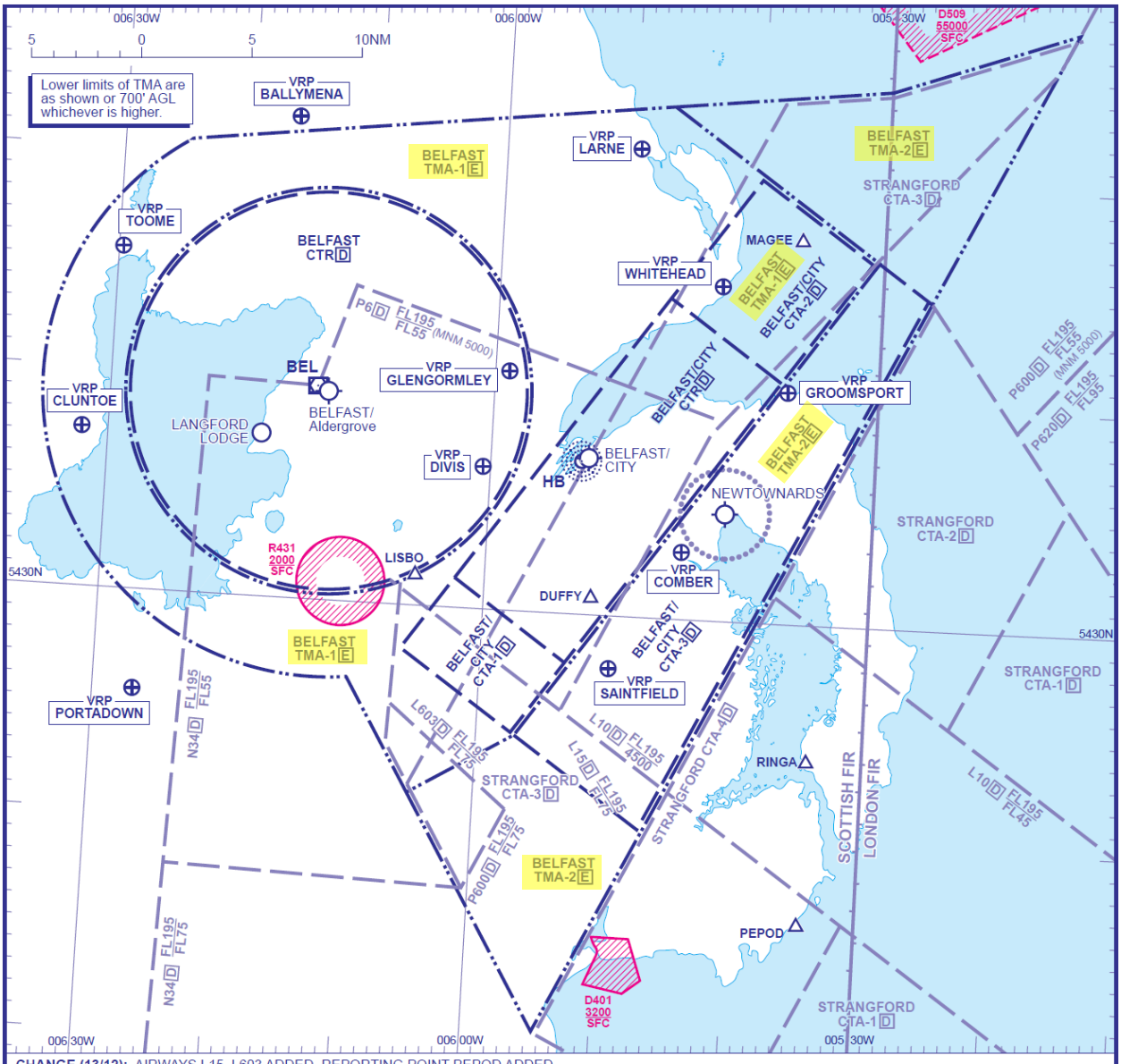
NATS Airspace Consultation:
Proposed change to the Belfast TMA from Class E to Class D



CHANGE (13/12): AIRWAYS L15, L603 ADDED. REPORTING POINT PEPOD ADDED.

ATS AIRSPACE VERTICAL LIMITS Controlled airspace with an upper vertical limit of FL195 and above is not shown.

BELFAST			BELFAST/CITY			BELFAST			STRANGFORD		
CTR	D	FL105 SFC	CTR	D	2000 SFC	TMA-1	E	FL105 2000*	CTA-1	D	FL195 FL75
			CTA-1	D	2000 1500	TMA-2	E	FL105 3500	CTA-2	D	FL195 3500
			CTA-2	D	2000 1500			*or 700 AGL if higher	CTA-3	D	FL195 FL105
			CTA-3	D	3500 2000				CTA-4	D	FL195 FL55

1 Introduction

1.1 The Belfast Terminal Manoeuvring Area (BTMA) is a volume of airspace established around the two major Belfast airports, and is also where air routes converge in Northern Ireland.

1.2 Airspace volumes can take several different forms, or 'classes'. These classes define the rules that apply within that volume. Airspace classes range from Class A (strongest restrictions) to Class G (fewest restrictions).

1.3 This consultation is about changing the airspace classification of the BTMA.

1.4 Whilst this consultation is aimed at stakeholders with specialist aviation knowledge (due to its technical nature), it is not limited to aviation specialists – we would welcome contributions from any individual or organisation.

2 Description of the Belfast Terminal Manoeuvring Area

2.1 The front cover of this document reproduces the chart from the UK Aeronautical Information Publication (AIP). Its AIP reference is ENR 6.2.1.3. Figure 1 on page 3 is an extract from the 1:500,000 scale Visual Flight Rules (VFR) chart (Northern England and Northern Ireland Edition 38).

2.2 The BTMA is currently Class E and is divided into two volumes.

2.3 BTMA1 surrounds the Class D Belfast Aldergrove Control Zone (CTR) from 2,000ft-FL105, and also partly surrounds and covers the Class D Belfast City CTR and Class D control areas (CTA1 and CTA2).

2.4 BTMA2 surrounds and covers the Class D Belfast City CTA3 from 3,500ft-FL105 and extends over the sea to the northeast.

2.5 Above and adjacent BTMA2 are the Strangford Control Areas (CTAs) 1-4 which are Class D at their lowest altitudes.

2.6 Airways run through the BTMA area and change their classification depending on whether they are crossing the BTMA or CTR.

2.7 This creates a complex lateral and vertical mix of Class E and Class D volumes.

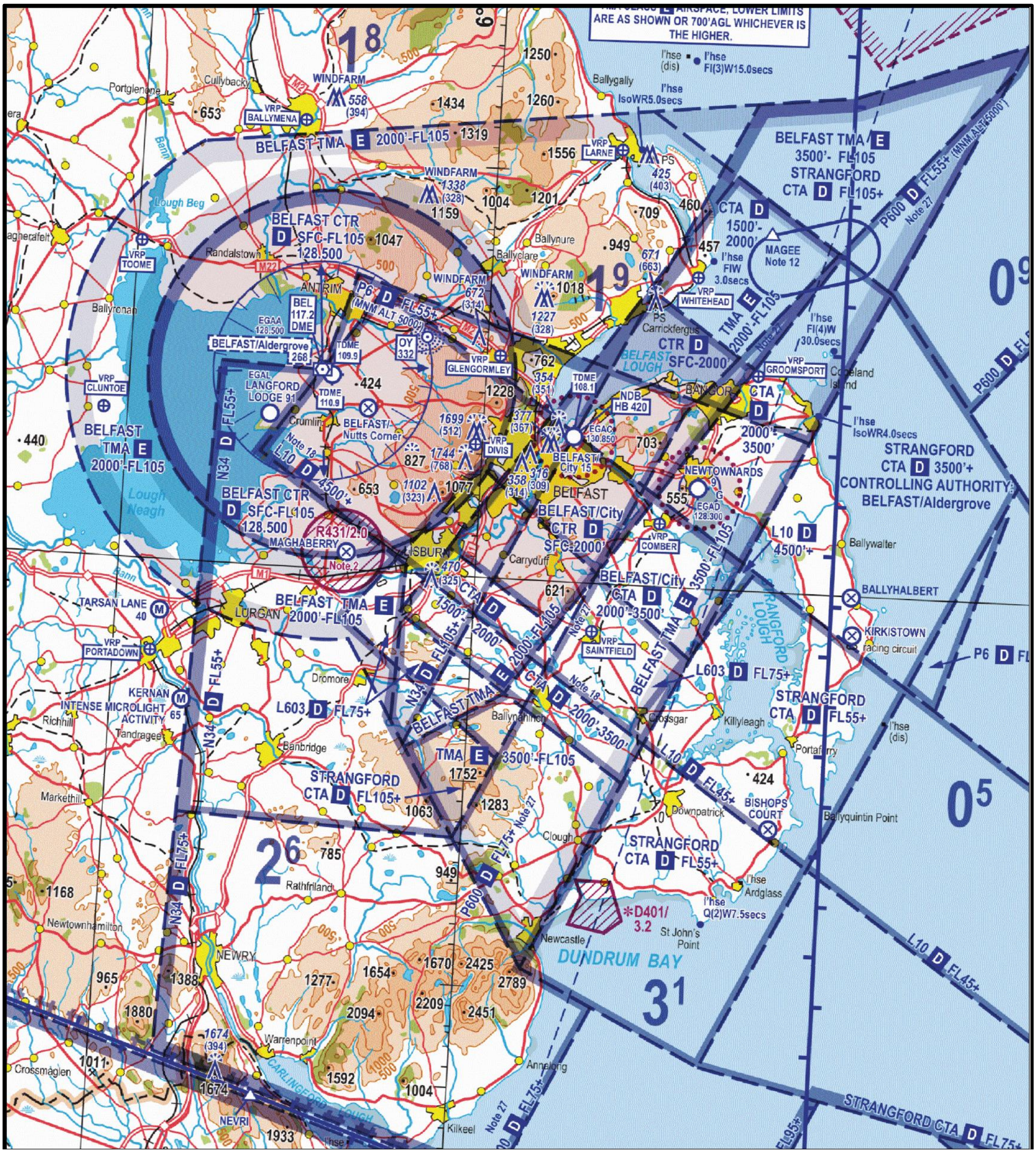


Figure 1 Extract from 1:500,000 VFR chart of the region

Showing the overlapping patchwork of Class D and Class E airspace volumes

3 Brief summary of air traffic control operations, and the issue to be resolved by this proposal

This is a simplified explanation for ease of reading.
See Section 14 Appendix A for full technical details.

3.1 All UK air traffic controllers (ATCOs) must learn several instruction manuals and apply them from memory on a daily basis.

3.2 These manuals are regularly updated. All ATCOs must learn and apply the new requirements. This is overseen by the CAA which ensures all ATCOs are properly qualified and licensed.

3.3 In November 2014 a new requirement was introduced. It required ATCOs to inform pilots when they cross an airspace boundary between Class D and Class E. The ATCOs are also required to get an acknowledgement from the pilot. This is done by voice instruction, over a radiotelephone (RT).

3.4 This new requirement had unintended consequences for Belfast ATCOs, specifically due to the uniquely complex overlapping patchwork of Class D and Class E airspace in the vicinity.

3.5 This requirement was impossible to safely apply because each aircraft in the Belfast area crosses Class D and Class E boundaries many times in a short distance or through altitude changes.
ATCOs could have to transmit the same information to the same pilot every minute or so (and expect an acknowledgement), increasing the controllers' and pilots' workloads and reducing their capacity.

3.6 The CAA understood this, and provided an exemption for Belfast ATCOs from transmitting this information on the RT, until the time a permanent solution could be found, hence this proposal.

4 Justification and Objective for this proposal

4.1 Neither Belfast ATC unit fully complies with standard UK ATC requirements. The justification for this proposal is the removal of the CAA exemption, so both Belfast units comply fully with UK rules as per CAA requirements.

4.2 The objective of this proposal is to change the airspace classification in the BTMA area so that all airspace volumes have the same properties, which would allow for simple RT compliance and the subsequent removal of the exemption.

4.3 CAA's Safety and Airspace Regulation Group (SARG) wrote a report in November 2014, recommending this course of action as the most practical and immediate (see Section 15 Appendix B for extract).

5 Descriptions of proposed solutions

This section describes the preferred solution, and lists other solutions that were considered but ultimately rejected.

5.1 Preferred: Change both volumes of the BTMA from Class E to Class D.
This would continue to allow for VFR access but crucially would remove the requirement for ATC to inform VFR flights when they cross internal boundaries between two classifications whilst within the BTMA. This would fulfil the objective above and is therefore being progressed here.

5.2 Considered: Retain Class E, keep the CAA's MATS Part 1 exemption in place.
This would not provide the safety benefits in paras 9.1 and 9.2 and was therefore not progressed. In the event that this proposal is not approved, the MATS Part 1 exemption would continue to apply.

5.3 Considered: Widen the scope to include a wide-ranging review and rationalisation of the entire Belfast area airspace arrangements.
This is the objective of a future airspace project, however it would be complex and time-consuming and was therefore not progressed at this time.

5.4 Considered: Retain Class E but rationalise some of the airspace boundaries and/or base altitudes.
This would be a halfway-house between this proposal and the full-redevelopment option considered in para 5.3 above, and was therefore not progressed at this time.

6 Impacts of the proposed solution: All Instrument Flight Rules (IFR) flights of all types

Commercial aviation, General Aviation (GA),
Sports and Recreational Aviation (S&RA), military and police services

6.1 IFR flights are required to have a clearance to enter and to operate within the Class E BTMA.

6.2 The same requirement applies to Class D volumes, such as CTRs or CTAs.

6.3 Under this proposal there would be no impact on IFR flights because the clearance requirements are identical for Class E and Class D.

7 Impacts of the proposed solution: All RT-capable VFR flights of all types

Commercial aviation, General Aviation (GA),
Sports and Recreational Aviation (S&RA), military and police services

7.1 RT-capable VFR flights may currently enter, and operate within, the Class E BTMA without clearance and may choose not to contact ATC.

7.2 VFR flights may not enter any Class D volume, such as CTRs or CTAs, without clearance.

7.3 Under this proposal, the pilots of all RT-equipped VFR flights would be required to use the RT to obtain clearance to enter (and to operate within) the BTMA in the same way they currently need clearance to enter any CTR or CTA. Without prejudicing pre-flight planning expectations, pilots are just as likely to receive appropriate clearances to use the BTMA as they are for Belfast's CTRs or CTAs.

8 Impacts of the proposed solution: All non-RT VFR flights

Examples include, but are not limited to, gliders, hang gliders and paragliders

8.1 Non-RT VFR flights may currently enter, and operate within, the Class E BTMA without clearance.

8.2 Non-RT VFR flights may not enter any Class D volume, such as CTRs or CTAs, without clearance, which in practice cannot be acquired without RT equipment.

8.3 Under this proposal, non-RT VFR flights would typically not be able to access the BTMA without special arrangements.

8.4 Anecdotally, NATS believes that relatively few non-RT VFR flights regularly operate in the Class E BTMA. However, this consultation aims to gather information specifically on this group of airspace users, as these would be the most likely to be impacted by the proposal.

8.5 To mitigate impacts on this group, members of flying clubs may be able to gain access to certain volumes by prior Letter of Agreement.

8.6 Belfast Aldergrove and Belfast City have formal arrangements with flying clubs primarily concerned with VFR flight in non-RT aircraft. These arrangements allow non-RT VFR entry into Class D airspace such as the Aldergrove CTR under certain conditions.

8.7 It is anticipated that these Letters of Agreement (LoAs) could be adapted to suit the revised BTMA classification, subject to negotiation with the clubs concerned.

8.8 Representatives of flying clubs primarily concerned with VFR flight in non-RT aircraft are welcome to request negotiation of an LoA if they believe their activities would be regularly and significantly impacted by the proposed change of classification. Please make your request as part of your consultation response (see Section 11).

9 Impacts of the proposed solution: Aviation Safety

9.1 Class D provides a fully-known ATC environment that allows for RT-equipped VFR access. Logically, this is safer than Class E where VFR aircraft may fly without RT and without a clearance.

9.2 The single classification for all relevant CAS in the vicinity of the BTMA would remove the need for the CAA exemption previously stated in Section 3. Full compliance with UK ATC standards is a safety benefit.

9.3 Non-RT VFR flights would either need to avoid the BTMA or fly beneath it (below 2,000ft altitude).
If avoiding or flying beneath the BTMA could cause a safety impact to your non-RT VFR operation, we would like to know about it in order to consider mitigating procedures (such as arranging advance coordination of your flight through the proposed Class D BTMA).

9.4 Other mitigations would be negotiating Letters of Agreement with Belfast Aldergrove and Belfast City ATC, for organised club flying in defined areas under specific conditions.

10 Impacts of the proposed solution: Environmental

10.1 Under this proposal there would be no noticeable change to flight-paths or altitudes, therefore we assess that no noticeable environmental impacts would occur.

11 How to respond to this consultation, and GA forum

11.1 Consultation started Friday 9th October 2015 and is available at:
www.nats.aero/environment/consultations/belfast-tma-class
Consultation closes **noon Monday 14th December**, a period of nine weeks and two days. All responses must be received by this date.

11.2 We have agreed a list of aviation stakeholders with the CAA. This list can be found in Section 16 Appendix C.
These stakeholders have been directly informed of this consultation, and are encouraged to publicise it.
This consultation is **not limited** to these stakeholders or their representatives; anyone is welcome to respond.

A GA Forum is planned for part way through the consultation period, on Thursday 5th November at 7.30pm, including a guest speaker.
The venue is the Maldron Hotel, Aldergrove, Belfast BT29 4ZY

Representatives of both Belfast Aldergrove and Belfast City ATC will be present to discuss this proposal along with other GA/ATC topics.
Please email airspaceconsultation@nats.co.uk to request an invitation.
After this forum, there will be five weeks and three days remaining in the consultation.

11.3 To respond to this consultation, please write an email to
airspaceconsultation@nats.co.uk
(This is the same email address we used to send you this consultation material)

Or write a letter and send it recorded-delivery to:

NATS Airspace Consultation
Box 25A
4000 Parkway
Whiteley
Hampshire
PO15 7FL

11.4 Please supply the following information in your response:
One of the following: SUPPORT OBJECT NO OBJECTION
Your name, and your role if you are responding on behalf of an organisation.
Your contact details.

Your reasons for supporting or objecting to the proposal.
For example the impacts and benefits it may have on your flights or organisation, and how often you would be affected. If this proposal does not affect your operation, **please respond** as that fact itself is useful data.

If your organisation is primarily concerned with non-RT VFR flight in the vicinity of the BTMA, please state if you wish to be considered for a Letter of Agreement with the Belfast ATC units.

Note that copies of all responses received will be supplied to the CAA.

12 Compliance with the airspace change process, including consultation

12.1 If you have questions or comments regarding the conduct of the airspace change process (also known as CAP725), please contact the CAA:

Airspace Business Coordinator
Re: Belfast TMA Classification
Safety and Airspace Regulation Group
CAA House
45-59 Kingsway
London

WC2B 5TE

Email: airspace.policy@caa.co.uk

12.2 Note: These contact details **must not** be used for your response to this consultation. If you do so, your response may be delayed or missed out.

13 What happens next?

13.1 When the consultation period closes, we will publish a report summarising the feedback received.

13.2 We will also write and submit an Airspace Change Proposal to the CAA based on this consultation document and the feedback report.

13.3 We expect both these events to happen before Christmas 2015.

13.4 The CAA will then study the proposal to decide if it has merit, and will publish a decision on its website, provisionally late January or early February 2016.

13.5 If the CAA decide to approve this proposal, we plan to implement the change in April 2016 to align with the 1:500,000 VFR chart publishing schedule.

14 Appendix A: Detailed description of the ATC Issue

14.1 UK ATCOs are licensed by the CAA and must be able to apply several instruction manuals from memory. Two of these manuals are:
CAP493 Manual of Air Traffic Services Part 1 (known as MATS Part 1); and
CAP413 Radiotelephony Manual (known as the RT Manual).

14.2 CAP493 MATS Part 1 contains universal instructions for all UK controllers. CAP413 RT Manual defines clear, concise, standardised radio transmissions.

14.3 These manuals are updated regularly, and controllers are required by the CAA to learn the changes and to apply them immediately.
CAP493 MATS Part 1 is updated using a CAA Supplementary Instruction (SI).

14.4 In November 2014, MATS Part 1 SI2014-04 was published by the CAA. This amendment was published to define changes to UK air traffic operations following the removal of an unused airspace classification (Class F air routes, which were essentially replaced by Class E routes). Therefore Class E became more prominent in the UK air route structure.

14.5 This MATS Part 1 SI also caused a change to CAP413 RT Manual, adding a new requirement for radio transmissions. The ATCO must now inform all flights when they transition from Class D into Class E airspace (and vice-versa).

14.6 This is a sensible requirement for air routes where the aircraft spends long periods in one class of airspace, and the change in class is an easily defined boundary. However the requirement had an unintended consequence for the complex patchwork of Class D and Class E airspace in the Belfast area.

14.7 For the BTMA area, aircraft pass through several airspace boundaries in a short distance, and these boundaries can be both vertical and lateral.

14.8 If the Belfast ATCOs attempted to comply with the Radiotelephony Manual, they would need to transmit (and receive pilot acknowledgement) many times in this short distance. The same aircraft could need to be told up to five times in thirty miles, and at the speed of modern aircraft this could mean the same transmission being repeated almost every minute to the same pilot.

14.9 This would significantly increase ATCO and pilot workload, leading to a reduction in each unit's ATC capacity.

14.10 Both Belfast Aldergrove and Belfast City have been granted a special exemption by the CAA from this particular RT requirement.

14.11 The primary goal of any ATC unit is air safety. On balance, the exemption/non-compliance is safer than the excessive RT workload that would be generated if ATCOs attempted to comply.

14.12 This exemption can be removed if the requirement for excessive RT workload is removed. This proposal would remove that requirement.

15 Appendix B: Extract from CAA SARG Report into BTMA

"The most practical and immediate solution, as appears to be agreed by all concerned, would be the re-classification of all existing Class E airspace within the TMA area to Class D. The same rules would then apply throughout, thus drastically simplifying the airspace instantly."

CAA, November 2014

16 Appendix C: List of Stakeholders Identified

National aviation organisations	Local aviation organisations
AOPA UK Aircraft Owners and Pilots Association	Ulster Flying Club Newtonards Airport
BBAC British Balloon and Airship Club	Kernan Aviation Kernan Airfield
BBGA British Business and General Aviation Association	FlyNI Airsports Tarsan Lane Airfield
BGA British Gliding Association	Wild Geese Skydive Movenis Airfield
BHPA British Hang Gliding and Paragliding Association	Ulster Gliding Centre Bellarena and Benone Strand Airfields
BMAA British Microlight Aircraft Association	Ulster Seaplane Association Causeway Airfield
BMFA British Model Flying Association	Ulster Hang Gliding and Paragliding Club
BPA British Parachute Association	City of Derry Airport
BHA British Helicopter Association	Enniskillen Airport
HCGB Helicopter Club of Great Britain	Police Service of Northern Ireland Flying Unit
Heavy Airlines Representing operators of heavy commercial airlines	Martin-Baker Langford Lodge Airfield
LAA Light Aircraft Association	
Light Airlines Representing operators of lighter commercial airlines	
PPL/IR Private Pilot's Licence/Instrument Rating Representing PPL holders interested in IFR operation	
The Ministry of Defence	

End of consultation document