ENR 2.2 OTHER REGULATED AIRSPACE

SPECIAL PROCEDURES WITHIN THE SHANNON UTA/SOTA/NOTA FOR NORTH ATLANTIC TRAFFIC

1. INTRODUCTION

A significant proportion of NAT traffic transits the SHANNON UTA/SOTA/NOTA to and from major European destination areas. The following paragraphs describe the procedures for NAT traffic transiting this Airspace.

2. ATS ROUTEING PROCEDURES FOR WESTBOUND NAT TRAFFIC

In the Westbound NAT OTS signal SHANWICK OAC promulgates the track structure(s) applicable together with such other information as may be considered useful for operators to identify the route to be flown.

3. ATS ROUTEING PROCEDURES FOR EASTBOUND NAT TRAFFIC

3.1 The domestic Landfall points KESIX, OSBOX, BEGID, SOVED, MOGLO, NETKI, KOKIB, BEXET, OLGON, GISTI, RILED, XETBO, LEKVA, ELSOX, EPUNA, ATSUR, BIMGO, NASBA, GUNSO and EMPER, which are associated with the Oceanic Exit points, are promulgated in the eastbound OTS message. Use of these points may vary from day to day depending on the published OTS.

3.1.1 If an Eastbound NAT Flight operating to a specified destination is rerouted via an oceanic Landfall different to that filed in the flight plan, the flight may route DCT from the new Landfall to the original filed exit point from Irish Airspace. In the event of an alternative route being issued by IFPS SHANNON ATC will advise the flight on first contact.

3.1.2 Due to a number of flights deviating from clearances prior to exiting SHANWICK Oceanic Controlled Airspace, Flight crew are reminded of the following, Eastbound route clearances issued by SHANNON Control for Aircraft exiting Oceanic Airspace apply from AGORI, SUNOT, BILTO, PIKIL,ETARI,RESNO,VENER,DOGAL, NEBIN,MALOT,TOBOR,LIMRI, ADARA,DINIM,RODEL,SOMAX,KOGAD,BEDRA,OMOKO,TAMEL, GELPO and LASNO. Flights shall not turn before these points.

4. IDENTIFICATION OF NAT TRACK MESSAGES & OCEANIC RCL SUBMISSION PROCEDURES

4.1 **Track Message Identification (TMI)**
See UK AIP

4.2 **Oceanic RCL Procedures for Transit Westbound Aircraft**
See UK AIP

4.2.1 Aircraft in communication with Shanwick Oceanic on VHF or HF in relation to Oceanic entry conditions are to maintain communication with SHANNON Control on the appropriate frequency.

4.3 **Aircraft sending an Oceanic RCL Request from Irish Aerodromes before departure.**
See UK AIP

NOTE: EICK departures for LASNO must be in receipt of an acknowledged RCL prior to departure.

5. OCEANIC FLIGHT PLANS

5.1 Flight plans in respect of Oceanic flights which are planned to enter SHANNON FIR/UIR/SOTA/NOTA must be submitted to IFPS.

5.2 Jet aircraft intending to operate in the SHANWICK OCA must indicate the MACH number planned to be used for any portion of the flight within the area in Item 15 of the ICAO flight plan.

Jet aircraft should indicate their proposed speeds in the following sequence:

a. Cruising speed (TAS) in knots;

b. Oceanic Entry point and cruising MACH number;

c. Landfall Fix and cruising speed (TAS) in knots.

5.3 All other aircraft: speed in terms of TAS in knots.

6. RADIO COMMUNICATIONS FAILURE PROCEDURES FOR OCEANIC AIRCRAFT INTENDING TO ENTER OR EXIT NAT AIRSPACE VIA SHANNON FIR/UIR/SOTA/NOTA

6.1 The following procedures apply to oceanic aircraft intending to enter or exit NAT airspace via the SHANNON FIR/ UIR/SOTA/NOTA. These procedures are intended to complement and not supersede State procedures/regulations. It is not possible to provide guidance for all situations associated with a communications failure.

6.2 General

6.2.1 The pilot of an aircraft experiencing a two-way radio communications failure shall operate the secondary radar transponder on identity Mode A Code 7600 and Mode C.

6.2.2 The pilot shall also attempt to contact any ATC facility (on VHF or HF) or another aircraft and inform them of the difficulty and request they relay information to the ATC facility with whom communications are intended.

6.3 Communications Failure Prior To Entering NAT Oceanic Airspace
Due to the potential length of time in oceanic airspace, it is strongly recommended that a pilot experiencing communications failure whilst still in SHANNON FIR/UIR/SOTA/NOTA does not enter SHANWICK Oceanic Control Area but adopts the procedure specified at Procedure A below. However, if the pilot elects to continue, then to facilitate the provision of adequate separation, adopt Procedure B below.

NOTE: A controlled IFR flight being vectored by radar away from the route specified in its current flight plan and experiencing two-way radio communication failure should proceed in the most direct manner to the route specified in the current flight plan.

Procedure A

For this procedure the pilot is deemed to have selected SHANNON as the aerodrome of intended landing. Proceed, maintaining the last assigned and acknowledged flight level, to the appropriate hold specified for SHANNON and hold for a period of not less than five minutes. Then commence descent and complete a normal instrument approach. For the procedure as outlined in this paragraph and in order to avoid ambiguity SHANNON is the only Irish aerodrome which may be used.

Procedure B

If the pilot elects to continue the flight, continue at the last assigned and acknowledged flight level to the oceanic entry point in their current flight plan, then, follow the procedure as detailed in UK AIP “Communications failure after entry to NAT oceanic airspace”.

6.4 **Communications Failure Prior To Exiting NAT Oceanic Airspace**

6.4.1 Cleared on Flight Plan Route

The pilot shall maintain the currently cleared route, flight level and speed until reaching the Oceanic landfall Point. Unless the pilot elects to adopt the procedure outlined at ENR 2.2.6.4.2 below, after landfall proceed in accordance with the filed flight plan (Level/speed/route).

6.4.2 Diversion to SHANNON

In the event of the pilot electing to divert to SHANNON, after landfall proceed direct to the appropriate hold specified for SHANNON in Table 1: here under, maintaining the last assigned oceanic level and hold for a period of not less than five minutes. Then commence descent and complete a normal instrument approach. For the procedure as outlined in this paragraph and in order to avoid ambiguity SHANNON is the only Irish aerodrome which may be used.

Table 1: Appropriate Holds specified for SHANNON

HOLD	RWY
DERAG for ILS approach	24
ELPOM for ILS approach	06

7. REQUEST FOR AMENDMENT TO RCL FOR AIRCRAFT TRANSITING THE SHANNON FIR/UIR/ NOTA AND SOTA.

Flight crews are reminded that a change in Flight Level, Speed or Route can be requested at any time after the Oceanic Entry Point.

8. STRATEGIC LATERAL OFFSET PROCEDURE

The Strategic Lateral Offset Procedure (SLOP) is now a standard operating procedure throughout the North Atlantic (NAT) Region. This procedure mitigates collision risk and wake turbulence encounters. Pilots conducting oceanic flight within the NAT Region with automatic offset programming capability are recommended to fly lateral offsets of either 1 or 2 NM right of centre line.

The introduction of very accurate aircraft navigation systems, along with sophisticated flight management systems, has drastically reduced the number of risk bearing lateral navigation errors reported in NAT airspace. Paradoxically, the capability of aircraft to navigate to such a high level of accuracy has led to a situation where aircraft on the same track but at different levels, are increasingly likely to be in lateral overlap. This results in an increased risk of collision if an aircraft departs from its cleared level for any reason.

SLOP reduces risk by distributing aircraft laterally. It is applicable within the New York Oceanic, Gander Oceanic, SHANWICK Oceanic, Santa Maria Oceanic, Nuuk and Reykjavik flight information regions, and within the Bodo Oceanic flight information region when flights are operated more than 185km (100 NM) seaward from the shoreline.

SLOP conforms to direction in the International Civil Aviation Organization's (ICAO) Procedures for Air Navigation Services–Air Traffic Management (PANS–ATM, Doc 4444, 15.2.4) and is subject to the following guidelines:

- Aircraft without automatic offset programming capability must fly the route centre line.
- Operators capable of programming automatic offsets may fly the centre line or offset one or two nautical miles right of centre line, allowing for 3 possible positions along route. Offsets are not to exceed 2 NM right of centre line and offsets to the left of centre line are not permitted. An aircraft overtaking another aircraft should offset within the confines of this procedure, if capable, so as to create the least amount of wake turbulence for the aircraft being overtaken. The pilot should take into account wind and estimated wake vortex drift and time to descend. (Nominal descent rates for wakes are 300-600 FPM).
- Pilots should use whatever means is available (e.g. TCAS, communications, visual acquisition) to determine the best flight path to fly. Pilots may contact other aircraft on frequency 123.450MHz, as necessary, to coordinate the best wake turbulence offset option.
- Pilots may apply an offset outbound after the oceanic entry point and must return to centre line before the oceanic exit point. Position reports transmitted via voice should be based on the way-points of the current ATC clearance and not the offset positions.
- Aircraft transiting oceanic radar areas may remain on their established offset positions.
- There is no ATC clearance required for this procedure and it is not necessary that ATC be advised.

9. SHANNON OCEANIC TRANSITION AREA (SOTA)

9.1 The SHANNON Oceanic Transition Area (SOTA)

consists of that portion of the SHANWICK Flight Information Region/Oceanic Control Area with lateral and vertical limits specified at Table 2:

Table 2: SHANNON Oceanic Transition Area

Name, Lateral limits, Vertical limits, Class of Airspace	Unit providing service	**Call Sign. Languages. Area and conditions of use. Hours of Service**	Frequency /Purpose	Remarks
1	2	3	4	5
SHANNON Oceanic Transition Area (**SOTA**) 5100N 01500W, 5100N 00800W, 4830N 00800W, 4900N 01500W, 5100N 01500W FL055/FL660 - Class A FL660/UNL - Class G	ATS SHANNON	SHANNON Control English H24	135.600MHz	FRA FL055 to UNL (Class G/A)

9.2 Addressing of Flight Plan Messages

Flight plans required for the SOTA should be addressed to the IFPS addresses EUCHZMFP and EUCBZMFP.

9.3 Delegation of Control within Airspace Contiguous with SOTA

9.3.1 Control of GAT above FL245 within the airspace bounded by lines joining the coordinates listed below is delegated by the UK authorities to SHANNON UAC.
4935.00N 00800.00W: 4933.38N 00656.04W: 4855.70N 00734.46W: 4850.00N 00800.00W: 4935.00N 00800.00W

9.3.2 Control of GAT above FL245 within the airspace bounded by lines joining the coordinates listed below is delegated by the French authorities to SHANNON UAC.
4850.00N 00800.00W: 4855.70N 00734.46W: 4830.00N 00800.00W: 4850.00N 00800.00W.

9.3.3 Procedures applicable within the airspace described at ENR 2.2 9.3.1 and ENR 2.2 9.3.2 above are those procedures applicable within SOTA. The following applies:

- Controlling Authority - SHANNON UAC
- Call sign - SHANNON Control
- Frequency - As allocated by ATS

9.3.4 Due to the risk of two aircraft using the same squawk leading to a mis-ident, Northbound traffic entering the SHANNON Oceanic Transition Area (SOTA) via T9, LASNO, T290 GELPO, or T213, TAMEL are instructed to set Transponder code A2000 at least 10 minutes before the above points.

9.4 Position Reports

All designated points on the SOTA boundary are compulsory position reporting points, unless otherwise advised by SHANNON ACC.

9.5 Oceanic RCL Procedures

Requirements regarding submission of RCL, detailed above, ENR 2.2 4.2 and or ENR2.2 7 should be complied with.

9.6 Met Reporting Procedures in SOTA

9.6.1 Pilots of aircraft in the SOTA are required to comply with the MET reporting procedures in ICAO DOC 8896 Chapter 7”Aircraft Observations and Reports”.

9.6.2 If the aircraft is designated to report meteorological information, the pilot will be advised by the inclusion of the phrase “SEND MET REPORTS” in the message.

9.6.3 Westbound North Atlantic (NAT) Random flights and NAT Oceanic Track System (OTS) flights, designated as MET reporting flights, are to treat W008 as a mid-point and W015 as a designated Reporting point. Pilots are to transmit their W015 and W008 MET reports with their W015 position Report to SHANWICK on HF

9.6.4 Eastbound flights are not required to make routine MET reports when flying in the SOTA.

Note: The UK Met Office provides meteorological watch and issues relevant SIGMET in the SOTA.
Special aircraft reports relating to meteorological conditions in SOTA received by Shannon ACC are forwarded to the UK Met Office and to SHANWICK.

9.7 Secondary Surveillance Radar

Aircraft intending to fly in the SOTA must be equipped with an SSR transponder capable of responding to Mode A interrogations with 4096 codes and Mode C interrogations with Automatic Pressure Altitude Reporting.

9.8 Communications

Communications between aircraft in the SOTA and SHANNON ACC are via VHF. The appropriate frequencies are listed in ENR 2.1 unless otherwise advised by SHANWICK, Scottish or SHANNON ACC. Flights unable to contact SHANNON ACC on VHF should use the appropriate HF facility, addressing their message to SHANNON ACC.

9.9 Communications Failure

Flights experiencing radio communications failure should proceed according to the procedures in ENR 1.1 General Rules, where appropriate, by procedures described in ENR2.2 6

9.10 High Level Airspace (HLA)

HLA 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. SOTA airspace is not included in NAT HLA. Details of HLA are contained in North Atlantic Operations and Airspace Manual (ICAO DOC 007) and Regional Supplementary Procedures.
SOTA has the same vertical extent as the SHANWICK OCA, and is bounded by lines joining successively the following points: N5100 W01500 – N5100 W00800 – N4830 W00800 – N4900 W01500 – N5100 W01500

10. NORTHERN OCEANIC TRANSITION AREA (NOTA)

10.1 The Northern Oceanic Transition Area (NOTA)

consists of that portion of the SHANWICK Flight Information Region/Oceanic Control Area with lateral and vertical limits specified at Table 3:

Table 3: Northern Oceanic Transition Area

Name, Lateral limits, Vertical limits, Class of Airspace	Unit providing service	Call Sign. Languages. Area and conditions of use. Hours of Service	Frequency /Purpose	Remarks
1	2	3	4	5
Northern Oceanic Transition Area (NOTA) 5700N 01500W, 5700N 01000W, 5434N 01000W, 5400N 01500W, 5700N 01500W FL055/FL660 - Class A FL660/UNL - Class G	ATS SHANNON	SHANNON Control English H24	122.980MHz	FRA FL055 to UNL (Class G/A)

10.2 Addressing of Flight Plan Messages

Flight plans required for the NOTA should be addressed to the IFPS addresses EUCHZMFP and EUCBZMFP.

10.3 Position Reports

All designated points on the NOTA boundary are compulsory position reporting points, unless otherwise advised by SHANNON ACC.

10.4 Oceanic RCL Procedures

Requirements regarding submissions of RCL, detailed above, ENR 2.2 4.2 and or ENR2.2 7 should be complied with.

10.5 Met Reporting Procedures in NOTA

10.5.1 Pilots of aircraft in the NOTA are required to comply with the MET reporting procedures in ICAO DOC 8896 Chapter

7 “Aircraft Observations and Reports”.

10.5.2 If the aircraft is designated to report meteorological information, the pilot will be advised by the inclusion of the phrase “SEND MET REPORTS” in the message.

10.5.3 Westbound North Atlantic (NAT) Random flights and NAT Oceanic Track System (OTS) flights, designated as MET reporting flights, are to treat W010 as a mid-point and W015 as a designated Reporting point. Pilots are to transmit their W015 and W010 MET reports with their W015 position Report to SHANWICK on HF

10.5.4 Eastbound flights are not required to make routine MET reports when flying in the NOTA.

Note: The UK Met office provides meteorological watch and issues relevant SIGMET in the NOTA.
Special aircraft reports relating to meteorological conditions in NOTA received by SHANNON ACC are forwarded to the UK Met Office and to SHANWICK.

10.6 Secondary Surveillance Radar

Aircraft intending to fly in the NOTA must be equipped with an SSR transponder capable of responding to Mode A interrogations with 4096 codes and Mode C interrogations with Automatic Pressure Altitude Reporting.

10.7 Communications

Communications between aircraft in the NOTA and SHANNON ACC are via VHF. The appropriate frequencies are listed in ENR 2.1 unless otherwise advised by SHANWICK, Scottish or SHANNON ACC. Flights unable to contact SHANNON ACC on VHF should use the appropriate HF facility, addressing their message to SHANNON ACC.

10.8 Communications Failure

Flights experiencing radio communications failure should proceed according to the procedures in ENR 1.1 General Rules, where appropriate, by procedures described in ENR2.2 6

10.9 High Level Airspace (HLA)

The HLA shall be applicable in that volume of airspace between FL 285 and FL420 within the Oceanic Control Areas of Santa Maria, SHANWICK, Reykjavik Oceanic and New York Oceanic.
Parts of the SHANWICK OCA are designated as the Shannon Oceanic Transition Area (SOTA) and the Northern Oceanic Transition Area (NOTA). NOTA airspace is included in the NAT HLA and hence NAT HLA airspace requirements are still applicable from FL285 to FL420 in NOTA. However, SOTA is not included in the NAT HLA. Therefore flights within SOTA routeing such that they are entering SHANWICK OCA and are subject to an RCL submission, are required to be NAT HLA MNPS Approved.

NOTA has the same vertical extent as the SHANWICK OCA and is bounded by the lines joining successively the following points. N5400 W01500 - N5700 W01500 - N5700 W01000W - N5434 W01000 - N5400 W01500

NOTA airspace is included in MNPS Airspace. Details of HLA MNPS Operations and Procedures are contained in North Atlantic Operations and Airspace Manual (ICAO DOC 007) and Regional Supplementary Procedures (DOC 7030) available on Paris ICAO Regional Office Website,

URL: https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx

11. FREE ROUTE AIRSPACE

11.1 The Ireland Free Route Airspace

consists of those of the Shannon FIR, Shannon FIR (Excluding Dublin CTA)/UIR/UTA, SHANNON Oceanic Transition Area (SOTA), The Northern Oceanic Transition Area (NOTA) and the LARLA triangle/TAKAS box with lateral and vertical limits specified at Table 4:

Table 4: Ireland Free Route Airspace

Name, Lateral limits, Vertical limits, Class of Airspace	Unit providing service	Call Sign. Languages. Area and conditions of use. Hours of Service	Frequency / Purpose	Remarks
1	2	3	4	5
Shannon FIR/UIR/UTA 5520N 00655W, 5425N 00810W, 5355N 00530W, 5220N 00530W, 5100N 00800W, 5100N 01500W, 5400N 01500W, 5434N 01000W, 5445N 00900W, 5520N 00815W, 5525N 00720W, 5520N 00655W, FRA FL075 to UNL (Class G/C/A)	ATS SHANNON	SHANNON Control English H24	134.260MHz 122.980MHz 131.150MHz	See ENR 2.1 Shannon FIR & Shannon UIR/UTA NOTE: Excludes Dublin CTA see EI ENR 2.1
NOTA 5700N 01500W, 5700N 01000W, 5434N 01000W, 5400N 01500W, 5700N 01500W FL055/FL660 - Class A FL660/UNL - Class G	ATS SHANNON	SHANNON Control English H24	122.980MHz	See ENR 2.2.10.1 The Northern Oceanic Transition Area (NOTA)
SOTA 5100N 01500W, 5100N 00800W, 4830N 00800W, 4900N 01500W, 5100N 01500W FL055/FL660 - Class A FL660/UNL - Class G	ATS SHANNON	SHANNON Control English H24	135.600MHz 135.230MHz	See ENR 2.2.9.1 The SHANNON Oceanic Transition Area (SOTA)
LARLA triangle/TAKAS box 493500N 0080000W, 493323N 0065617W, 492241N 0070715W, 490019N 0072953W, 485542N 0073430W, 483000N 0080000W, 483437N 0080000W, 485000N 0080000W, 490000N 0080000W, 493000N 0080000W, FL245/FL660 Class C	ATS SHANNON	SHANNON Control English H24	135.230MHz	

11.2 Addressing of Flight Plan Messages

Flight plans required for the Ireland FRA should be addressed to the IFPS addresses EUCHZMFP and EUCBZMFP.

11.3 Position Reports

Oceanic Entry/Exit Points on the Ireland FRA Boundary are compulsory position reporting points, unless otherwise advised by Shannon ACC.

11.4 Oceanic RCL Procedures

Requirements regarding submission of RCL, detailed above, ENR 2.2 4.2 and or ENR 2.2 7 should be complied with.

11.5 Met Reporting Procedures in NOTA

11.5.1 Pilots of aircraft in the Ireland FRA are required to comply with the MET reporting procedures in ICAO DOC 8896 Chapter 7 “Aircraft Observations and Reports”.

11.5.2 If the aircraft is designated to report meteorological information, the pilot will be advised by the inclusion of the phrase “SEND MET REPORTS” in the message.

11.5.3 Westbound North Atlantic (NAT) Random flights and NAT Oceanic Track System (OTS) flights, designated as MET reporting flights, are to treat W010 as a mid-point and W015 as a designated Reporting point. Pilots are to transmit their W015 and W010 MET reports with their W015 position Report to SHANWICK on HF

11.5.4 Eastbound flights are not required to make routine MET reports when flying in the Ireland FRA.

11.6 Secondary Surveillance Radar

Aircraft intending to fly in the Ireland FRA must be equipped with an SSR transponder capable of responding to Mode A interrogations with 4096 codes and Mode C interrogations with Automatic Pressure Altitude Reporting.

11.7 Communications

Communications between aircraft in the Ireland FRA and SHANNON ACC are via VHF. The appropriate frequencies are listed in ENR 2.1 unless otherwise advised by SHANNON ACC.

11.8 Communications Failure

Flights experiencing radio communications failure should proceed according to the procedures in ENR 1.1 General Rules, where appropriate, by procedures described in ENR2.2 6

12. AERODROME TRAFFIC ZONES (ATZ)

Aerodrome Traffic Zone: An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

Table 5: Aerodrome Traffic Zone

Name **Lateral Limits** **Vertical Limits** **Class of Airspace**	**Unit Providing Service**	**Callsign** **Language** **Hours of Service** **Conditions of Use**	**Frequency** **Channel** **Purpose**	**Remarks**
EINC Newcastle ATZ A circle, 1.5nm radius, Centred at 530422N,0060211W Upper limit: 1500FT AMSL Lower Limit: SFC Class: G	Newcastle	Newcastle Zone English Summer 08.00 - CET Winter 0800 - SS Prior Permission Required (PPR)	122.550 MHz	Elev.: 1FT Runway Length: 690m Licensed Aerodrome

13. RADIO MANDATORY ZONE (RMZ) / TRANSPONDER MANDATORY ZONE (TMZ)

Table 6: Radio/Transponder Mandatory Zones

Name	**Geographical Coordinates**	**Lateral Limits**	**Vertical Limits**	**Remarks**
Sligo RMZ/TMZ	541649N 0083557W	Circle with radius of 10NM	SFC to 5000ft	See Sligo AD Sections EISG AD 2.17 and EISG AD 2.20.1
Waterford RMZ/TMZ	521114N 0070513W	Circle with radius of 10NM	SFC to 5000ft	See Waterford AD Sections EIWF AD.2.17 and EIWF AD.2.20.8