05N 0070457.37W	Tree 82.0 M / 269 ft Nil	521211.85N 0070617.53W	
	Approach Light 40.5 M / 133 ft LGTD	521139.96N 0070457.61W	Tree 79.0 M / 260 ft Nil	521211.86N 0070616.22W	
	Bush on Fence 41.0 M / 135 ft Nil	521140.23N 0070456.84W	Tree 79.5 M / 261 ft Nil	521227.96N 0070610.42W	
	Bush on Fence 43.0 M / 141 ft Nil	521141.21N 0070459.37W	Spire at Tramore 114.0 M / 374 ft Nil	52094769N 0070922.03W	
	Approach Light 41.5 M / 137 ft LGTD	521141.61N 0070455.73W			
	Approach Light 43.0 M / 141 ft LGTD	521143.40N 0070454.59W			
	Bush on Fence 45.0 M / 148 ft Nil	521145.68N 0070456.41W			
	Bush on Fence 46.0 M / 151 ft Nil	521147.21N 0070455.54W			
	Bush on Fence 48.0 M / 157 ft Nil	521149.63N 0070454.99W			
	Pole 53.0 M / 174 ft Nil	521156.53N 0070449.61W			
	Building 52.5 M / 173 ft Nil	521157.51N 0070449.69W			

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
	Tree 71.5 M / 235 ft Nil	521227.26N 0070442.70W			
	Tree 74.5 M / 245 ft Nil	521229.53N 0070442.87W			
21/APCH 03/TKOF	Forest 58.5 M / 192 ft Nil	521146.90N 0070501.76W			
	Tree 36.5 M / 120 ft Nil	521135.09N 0070450.52W			
	Tree 43.0 M / 141 ft Nil	521139.02N 0070448.90W			
	Tree 43.0 M / 141 ft Nil	521139.74N 0070447.94W			
	Tree 41.0 M / 135 ft Nil	521140.05N 0070449.75W			
	Building 51.0 M / 168 ft Nil	521156.01N 0070448.07W			
	Pole 52.0 M / 171 ft Nil	521157.11N 0070446.75W			
	Pole 53.0 M / 174 ft Nil	521159.44N 0070448.87W			
	Tree 61.0 M / 200 ft Nil	521204.96N 0070452.97W			
	Pole 53.0 M / 174 ft Nil	521157.92N 0070450.71W			
	Pole 53.0 M / 174 ft Nil	521200.47N 0070452.84W			
	Building 52.0 M / 171 ft Nil	521201.01N 0070452.29W			
	Pole 54.0 M / 178 ft Nil	521201.34N 0070450.29W			
	Pole 52.5 M / 173 ft Nil	521202.88N 0070445.96W			

## EIWF AD 2.11METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Central Aviation Office, Shannon Airport see <a href="#">GEN 3.5.4</a>
2	Hours of service	Refer to EIWF AD 2.3
3	Office responsible for TAF preparation Periods of validity Interval of issuance.	Met Eireann Central Aviation Office, Shannon. 9 HR 3 HR
4	Type of landing forecast Interval of issuance	METAR. 30 Minutes.
5	Briefing/consultation provided	Personal
6	Flight documentation Language(s) used	Charts and Tabular English
7	Charts and other information available for briefing or consultation	Hourly Synoptic Chart; 6-hourly synoptic chart; 6-hourly prognostic chart (surface); prognostic chart of significant weather; prognostic chart of wind/temperature at upper levels; prognostic chart of tropopause levels.
8	Supplementary equipment available for providing information	Automated Weather Station at Waterford AD. EIWF Metar available on URL: <a href="http://www.waterfordairport.ie/weather">http://www.waterfordairport.ie/weather</a> Phone:+ 353 51 87 70 00 HR as per ATS.
9	ATS units provided with information	EIWF TWR
10	Additional information (limitation of service, etc.)	<a href="#">GEN 3.5.4.2</a>

## EIWF AD 2.12RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR Geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
03	021.01°	1433 M x 30 M	PCN 30/F/C/Y/T ASPH	521054.98N 0070524.89W 521135.57N 0070459.53W 184 ft	26 M /86 ft
21	201.01°	1433 M x 30 M	PCN 30/F/C/Y/T ASPH	521131.24N 0070502.24W 521052.27N 0070526.59W 184 ft	34.4 M /113 ft

Slope of RWY- SWY	SWY dimensions	CWY dimensions	Strip dimensions	OFZ	Remarks
7	8	9	10	11	12
Refer to Aerodrome Obstruction Chart Type A	Nil	Nil	1553 M x 150 M	Nil	Grooved Surface
	Nil	Nil	1553 M x 150 M	Nil	Grooved Surface



**EIWF AD 2.13DECLARED DISTANCES**

RWY Designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
03	1433 M	1433 M	1433 M	1343 M	THR 03 DISPLACED 90 M
21	1433 M	1433 M	1433 M	1290 M	THR 21 DISPLACED 143 M

**EIWF AD 2.14APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ Length	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour, INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
03	SALS 360M, 1 crossbar at 300M	G	PAPI, Left Slope 3° MEHT 26.0 ft	Nil	Nil	White 60 M Amber 450 M from runway end	R	Nil	Nil
21	CAT I 750 M 4 crossbars	G	PAPI, Left Slope 3.25° MEHT 26.0 ft	Nil	Nil	White 60 M Amber 450 M from runway end	R	Nil	Nil

**EIWF AD 2.15OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	ABN/IBN location, characteristics and hours of operation	At Tower, FLG W/G, 12 per minute As per AD ADMIN <a href="#">EIWF AD 2.3</a> .
2	LDI location and LGT Anemometer location and LGT	WDI Near THR 21 lighted Near THR 21 lighted
3	TWY edge and centre line lighting	Blue TWY Edge Only
4	Secondary power supply/switch-over time	Secondary Power Supply to all Lighting at AD/Switch-over 12 seconds.
5	Remarks	Nil

**EIWF AD 2.16HELICOPTER LANDING AREA**

Nil

**EIWF AD 2.17ATS AIRSPACE**

1	Designation and lateral limits	Waterford Control Zone Circle radius 10NM 521114N 0070513W (Waterford ARP)
2	Vertical limits	5000 ft AMSL
3	Airspace classification	C
4	ATS unit call sign Language(s)	Waterford Tower English

5	Transition altitude	5000 ft
6	Remarks	Airspace Classification outside hours of operation of ATC is uncontrolled Class G.

## EIWF AD 2.18ATS COMMUNICATIONS FACILITIES

Service designation	Call sign	Frequency	Hours of Operation	Remarks
1	2	3	4	4
TWR	Waterford Tower	129.850 MHz	Refer to <a href="#">EIWF AD 2.3</a> AD ADMIN	Nil
GND	Waterford Ground	121.600 MHz		As directed by ATC
AFIS	Waterford AFIS	129.850 MHz		When ATC not available. Check NOTAM and refer to ATIS.
ATIS	Waterford ATIS	121.150 MHz		Nil

## EIWF AD 2.19RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR, Type of supported OP (for VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DME	IWD	110.9 kHz CH 46X	H24	521119.6N 0070502.0 W	110 ft	Designated Operational Coverage 25 DME reads Zero at RWY 21 THR. DME reads 0.3D at RWY 03 THR. Monitored only during hours as per ATS
NDB	WTD	368.0 kHz	H24	521120.4N 0070500.0 W		Designated Operational Coverage 25 Monitored only during hours as per ATS
ILS LLZ RWY 21	IWD	110.9 MHz	H24	521039.1N 0070534.8W		Monitored only during hours as per ATS
ILS GP RWY 21	IWD	330.8 MHz	H24	521123.2N 0070514.1 W		GP Angle 3.2° RDH 45 ft Full scale fly up indication may not be maintained when right of localizer sector and below glidepath. Glidepath flags may occur when right of centreline.

## EIWF AD 2.20LOCAL TRAFFIC REGULATIONS

- Landing, take off and manoeuvring on the aerodrome outside the published HR of operation of the aerodrome is not permitted unless such permission has been obtained in advance from aerodrome operations or is in the event of an emergency or a search and rescue (SAR) operation.
- A booking system exists for instrument training, training periods may be booked by application to ATC  
 Phone: + 353-51-846600  
 Fax: + 353-51-871701  
 Email: [atc@waterfordairport.net](mailto:atc@waterfordairport.net)  
 The filing of a flight plan does not constitute a booking. Failure to make a booking may result in the aircraft being refused the use of the facilities.  
 Pilots are requested to advise aerodrome operations of booking cancellations.

3. A booking procedure for all circuit training flights may be introduced by ATS during busy periods.
4. Aircrew and personnel are required to wear high visibility clothing at all times when airside.
5. Individuals or operators intending to base aircraft at the aerodrome must seek the prior written approval of the Airport Manager.

## EIWF AD 2.21 NOISE ABATEMENT PROCEDURES

Nil

## EIWF AD 2.22 FLIGHT PROCEDURES

### 1. Arrival Procedures

Clearance to enter the CTR

Aircraft flying the ATS Route System will be cleared into the CTA/CTR without having to request a specific entry clearance.

Arrival routes may be varied at the discretion of ATC.

Arrival Routes are based on holding patterns established at Waterford.

Shannon ATS will descend arriving traffic to the lowest usable flight level within controlled airspace (FL080 / Shannon Transition level if higher).

A lower level/altitude within controlled airspace may be coordinated with Waterford ATC.

Descent into the FIR (Class G Uncontrolled airspace)

**Caution:** Descent below FL080 or Transition level if higher, before the lateral limits of the Control Zone or associated stubs as outlined in [ENR 2.1](#) will bring the flight into Shannon Class G (uncontrolled) airspace. There may be traffic operating in this airspace that is unknown and not operating with a transponder. Such descent, if requested, may be given at pilot's discretion with a clearance to re-enter controlled airspace at or descending to a specified level/altitude agreed with ATC. Flight information in the FIR is available from Shannon ATS on 127.500 MHz

### 2. Communication Failure

In the event of communication failure, the pilot shall act in accordance with the communication failure procedures in ICAO Annex 2.

## EIWF AD 2.23 ADDITIONAL INFORMATION

Caution Wind Shear may be experienced under certain conditions on the approaches to RWY 21.

## EIWF AD 2.24 CHARTS RELATED TO AERODROME

Name	Page
Aerodrome Chart – ICAO	EIWF AD 2.24-1
Aerodrome Obstacle Chart RWY 03/21 – ICAO TYPE A	EIWF AD 2.24-2
Instrument Approach Chart ILS CAT I or LOC RWY 21	EIWF AD 2.24-3
Instrument Approach Chart NDB/DME RWY 21 – ICAO	EIWF AD 2-24-5
Instrument Approach Chart NDB/DME RWY 03 – ICAO	EIWF AD 2-24-6
Visual Approach Chart – ICAO	EIWF AD 2.24-7

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Note: The following sections in this chapter are intentionally left blank: AD-2.4, AD-2.7, AD-2.16, AD-2.17, AD-2.19, AD-2.21, AD-2.24

## EIIM AD 2.1 AERODROME LOCATION INDICATOR AND NAME

EIIM - INISHMORE

## EIIM AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	530625N 0093911W Mid-point RWY14/32
2	Direction and distance from (city)	1NM SE of Kiltonan on largest Island of the Aran Islands
3	Elevation/Reference temperature	24 ft/18.3°C (Max Temp) 1.8°C (MNM Temp)
4	Geoid undulation at AD ELEV PSN	191 ft
5	MAG VAR/Annual Change	4.5° W (2017) / 11' decreasing
6	AD Administration, address, telephone, telefax, telex, AFS	Post: GALWAY AVIATION SERVICES LTD CAISLEAN INVERIN CO. GALWAY  Phone:+353 91 593034 Fax: +353 91 593238 Email: info@aerarannislands.ie URL: http://www.aerarannislands.ie
7	Types of traffic permitted (IFR/VFR)	VFR
8	Remarks	Nil

## EIIM AD 2.3 OPERATIONAL HOURS

1	AD Administration	0800-1600 MAR-SEP (UTC ) 0900-1500 OCT-FEB (UTC )
2	Customs and immigration	Nil
3	Health and sanitation	0800-1600 MAR-SEP (UTC ) 0900-1500 OCT-FEB (UTC )
4	AIS Briefing Office	See remarks
5	ATS Reporting Office (ARO)	See remarks
6	MET Briefing Office	See remarks
7	ATS	Nil
8	Fuelling	Nil
9	Handling	0800-1600 MAR-SEP (UTC ) 0900-1500 OCT-FEB (UTC )

10	Security	0800-1600 MAR-SEP (UTC) 0900-1500 OCT-FEB (UTC )
11	De-icing	Nil
12	Remarks	PPR Minimum 3 hours - Contact AD ADMIN via telephone or email.  PIB AVBL from AIS, Shannon, <a href="#">See Section GEN 3.1.5</a> ,  ARO service is AVBL H24 from AIS Shannon <a href="#">See Section GEN 3.1.5</a>  Met briefing AVBL from Central Aviation Office, Shannon Airport, <a href="#">See Section GEN 3.5.4</a>

## EIIM AD 2.4 HANDLING SERVICES AND FACILITIES

Nil

## EIIM AD 2.5 PASSENGER FACILITIES

1	Hotels	AVBL on Island
2	Restaurants	AVBL on Island
3	Transportation	Transport AVBL on request
4	Medical facilities	Doctor located on Island
5	Bank and Post Office	Post Office located on Island
6	Tourist Office	AVBL on Island
7	Remarks	Nil

## EIIM AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	CAT 2
2	Rescue equipment	Appropriate to CAT 2
3	Capability for removal of disabled aircraft	Nil
4	Remarks	Nil

## EIIM AD 2.7 SEASONAL AVAILABILITY - CLEARING

Nil

## EIIM AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Surface: Bituminous Strength:			
2	Taxiway width, surface and strength	Taxiway	Width	Surface	Strength
		A	18 M	Bituminous	
3	Altimeter checkpoint location and elevation	Location: Runway mid point Elevation:24ft			

4	VOR checkpoints	Nil
5	INS checkpoints	Nil
6	Remarks	Nil

## EIIM AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Nil
2	RWY and TWY markings and LGT	Runway Designators, Threshold, Transverse Stripe and centreline. Taxiway centreline and runway holding position. Runway edge, threshold and end lighting
3	Stop bars	Nil
4	Remarks	Lighting for emergency use only.

## EIIM AD 2.10AERODROME OBSTACLES

In approach/TKOF areas			In circling area and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/ LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
32/APCH 14/TKOF	Nil		CONC Post and Wire Fence 9 M / 30 ft AMSL -	530623N 0093912W	
			CONC Post and Wire Fence 6 M /20 ft AMSL -	530628N 0093921W	
			CONC Post and Wire Fence 9 M /30 ft AMSL -	530622N 0093910W	
			CONC Post and Wire Fence 6 M /20 ft AMSL -	530629N 0093923W	

## EIIM AD 2.11METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	<a href="#">See Section GEN 3.5</a> for information
2	Hours of service	H24
3	Office responsible for TAF preparation Periods of validity Interval of issuance.	Nil
4	Type of landing forecast Interval of issuance.	Nil
5	Briefing/consultation provided	Computer-based self-briefing facility URL: <a href="https://briefing.met.ie/">https://briefing.met.ie/</a> Personal briefing by telephone from Central Aviation Office, Shannon

6	Flight documentation Language(s) used	Nil
7	Charts and other information available for briefing or consultation	<a href="#">See Section GEN 3.5</a> for information
8	Supplementary equipment available for providing information	NIL
9	ATS units provided with information	NIL
10	Additional information (limitation of service, etc.)	NIL

## EIIM AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
32	311.10°	490 M X 18 M	Bituminous	530618.97N 0093900.82W 530630.10N 0093922.03W 191ft	6 M / 20 ft
14	131.09°	490 M X 18 M	Bituminous	530630.10N 0093922.03W 530618.97N 0093900.82W 191ft	4 M / 13 ft

Slope of RWY- SWY	SWY dimensions	CWY dimensions	Strip dimensions	OFZ	Remarks
7	8	9	10	11	12
0.33%	Nil	Nil	550 M X 60 M	Nil	Nil
Nil	Nil	Nil	Nil	Nil	Nil

## EIIM AD 2.13 DECLARED DISTANCES

RWY Designator	TORA	TODA	ASDA	LDA	Remarks
1	2	3	4	5	6
32	490 M	490 M	490 M	490 M	Nil
14	490 M	490 M	490 M	490 M	Nil



**EIIM AD 2.14 APPROACH AND RUNWAY LIGHTING**

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing colour INTST	RWY End LGT colour WBAR	SWY LGT LEN(M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
32	Nil	Green Med Nil		Nil	Nil	490 M 60 M White Med	Red Med N/A	Nil	Emergency use only
14	Nil	Green Med Nil		Nil	Nil	490 M 60 M White Med	Red Med N/A	Nil	Emergency use only

**EIIM AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY**

1	ABN/IBN location, characteristics and hours of operation	White flashing Strobe Beacon. Located on Terminal building operated as emergency lighting only.
2	LDI location and LGT Anemometer location and LGT	Red obstacle light on LDI Nil
3	TWY edge and centre line lighting	Nil
4	Secondary power supply/switch-over time	Nil
5	Remarks	Lighting for emergency use only. WDI LGTD 530621N 0093911W

**EIIM AD 2.16 HELICOPTER LANDING AREA**

Nil

**EIIM AD 2.17 ATS AIRSPACE**

Nil

**EIIM AD 2.18 ATS COMMUNICATION FACILITIES**

Service Designation	Callsign	Frequency	Hours of Operation	Remarks
1	2	3	4	5
Aerodrome Information	INISHMORE Airport	123.000 MHz	0800-1600 UTC March-September 0900-1500 UTC October-February	N/A

**EIIM AD 2.19 RADIO NAVIGATION AND LANDING AIDS**

Nil

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## **EIIM AD 2.20LOCAL TRAFFIC REGULATIONS**

Pilots may only land and take off during opening hours and when two-way radio contact has been established with the aerodrome.

Be aware of the intense commercial operations serving the island.

## **EIIM AD 2.21NOISE ABATEMENT PROCEDURES**

Nil

## **EIIM AD 2.22FLIGHT PROCEDURES**

Standard joining procedures

## **EIIM AD 2.23ADDITIONAL INFORMATION**

3HR Prior Permission Required. Contact AD administration via telephone or email. Refer to [EIIM AD 2.2](#)

Caution: Possibility of sharp low level turbulence in strong SW wind.

## **EIIM AD 2.24CHARTS RELATED TO AN AERODROME**

Nil