



VATeir Controller Operations Manual

Belfast TMA Operations- EGAA/EGAC

Version 1.2

Contents

Ground– Procedures.....	4
Introduction:	4
ATC Clearance.....	4
Push and Start.....	4
EGAA	5
Taxi Routings.....	5
Stand Allocation:	5
EGAC	6
Taxi Routings.....	6
Tower– Procedures.....	7
<i>Introduction:</i>	7
EGAA	7
Departing Aircraft:	7
Arriving Aircraft:.....	8
Low Visibility Procedures:	8
VFR <i>Circuits:</i>	8
EGAC	9
Departing Aircraft:	9
Arriving Aircraft:.....	9
Missed Approach:	10
Low Visibility Procedures	10
VFR <i>Circuits:</i>	10
Approach – Procedures.....	11
<i>Introduction:</i>	11
Onward Co-Ordination:.....	11
Speed Control:	11
EGAA	12
Departures:	12
Arrivals:	12
EGAC:	12
Departures:	12
Arrivals:	12
VFR Procedures:	13
<i>Zone Entry:</i>	13
<i>Zone Exit:</i>	13
Radiotelephonic Differences:	14
Ground/Tower:	14
Approach:	14
VFR:	14
<i>Basic Service</i>	15
<i>Traffic Service</i>	15
<i>Procedural Service</i>	15
EGAA/EGAC Airport Information Table's.....	16
Table 1 – EGAA Frequency List	16
Table 2-EGAC Frequency List	16

Table 3- EGAA Stand Details.	16
Table 4- EGAC Stand Details	17
Table 5- EGAA Taxiway Details	17
Table 6- EGAC Taxiway Details.....	17
Table 7- EGAA Runway Details.....	17
Table 8- EGAC Runway Details.....	17
Table 9- Preferred Circuit Direction.....	18
Table 10 - Departure Spacing.....	18
Table 11- Stacks	18
Table 12 – Revision History.....	18

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Ground– Procedures.

Introduction:

EGAA GND at Aldergrove and EGAC TWR at Belfast provides clearances for all departing aircraft. All IFR clearances should include an airway, initial altitude or flight level and a Squawk code. All departures should be given an initial climb of 5,000ft. Ground also provides expeditious and safe movement of all aircraft on the ground, gives Push and Start approval, then taxi instructions to the hold of the active departing runway along with the QNH.

ATC Clearance.

Squawk Range:

Squawks for Belfast will be assigned using an external program called ATCA (Air Traffic Controller Assistant). The standard VFR squawk of 7000 is to be issued to all VFR traffic.

Flight Plan Clearance:

All departing IFR aircraft, should file via an airway in their flight plans. The four main airways for aircraft departing Belfast will be L10 SE bound, P600 NE bound, P620 south bound and N517 SW bound.

Example Transmission:

“EIN030, Cleared to London Heathrow, via the L10 airway, climb initially 5000ft., squawk 5421”

Push and Start

When requested by the pilot a push and start instruction will be issued. The current ATIS information and the QNH should be given.

Example Transmission:

“EIN030, Current Information T, QNH 1013, push and start approved.

Care should be given when issuing push and start instruction's that the apron taxiway is not blocked for other departing or arriving traffic. Any delay and reason for delay should be informed to the pilot.

EGAA

Taxi Routings.

Common taxi routing are outlined below.

Outbound Routings:

Rwy 25 – Via the Apron, Alpha to holding point Alpha 1 or Alpha 2.

Rwy 07 – Via the Apron, Charlie, Delta to holding point Delta 1.

Rwy 17 – Via the Apron, Charlie to holding point Charlie 1.

Rwy 35- Via the Apron, Bravo, Rwy 25 holding point Rwy35, backtrack Rwy 35.

EGAA_GND will taxi the aircraft to the holding points of all runways, where they will be handed off to tower. This should be done by telling the aircraft to contact towers frequency. Aircraft should be handed off in sufficient time to allow for continuous manoeuvring, for example if Rwy 25 is in use this can be any time after crossing A2 holding point.

Example Transmission:

“EIN030, Taxi to holding point A1 for Rwy 25, via Alpha.

Inbound Routings:

Rwy 25 –Vacate onto Rwy17 or via Delta. Aircraft must never vacate at Bravo.

Rwy 07 – Vacate onto Rwy17, Bravo or Alpha.

(Bravo may be used only if there is no conflicting traffic pushing or taxing on the apron.)

Rwy 17 – Backtrack only by using the turning circle at the end of Rwy 17. Vacate onto Rwy 25, taxi Bravo to the apron.

Rwy 35- Vacate onto Charlie, taxi to the apron.

Stand Allocation:

Domestic arrivals are given allocated stands 1-18.

International arrivals are allocated stands 21-29. The usual heavy stands are 22, 25A and stand 27.

Cargo flights shall park on the cargo apron stands 1F through to 5F.

EGAC

Taxi Routings.

Common taxi routing are outlined below.

Outbound Routings:

Rwy 22 – Via the Apron, Alpha to holding point Alpha 1.

Rwy 04 – Via the Apron. , Alpha to holding point Alpha 3.

Tower will taxi the aircraft to the holding points of all runways.

Example Transmission:

“EIN030, Taxi to holding point A1, Rwy 22, via Alpha.

Inbound Routings:

Rwy 22 –Vacate onto Alpha, Taxi to the Apron.

(Aircraft must never vacate via the holding point A1)

Rwy 04 – Backtrack only by using the turning circle at the end of Rwy 04, vacate onto Alpha via the holding point Alpha 1.

Tower– Procedures.

Introduction:

EGAA/EGAC TWR's core job is to maximize the use of the runways by handling the arrivals and departures efficiently. EGAA_R_APP will hand aircraft to you anywhere between 5 and 12 miles out. It is Towers reliability to clear the aircraft to land or maybe go around. Ensure you are familiar with the correct missed approach procedures. Aircraft carrying out a missed approach are handed back to EGAA_R_APP. All IFR departures are handed to EGAA_R_APP. Tower should co-ordinate a release for the departing aircraft, and normally it is to a waypoint on track to BLACA/DEGOS/MULLA/IOM. If EGAA_R_APP is offline, aircraft shall be handed to BEL_APP, if there offline EGAA/EGAC_APP, or then EGPX.

EGAA

Runway preference:

The preferred runway at Aldergrove is 25 when the winds are less than 10 knots.

Change of duty runway:

When a change of runway is anticipated Aldergrove Tower shall co-ordinate with Aldergrove Ground, Aldergrove Director and Aldergrove Radar.

Departing Aircraft:

There is no SID's at Aldergrove. This means coordination is essential between Ground, Director & Radar. Departing aircraft will be issued with an after departure clearance by tower. This will include the coordinated departure with radar. It usually consists of either a radar heading, or on track to: BLACA/DEGOS/MULLA/IOM.

Handoffs are normally to Aldergrove Radar (EGAA_R_APP)

Example Transmission:

"EIN030, after departure left turn on track direct LISBO."

Outbound traffic should be handed to the next controller as soon as is practical after departure. This is to ensure that the aircraft is established in the climb, and to allow the pilot enough time to retract the wheels and start his climb out sequence.

Example Transmission:

"EIN030, Contact Aldergrove Radar on frequency 128.500, bye"

Departure Spacing:

The basic time separation to be applied by Aldergrove Tower to departures on the same departure routing is outlined below in table 10. This is measured from the time the preceding aircraft is airborne.

If two aircraft are departing, and their departing routings diverge by more than 45°, then the time separation may be reduced to one minute.

Arriving Aircraft:

Arriving traffic should call Aldergrove tower established on the approach.

Arrival Spacing:

With runway 17 in use aircraft are required to backtrack to the end of the runway to turn. This should be taken into account if multiple aircraft are on the approach.

Aircraft on the approach should be passed all useful information, including number to land, if departures are expected, and the winds.

Missed Approach:

Standard missed approach procedure is as published on the chart.

Low Visibility Procedures:

Low Visibility procedures are in operation at Belfast International Airport when the cloud ceiling is below 200ft and either the IRVR is less than 550M or the meteorological visibility is less than 800m.

Only RWY25 may be used for CATII/III operations. The CATII/III holding position on ALPHA must be used. When these procedures are in operation, and RWY25 is in use the following standard taxi route system applies:

Departing aircraft shall use TWY Alpha.

Arriving aircraft shall use TWY DELTA and CHARLIE.

VFR Circuits:

Standard circuit height is 1500ft. The direction of the circuit is at Tower's discretion; however there is a preferred circuit direction for each Runway.¹VFR circuit traffic will have secondary priority to IFR traffic, and may need to be held abeam the field until they can make their approach.

¹ See Table 9

EGAC

Runway preference:

RWY 22 is the preferred landing runway. RWY 04 is the preferred departure runway.

Change of duty runway:

When a change of runway is anticipated Belfast Tower shall co-ordinate with Belfast Ground, Belfast Radar and Aldergrove Radar.

Departing Aircraft:

There is no SIDS at Belfast City. This means coordination is essential between Belfast Radar & Aldergrove Radar. Departing aircraft will be issued with an after departure clearance by tower. This will include the standard noise abatement procedure then coordinated departure with Approach. It usually consists of either a radar heading, or on track to: BLACA/DEGOS/MULLA/IOM etc. Handoffs are normally to Aldergrove Radar (EGAA_R_APP).

Example Transmission:

“BEE785R, after departure, standard noise abatement then DCT IOM”

Outbound traffic should be handed to the next controller as soon as is practical after departure. This is to ensure that the aircraft is established in the climb, and to allow the pilot enough time to retract the wheels and start his climb out sequence.

Example Transmission:

“BEE785R, Contact Aldergrove Radar on frequency 128.500, bye”

Departure Spacing:

The basic time separation to be applied by Belfast Tower to departures on the same departure routing is set out in Table 8 below. This is measured from the time the preceding aircraft is airborne.

If two aircraft are departing, and their departing routings diverge by more than 45°, then the time separation may be reduced to one minute.

Arriving Aircraft:

Arriving traffic should call Belfast tower established on the approach.

Arrival Spacing:

With runway 04 in use aircraft are required to backtrack to the end of the runway to turn. This should be taken into account if multiple aircraft are on the approach.

Aircraft on the approach should be passed all useful information, including number to land, if departures are expected, and the winds.

Missed Approach:

Standard missed approach procedure is as published on the chart.

Low Visibility Procedures:

Belfast City is CAT II/III not applicable.

VFR Circuits:

Standard circuit height is 1500ft. The direction of the circuit is at Tower's discretion; however there is a preferred circuit direction for each Runway.²VFR circuit traffic will have secondary priority to IFR traffic, and may need to be held abeam the field until they can make their approach.

² See Table 10

Approach – Procedures.

Introduction:

EGAA_APP and EGAC_APP's main job is to vector aircraft inbound to establish on the approach. Belfast City arrivals will also be passed to EGAA_R_APP and vectored towards an agreed point before handing over to EGAC_APP. Approach will also be contacted by inbound, outbound and transiting VFR and SVFR flights get to know your Aldergrove VRP's and VFR routes. There are no designated entry and exit lanes.

(Note: The radio callsign for BEL_APP is Scottish Control.)

Onward Co-Ordination:

Aldergrove Radar or Scottish Control (BEL_APP or EGPX) can co-ordinate a direct routing to a point outside of Aldergrove Radar's airspace. A further climb can also be co-ordinated. Approaching FL090 the aircraft should be handed off to BEL_APP, then EGPX if BEL_APP is not online. The aircraft should not be passed on voice to Scottish until the handoff has been accepted.

Speed Control:

Speed Control is an essential part of Aldergrove Radar. The majority of arrivals will be from the SE along L10 and P6, being streamed by Scottish. Standard speed should be adhered to below FL100 unless otherwise instructed by the controller. An aircraft may be requested to maintain high speed. Aircraft will be handed to Aldergrove Radar in the decent to FL100 and so it can be assumed they are currently above 250kts IAS. This allows the controller to lift the standard speed restriction and allow the aircraft to maintain high speed in the decent.

EGAA

Departures:

Aircraft departing Aldergrove will be passed to Aldergrove Radar via silent transfer from Aldergrove Tower. This should happen around 1000-2000ft. Once identified, the aircraft can be climbed to a suitable flight level. Approaching FL090 the aircraft should be handed off to Scottish Control (BEL_APP). The aircraft should not be passed on voice to Scottish until the handoff has been accepted.

Arrivals:

All arrivals into Aldergrove are required to be on an airway, P600, L10 or P6. High-level inbounds should not use L10.

Arrivals will normally be handled by Aldergrove Radar (EGAA_R_APP) initially and streamed towards Aldergrove; handoff to Aldergrove Director will normally take place descending to 4000ft QNH with nothing to conflict. Pilots should end their flight plan with BEL but should anticipate being vectored.

If no contact is established beforehand, aircraft must not proceed beyond BEL without ATC clearance. Aldergrove Radar has control of P600 between ROTEV and BLACA up to FL100.

EGAC:

Departures:

Aircraft departing Belfast will be passed to Aldergrove Radar via silent transfer from Belfast Tower. This should happen around 1000-2000ft. Once identified, the aircraft can be climbed to a suitable flight level. Approaching FL090 the aircraft should be handed off to Scottish Control (BEL_APP). The aircraft should not be passed on voice to Scottish until the handoff has been accepted.

Arrivals:

All arrivals into Belfast are required to be on an airway, P600, L10 or P6. High-level inbounds should not use L10.

Arrivals will normally be handled by Aldergrove Radar (EGAA_R_APP) initially and streamed towards Belfast; handoff to Belfast Radar will normally take place descending to 4000ft on Belfast QNH with nothing to conflict. Pilots should end their flight plan with NB NDB or MAGEE but should anticipate being vectored.

If no contact is established beforehand, aircraft must not proceed beyond NB NDB or MAGEE without ATC clearance. Aldergrove Radar has control of P600 between ROTEV and BLACA up to FL100.

VFR Procedures:

Aircraft shall normally enter and exit the Belfast CTR, with clearance to fly not above altitude 2,000' on the Aldergrove QNH, via the requested direction (e.g. N, S, SW, and SE)

There is no entry/exit lanes established and so a direction is given. Generally there is no need to route the aircraft via a VRP and the majority of VFR departures should not pose a problem to inbound or departing IFR traffic. Aircraft once clear of the ATZ should be passed to APP and asked to report leaving the zone, with any appropriate traffic information passed. VFR departures routing to the SE should be asked to report approaching the high ground, at which point they will be passed to EGAC_TWR for transit/entry of the Belfast City Zone.

Inbound VFR and SVFR traffic should contact Aldergrove Approach at least 5 minutes/5 NM before entering the Belfast CTA/CTR and request entry clearance. The aircraft will be given a FIS, a local squawk, runway and pressure (QNH/QFE) details and told to report entering the zone from the specified direction, and not above 2000ft

Zone Entry:

Aldergrove/Belfast Radar will provide an Air Traffic Service Outside Controlled of Airspace to flying VFR around Belfast airspace. This information should include current QNH, ATIS identifier, Runway in use and any known traffic. Approach shall co-ordinate any descents for traffic entering/transiting the Belfast control zone with Aldergrove Tower or Belfast Tower. They will also issue any descent instructions in sufficient time to allow the traffic to comply with these instructions. This traffic should be handed to tower via silent transfer ten nm or five minutes out.

Example Transmission:

"GBRME, QNH 1013, Landing Rwy 25, no known traffic, descend to 2500ft before the Belfast control zone"

Zone Exit:

Departing aircraft on a VFR will be passed to Aldergrove/Belfast radar via silent transfer upon reaching the Belfast zone boundary. A traffic information service, as described in the Zone Entry section above will be provided. The aircraft should be passed to Scottish Control for further flight information services upon reaching the vertical limits of Aldergrove radar's airspace.

Example Transmission:

"GBRME, QNH 1013, no known traffic, remain clear of controlled airspace."

Radiotelephonic Differences:

There are some differences in R/T when controlling in Northern Ireland. NATS (National Air traffic Service) provide the air traffic service for the UK and the CAA (Civil Aviation Authority) regulates the UK airspace. Some differences include:

Ground/Tower:

If the QNH is less than 1000, then instead of hectopascals it's millibars. In the UK NATS and the CAA use millibars instead of hectopascals but there is no difference between the two other than the name. 1mb=1hPa.

Note: The UK will be switching to Hectopascals around 17th November 2011.

Example Transmission:

"EZY193, Push and Start is approved, QNH 987 millibars.

Approach:

When an aircraft is established on the localiser/glide slope and reports established. Instead of saying either contact tower or continue approach. You can say descend with the glide.

Example Transmission:

"EZY193, descend with the glide."

VFR:

In Ireland there is only Class Alpha, Charlie and Golf. In the UK there is a Class Alpha, Charlie, Delta, Echo, Foxtrot and Golf.

Outside controlled airspace i.e. Class F and G, it is not mandatory for a pilot to be in receipt of an air traffic service; this provides an unknown traffic environment, where pilots are ultimately responsible for collision avoidance and terrain/obstacle clearance.

Traffic Services:

There are 4 distinct services available to aircraft flying outside controlled airspace:

Basic Service
Traffic Service
Deconfliction Service
Procedural Service

Basic Service

A Basic Service is an air traffic service (ATS) provided for the purpose of giving advice and information useful for the safe and efficient conduct of flight. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

Traffic Service

A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the avoidance of other traffic is ultimately the pilot's responsibility.

Deconfliction Service

A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima against all observed aircraft in Class F/G airspace, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility.

Procedural Service

A Procedural Service is an ATS where in addition to the provisions of a Basic Service, the controller provides vertical, lateral, longitudinal and time instructions which, if complied with, shall achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic.

EGAA/EGAC Airport Information Table's

Table 1 – EGAA Frequency List

Service Designator	Call sign	Range	Frequency
EGAA_GND	Aldergrove Ground	10nm	121.750mhz
EGAA_TWR	Aldergrove Tower	20nm	118.300mhz
EGAA_APP	Aldergrove Director	40nm	120.900mhz
EGAA_R_APP	Aldergrove Radar	60nm	128.500mhz
EGAA_ATIS	Aldergrove ATIS	N/A	130.950mhz

Table 2-EGAC Frequency List

Service Designator	Call sign	Range	Frequency
EGAC_TWR	Belfast Tower	20nm	122.825mhz
EGAC_APP	Belfast Radar	40nm	134.800mhz
EGAC_ATIS	Belfast ATIS	N/A	136.625mhz

Table 3- EGAA Stand Details.

Stand Designator (NR)	Aircraft Type (MAX)	Note
1F	A300/B767	
2F	A300/B767	
3F	A300/B767	
4F	ATP	
5F	ATP	
9-18	A321	
21	B757	
22	B747	The only stand with an air bridge
23	B737	
23A	B737	
24	A320	
25	B737	
26	A321	
27A	B767	
28	A320	
29	A320	
29A	B757	

Table 4- EGAC Stand Details

Stand Designator (NR)	Note
1	
2	
3	
4	
5	
6	
6A	
7	
7A	
8	
9	
10	

Table 5- EGAA Taxiway Details

Txy Designator (NR)	Width of Txy (M)	Note
A	23	
B	23	
C	23	
D	23	
F	15	
L	57	

Table 6- EGAC Taxiway Details

Txy Designator (NR)	Width of Txy (M)	Note
A	18	

Table 7- EGAA Runway Details

Rwy Designator (NR)	Dimensions of RWY (M)	Approach Type (MAX)	Frequency (Ident)	Course
25	2780 x 45	ILS CATII	109.90	251
07	2780 x 45	VOR/DME	117.20	069
17	1891 x 45	ILS CAT I	110.90	167
35	1891 x 45	VOR/DME	117.20	353

Table 8- EGAC Runway Details

Rwy Designator (NR)	Dimensions of RWY (M)	Approach Type (MAX)	Frequency (Ident)	Course
22	1829 x 45	CAT I ILS	108.10	220
04	1829 x 45	LLZ/DME/NDB	108.10	040

Table 9- Preferred Circuit Direction

Airport ICAO	Rwy Designator (NR)	Direction
EGAA	25	RH
EGAA	07	LH
EGAA	17	RH
EGAA	35	LH
EGAC	22	LH
EGAC	04	RH

Table 10 - Departure Spacing.

Leading Aircraft	Following aircraft	Minimum Spacing
Heavy	Heavy	2 Minutes
Heavy	Medium	2 minutes
Heavy	Light	2 minutes
Medium	Heavy	1 Minute
Medium	Medium	1 Minute
Medium	Light	1 Minute
Light	Heavy	2 Minutes
Light	Medium	2 Minutes
Light	Light	1 minute

Table 11- Stacks

Airport ICAO	Hold	Holding Fix	Holding Axis and Direction of Turn	Separated Holding Levels
EGAA	BEL	BEL VOR	059 Left Hand	MSL-FL140
EGAC	MAGEE	BEL VOR R082 D27	255 Left Hand	MSL-FL140
EGAC	HB	HB NDB	040 Right Hand	MSL-FL140

Table 12 – Revision History.

Revision	Date	Author	Reason
1.0	07/06/2011	Kilian Thornton	Original Draft
1.1	16/07/2011	Kilian Thornton	Revised Content
1.2	01/10/2011	Kilian Thornton	Revised Formatting