

The Second UK State Consultation on a Harmonised Transition Altitude (TA) of 18,000ft in the London and Scottish Flight Information Regions - Aviation Stakeholder Consultation Feedback Report

CAP 1417

Published by the Civil Aviation Authority, 2016

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Aviation House,
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West Sussex,
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First published 2016

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Reference documents and revision history

Reference documents

Joint Concept of Operations for Inside and Outside of Controlled Airspace (CONOPs)	www.caa.co.uk/CAP1349P7
State Safety Assurance Report (SSAR)	www.caa.co.uk/CAP1349P8
Nominal Vertical Separation Minima Safety Report	www.caa.co.uk/CAP1349P9

Revision history

Issue 1

15 July 2016

Chapter 1

Executive summary

Progressing the 18,000ft Transition Altitude (TA) to this stage has involved considerable liaison with aviation professionals within the United Kingdom (UK) and overseas. The UK, Republic of Ireland and Norway formed a Transition Altitude Oversight Group, (UINTAOG), to ensure a consistent approach, to identify common issues and to develop compatible procedures to implement an 18,000ft TA; additionally there was significant UK and Irish participation in the EASA Harmonised European Transition Altitude (HETA) Rulemaking Group as well as consultation with agencies further afield. The UK and Ireland's second consultation relating to the future implementation of a harmonised, Functional Airspace Block (FAB) Transition Altitude (TA) of 18,000ft concludes with this Consultation Response Document. This consultation focused on a proposed Concept of Operations (CONOPs) and supporting documents; the consultation on the principle of moving to an 18,000ft TA was covered in 2012.

The UK project has worked on the principle that an 18,000ft TA's primary benefit lies in enabling a new systemised airspace design to fully realise its potential by removing the loss of levels around the current 6,000ft TA (5,000ft around Manchester) from Terminal Manoeuvring Areas (TMA). An 18,000ft TA facilitates airspace design through interlocking Standard Instrument Departures, Standard Arrival Routes, Holds, Arrival Transitions and Instrument Approach Procedures, including those with vertical guidance, without the need to incorporate buffers to allow for the differences in the manual re-setting of aircraft altimeters. It will also facilitate the design of more Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) in the airspace below 18,000ft.

NATS' London Airspace Management Programme (LAMP) was intended to be the first large scale systemised airspace design requiring the key enabler of an 18,000ft TA; however, external factors mean that NATS is not able to progress the redesign of the Southeast's airspace until Regulatory Period 3 (RP3), (2020 to the end of 2024). As raising the TA to 18,000ft in isolation provides no quantifiable safety

improvement to the NATS operation, NATS feels that a change should only be implemented ahead of, and closely aligned with, LAMP implementation to fully realise the benefits to airlines from the substantial outlay involved.

The CAA recognises the significant financial implications associated with the implementation of a higher TA. The Transition Altitude Project Team (TAPT) worked to gain a full understanding of these costs and to identify possible mitigations, such as a regulatory approval to amend local TA annotations on Instrument Procedure Charts where there is no interaction with the current or future TA. The consultation shows that there are few direct benefits of a raised TA for ANSPs, and the main burden of cost is likely to fall on them. Therefore, with the exception of NATS, other ANSPs have generally not supported a raised TA.

The purpose of introducing a raised TA has always been to enable more efficient use of airspace to realise potential savings for aircraft operators in terms of lower fuel bills and lower emissions. Therefore, a higher harmonised TA needs to be assessed in the context of efficiency, rather than solely on increased costs to stakeholders. This would be done on the basis that the project is able to deliver overall benefits to the customers that outweigh ANSPs' investments. This applies throughout the UK and Ireland FAB and therefore, a coordinated, joint approach was adopted to address procedures.

The CAA will continue to develop and maintain a Business Engagement Assessment, (BEA), to fully understand the associated costs. It will consider the BEA findings from the overall State perspective, balancing the costs against benefits to the UK's entire aviation industry. The CAA will want to ensure that the project delivers overall benefits to users, thus making the investment, particularly by ANSPs, worthwhile. The BEA will be published in advance of implementation once the effects on the industry are fully known.

The UK Ministry of Defence (MOD) anticipates considerable costs whilst receiving no benefit to its operations as a result of a raised TA. It acknowledged that these issues do not prevent the implementation of an 18,000ft TA, although the availability of services to commercial aviation or the ability to co-ordinate may be reduced to contend with any increased controller workload. The MOD recognises the benefits of

a raised TA within the lower airspace and airfield environment, but identifies significant dis-benefits associated with its en-route task.

The GA community is largely in favour of an 18,000ft TA as the simplified procedures provide better awareness of proximity to terrain and they help to avoid infringing CAS or other airspace reservations. For commercial pilots and aircraft operators, the benefits will mainly be realised if the TA change leads to more efficient arrival and departure routes being designed, although pilots also state that it could improve safety by reducing workload and the number of level busts.

The CONOPs and supporting project documentation have been developed considerably since the first consultation, with many of the issues identified being resolved to a satisfactory degree for this stage of the project. However, there are still issues which would need to be addressed before an 18,000ft TA can move into an implementation phase.

The CAA confirms its commitment to a harmonised TA across the UK, and its intent remains to implement an 18,000ft TA at the earliest opportunity. However, in view of the fact that NATS will delay the systemised airspace structure which relies on an 18,000ft TA until RP3, the CAA concludes that implementation of an 18,000ft TA will need to be moved to RP3. As stated by NATS, it should also be implemented shortly before, and in conjunction with, major systemised airspace change in order to benefit from the substantial outlay that a raised TA will involve.

In view of this delay, a third, proportionate, TA consultation will likely be required prior to implementation to address any issues or changes which may have occurred in the interim; the full scope of such a consultation has not yet been determined. This delay will also give time for all stakeholders to better assess the effects of an 18,000ft TA on their operations, whilst giving the TA project and major ANSPs sufficient time to address the issues identified by this consultation.

The UK's TA project will now move into a period of 'care and maintenance' during which time the CONOPs, new ATC Tools that potentially mitigate some of the areas for development identified by this consultation will be reviewed. At an appropriate point, ahead of any planned systemised airspace implementation requiring the higher TA, the project will move out of 'care and maintenance' to undertake a refresh

of the CONOPs, followed by proportionate consultation, before moving the project to an implementation footing.

Chapter 2

Introduction

This document provides feedback to aviation stakeholders who participated in the second consultation on the policy to harmonise the Transition Altitude (TA) both inside and outside controlled airspace (CAS) in the London and Scottish Flight Information Regions (FIRs) at 18,000 ft¹. The feedback provided focuses on the analysis of the comments received and the key themes identified by stakeholders. The consultation commenced on 23 November 2015 and closed on 24 February 2016. The purpose of this report is to inform industry of the outcomes of the consultations and of the proposed way forward.

The UK CAA previously undertook a consultation during 2012 to ascertain aviation stakeholders' feedback on the principle of raising the UK's various Transition Altitude (TA) values to a harmonised value, both inside and outside of Controlled Airspace. That consultation concluded that two thirds of respondents favoured a change from the current mix of Transition Altitudes to a harmonised value; 18,000ft amsl was agreed as the target value. Since then, working in partnership, NATS, MOD, and the UK CAA (collectively the TA Project Team), have undertaken a programme of work to develop a draft Concept of Operations (CONOPs) for a harmonised TA of 18,000ft amsl.

Rather than providing options for stakeholders to choose within the consultation, this second consultation was based purely on the TA Concept of Operations (CONOPs) and supporting documentation. This documentation was produced by the Transition Altitude Project Team (TAPT) with oversight from the Transition Altitude Steering Group (TASG). The purpose of this second UK CAA consultation is to garner feedback from aviation stakeholders on the proposed CONOPs and supporting documentation to ensure that they are robust, representative of the operational environment and reflective of industry feedback. It does not cover the content of the

¹ There may be some possible exceptions, such as in Delegated Air Traffic Service Airspace where services are provided by another state.

2012 consultation, nor does it ask if stakeholders favour a change to the TA as this was completed within the first consultation.

The UK and Ireland Functional Airspace Block (FAB) has been pursuing the common goal of a harmonised TA for several years. The National Supervisory Authorities (NSAs) and the Air Navigation Service Providers (ANSPs) of both countries, along with the MOD and the Irish Air Corps, have reached a consensus on how they would like to proceed and TA Consultations were conducted in both countries concurrently.

UK / Ireland joint regulator statement

Following the successful completion of the consultation in both states, the NSAs agree that they have the foundation of a CONOPs for a TA of 18,000ft for future implementation.

'It is agreed by the UK and Ireland NSAs that all parties will continue to co-operate fully on the development and implementation of a harmonised TA of 18,000ft at a date in the future.'

Chapter 3

Consultation response analysis

Figure 1 below provides an overview of the stakeholder responses received. In terms of this overview, it should be noted that this chart only reflects the number of individual responses to the consultation. Therefore, the size of the 'pie portions' should not be taken to reflect the overall combined opinion of the responders. This is because, whilst some responses reflect the opinions of an individual, several reflect the opinions of an organisation, or in some cases, a number of organisations.

Figure 1: Stakeholder responses received

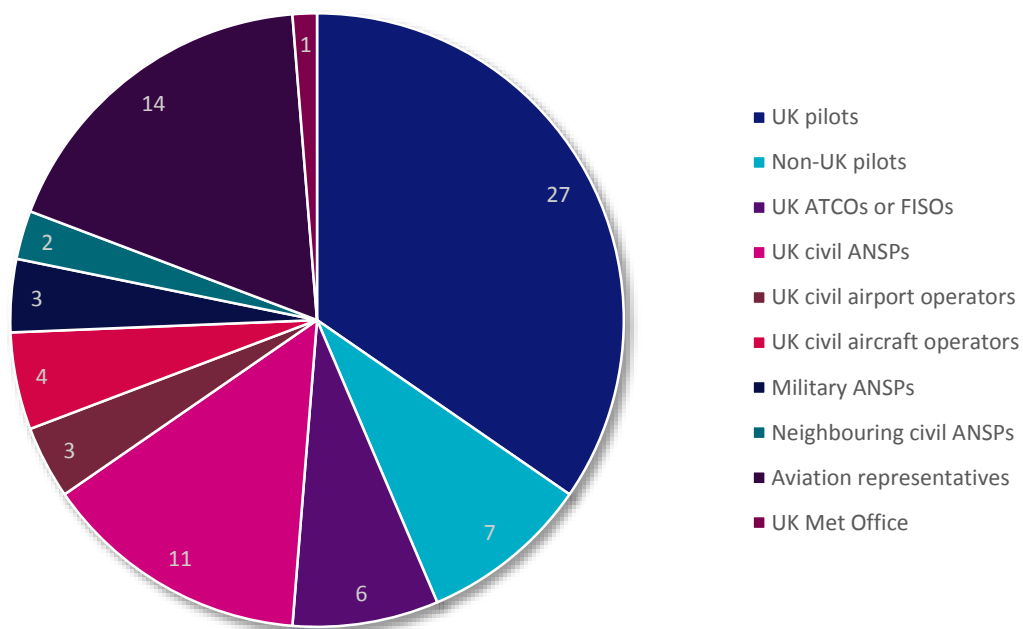


Chart data updated on 27 April 2016

There were 79 responses to the consultation; 63 of these were completed on the consultation website, with the other sixteen providing more generalised comments which were received via the TA Consultation email address. These totals do not match the pie chart above due to multiple submissions from some organisations. 64 per cent of the total responses were from individuals with the rest representing organisations. Overall the response rate was considered satisfactory for the formal consultation.

The numbering of questions in the following section relates to the numbers as utilised on the TA Consultation website. Not all questions/numbers are included here as some relate to personal information, or are otherwise not relevant to the Consultation Feedback process. The number of responses to each question may not reflect the overall number of responses received, as not all questions were answered by all responders; also, it should be noted that some responders answered in more than one category.

Consultation questions to stakeholders

Q1: Having assessed the scope of the changes that the TA will bring, please rate your understanding (or that of your organisation) of the business requirements needed to implement an 18,000ft TA. (BEA 1)

Fully understand requirements and detailed evaluation complete	21
Fully understand requirements and making good progress on detailed evaluation	9
Have a good understanding of requirements and have started detailed evaluation	10
Have a broad overview but have not progressed to detailed evaluation	40

GATCO main comments: GATCO believes that the likely scale of training required to bring the ATCO workforce up to speed cannot be underestimated. GATCO is concerned that the CONOPs does not contain enough information for all aerodrome ANSPs to be able to make a thorough assessment of the impact on their operations, including consideration of the required procedures between adjacent units. GATCO has noted that unless capacity is decreased, more personnel are likely to be needed to tackle the extra workload introduced by increases in RTF loading, and the complexity of calculations required to ensure separation is maintained. The Human Factors impact of aircraft not being displayed on surveillance equipment at whole FLs is also going to require training for. Not necessarily being able to use surveillance data to assure that separation is in place is a significant culture change. GATCO is concerned that the sums required to implement all this staffing and

training may not be available, and that smaller ANSPs may not be able to afford the tools.

BALPA main comments: We have concerns that the business requirements are being put ahead of safety and as has been admitted, there is no enhancement of safety. In all the documentation, there is no evidence that advice or research has been undertaken to investigate how a TA of 18,000ft is operated and managed in the USA and Canada where it has been in operation for decades in airspace that is at least as complex as the UK's with more extremes of weather.

HAL main comments: Our organisation cannot have a clear understanding of the business requirement until the format for the provision of ASR data is agreed. Where the format (eg XML) can be integrated with AFTN, our business requirement is minimal. However, if XML is not compatible with AFTN and the purchase of an AMHS system is necessary, the business requirement escalates markedly in terms of cost.

BAe Systems Warton comments: At this stage, we do not anticipate any manpower changes, however, there will definitely be an impact with training costs, updates of procedures, instrument approach procedures, training materials and education and awareness training. Considerable thought and effort will be required prior to TA change, to ensure that Warton's wide ranging flight test activities are not adversely affected by TA change.

CAA comments

Encouragingly, feedback from the consultation indicates that 62.5 per cent of the stakeholder group already has at least a broad overview of the TA project.

In early 2015 the CAA conducted an Implementation Workshop to determine the scope and duration of the implementation process. Based on the findings from that workshop, the CAA acknowledges the size of the task in terms of implementing an 18,000ft TA. The CAA would therefore propose a long enough implementation period to enable all stakeholders to assess the effects on their operations in more detail than is possible as part of this consultation. This would include allowing sufficient

time for development and approval of the procedures to be adopted by individual units and between adjacent units.

The CAA recognises that, whilst the CONOPs has reached a reasonable level of maturity, there are still issues which would need to be addressed before implementation of an 18,000ft TA could be considered. Of particular note are those areas where the level of indicative safety risk remains relatively high: the high level of RTF loading and the management of ASR boundary crossings outside CAS; both of which have yet to be satisfactorily resolved by the project.

Getting the project to this stage has involved considerable liaison with aviation professionals both in the UK and abroad. The UK, Ireland and Norway formed an oversight group (the UINTAOG) to progress the issues and procedures which were likely to affect all three countries as they seek to implement an 18,000ft TA. There was also significant UK and Ireland participation in the Harmonised European Transition Altitude (HETA) Rulemaking Group as well as consultation with agencies further afield, including the USA. Whilst there are some comparisons that can be made with operations in the USA, one of the main issues is the small size of the UK which limits the ability to manage its traffic effectively. A system reflecting a US style operation would require the UK to be managed as part of a fully integrated and unified Europe-wide system of ATM, and this is something that Europe is still working towards.

The financial implications of a higher harmonised TA are also significant for certain sectors of the industry, and the CAA would want to ensure that the project delivers overall benefits to the customer, as determined at the State level, which would make the investment, particularly by ANSPs, worthwhile.

It is acknowledged that the format for the provision of ASR data has not yet been clarified and this issue is considered in more detail in Appendix A.

*Q2 – Q4: (Personal details)***Q5: Are you completing this consultation feedback on behalf of an organisation or as an individual response?**

Organisation	32
Individual	38

Q6: ORGANISATIONS: Please select the type of organisation that you work for.

UK Civil ANSP	11
UK Civil Airport Operator	3
UK Aircraft Operator	4
Aviation Representative Organisation (e.g. BGA, Airport Operators Association, GATCO)	12
Neighbour State Civil ANSP	2
Military ANSP	3
UK Met Office	1
PPL Flying School	1
Microlight School	1

Q7: INDIVIDUALS: Please state your role.

UK Pilot (commercial and private)	27
Non UK pilot (commercial and private)	7
UK Air Traffic Controller (ATCO) or Flight Information Service Officer (FISO)	6

Q8: Please select your organisation from the list of Adjacent State Regulators.

(No Adjacent State Regulators responded).

Q9: Please select your organisation from the list of Air Navigation Service Providers.

Avinor, Norway
Isle of Man ATC

Q10: AVIATION ORGANISATION REPRESENTATIVE: Please select your organisation.

UK Aircraft Owners and Pilots Association (AOPA)	3
General Aviation Alliance (GAA)	1
PPL/IR Europe	1
British Gliding Association (BGA)	1
Guild of Air Traffic Control Officers (GATCO)	1
Prospect ATCOs Branch	1
British Airline Pilots Association (BALPA)	1
IATA	1
FASVIG	1

Q11: What type of ANSP is your organisation?

En-route	1
Airport	8

Q12: UK AIRPORT ANSPs: Please select your organisation from the list of airports.

NATS
Coventry Airport
Shoreham Airport
Birmingham Airport
Birmingham, East Midlands & Leeds Airports (joint submission)
Humberside Airport
Exeter Airport
BAe Systems, Warton
Highlands & Islands Airports (HIAL): HIAL operate as ANSP for 11 Airports: Sumburgh, Kirkwall, Wick, Inverness, Dundee, Stornoway, Benbecula, Barra, Campbeltown, Islay and Tiree.
Northern Development & Deployment Group (NDDG): NDDG has provided a joint submission which represents the interests of Manchester, East Midlands, Liverpool John Lennon, Doncaster Robin Hood, Durham Tees Valley, Birmingham, Leeds Bradford International and Newcastle International Airports.

Q13: UK AIRPORT OPERATORS: Please select your organisation from the list of airports.

Bournemouth Airport
Humberside Airport
London Heathrow Airport

Q14: In the period following the TA change, what are the forecast benefits to your organisation of any changes required as a consequence of a change in the TA? (BEA 3)

(Individual responses to this question are analysed in the Key Themes document at Annex A, serial no.14).

Q15: In the period up to the TA change, what is the forecast cost to your organisation of any changes required as a consequence of a change in the TA? (BEA 2)²

No financial cost	26
Less than £5,000	3
£5,000 - £10,000	0
£10,000 - £20,000	0
£20,000 - £50,000	0
£50,000 - £100,000	4
£100,000 - £250,000	1
£250,000 - £500,000	1
More than £500,000	3

CAA comment

As anticipated, the consultation has shown that costs mainly fall on ANSPs, with the largest ANSPs, such as NATS and the MOD, anticipating the highest costs. The GA community generally feels that there is little or no cost to affect their operations.

² Costs are analysed in greater detail in the Key Themes document at Appendix A, serial no. 9.

Q16: What on-going costs do you or your organisation anticipate after implementation? This includes costs associated with airspace redesign brought about by a change in the TA. (BEA 4)³

	Costs year 2	Costs year 2	Costs years 3-6
No financial cost	23	27	28
Less than £5,000	8	4	3
£5,000 - £10,000	3	2	2
£10,000 - £20,000	0	0	0
£20,000 - £50,000	0	1	1
£50,000 - £100,000	0	0	0
£100,000 - £250,000	1	0	0
£250,000 - £500,000	0	0	0
More than £500,000	1	1	1

General comments: As neighbour State ANSPs, Isle of Man ATC has stated that further changes regarding the acquisition of QNH data may be required if the proposal to cease distribution via AFTN takes effect, whilst Avinor anticipates a onetime cost to amend documentation.

CAA comments

Although there is a slight reduction in ongoing costs over time, there is still the perception amongst a number of ANSPs that costs will continue to be constant over a number of years. Although the CAA recognises that initial costs are likely to be high, it would need to have a better understanding of why ANSPs believe that ongoing costs would remain high in subsequent years.

Airports with Instrument Flight Procedures (IFPs) which need to be amended, generally believe that they would gain no benefit from a raised TA.

³ Costs are analysed in greater detail in the Key Themes document at Appendix A, serial no. 9.

Q17: What future benefit(s) do you or your organisation anticipate after implementation as a consequence of a change in the TA? This includes any benefits realised through the redesign of airspace to enable improved vertical profiles of aircraft arrivals and departures. (BEA 5)

(Individual responses to this question are analysed in the Key Themes document at Appendix A, serial no.14.)

Q18: What is the forecast cost to you or your organisation for changes as a consequence of a change to the TA? (BEA 6)⁴

	Costs year 2	Costs year 2	Costs years 3-6
No financial cost	28	31	32
Less than £5,000	5	4	3
£5,000 - £10,000	1	0	0
£10,000 - £20,000	1	1	1
£20,000 - £50,000	0	0	0
£50,000 - £100,000	1	0	0
£100,000 - £250,000	10	0	0
£250,000 - £500,000	1	0	0
More than £500,000	0	1	1

General comments: Eastern Airways felt that their Year 1 costs would be £250,000-£500,000 with the costs for subsequent years being more than £500,000. The airline felt that whilst the cost of implementation for them as an operator isn't significant, the impact on their operation could be massive, especially if military controllers are unable to offer deconfliction services due to the perceived additional workload imposed on them. Costs are based on the assumption that all scheduled services are forced into flying in controlled airspace with longer routings and more congestion on trunk routes. A detailed breakdown of costs is provided.

⁴ Costs are analysed in greater detail in the Key Themes document at Appendix A, serial no. 9.

CAA comment

The GA community generally believes that the costs to their operations will be minimal, with updated charts probably being their main requirement. From the aircraft operator perspective, with the exception of Eastern Airways, the only dependent costs anticipated would be incurred by the production of training and briefing material for the pilots. Changes to charting and navigation data would be accomplished as part of normal processes.

CAA Conclusion: As part of the requirement to introduce a more systemised airspace structure, the CAA should engage with commercial operators before an 18,000ft TA is implemented so that any issues can be better understood and managed.

Q19: Do you or your organisation agree or disagree with the proposed procedures associated with the expected magnitude and frequency of pressure differentials at ASR boundaries within the UK and the methodology prescribed to manage such differences? (GEN 11.1)⁵

Agree	24
Disagree	7
Not applicable	13

General comments: BAe Systems Warton does not support a raised TA, particularly one of 18,000ft; however, it recognises that if the State wishes to pursue a revised TA, the proposed procedures for managing ASR boundary differentials seem to be the best way of managing a difficult situation.

Eastern Airways agrees with the procedures devised, although they perceive them as introducing significant additional complexity for no benefit to their operations, especially in Class G airspace.

⁵ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 15.

Q20: Do you or your organisation agree or disagree with the proposed management of Class G international FIR boundary crossings? (GEN 11.2)

General comments: The GA community is quite concerned at the lack of clear procedures for this element of the CONOPs and GATCO has stressed the importance of boundary procedures being developed to be efficient and safe without being dictated by one ANSP to another based upon resources available to each. GATCO also believes that the procedure for managing interactions crossing, and close to, ASR and FIR boundaries should be standardised nationally; i.e. should be a MATS Part 1 level requirement, not a local unit instruction.

One response was hopeful that agreement would be reached within an acceptable timescale on a common European TA in order to mitigate what is likely to be a difficult transition between the TA levels at the boundary. Unfortunately, it can be confirmed that this is now unlikely as EASA has concluded that it would not be worthwhile to enforce a harmonised TA on the industry.

CAA comment

A representative group of Class G airspace users was consulted regarding Class G boundary crossings during a CAA safety workshop. The group stated that, whilst they had some concerns regarding the nature of the interface at the FIR boundary with adjacent states operating the system of intermediate VFR cruising levels, they had no concerns regarding the risk of traffic conflict at the FIR boundary. A great deal of liaison has taken place with all the UK's adjacent NSAs and ANSPs, particularly with Ireland and Norway as part of the UINTAOG. However, it was not possible to resolve this issue before the results of this consultation were collated. The CAA accepts that further work is required with neighbouring ANSPs to ensure that boundary procedures outside CAS are workable in each instance.

CAA conclusion: Before implementation, the UK TA project will need to engage further with neighbouring ANSPs to ensure that all boundary procedures, including delegation of ATS in the North Sea, are fully agreed and workable.

Q21: What is your position or the position of your organisation on the flight crew cockpit workload under the proposed Concept of Operations (CONOPs)? (GEN 20)⁶

Reduced cockpit workload	9
No significant change	14
Acceptable increase in cockpit workload	8
Unacceptable increase in cockpit workload	2
Not applicable	9

Q22: With reference to the issues described in paragraphs 26 to 30 of the Nominal Vertical Separation Minima Safety Report; does your organisation believe that a raised TA would result in reduced airspace containment for its Instrument Flight Procedures? (GEN 22)

Yes	5
No	6
Not yet fully assessed	15
Not applicable	19

General comments: NATS notes that aerodrome SID procedures are predicated on the airport QNH and not the ASR QNH. There is no PANS-OPS procedure for where the pilot on a SID should change from Aerodrome QNH to ASR QNH. Therefore the ANSP cannot guarantee an aircraft remains within nominal VSM parameters at all times.

HAL notes that the Assurance Report appears to suggest that surveillance is a requirement for nominal separation. They ask if this is the case or can non-surveillance ATC Units utilise the nominal separation rule; perhaps outside of ASR management.

⁶ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 1.

CAA comment

For the initial stages of implementation of the nominal VSM concept, the CAA had stated that surveillance based ATS with either SSR Mode C or Mode S would be a pre-requisite in order to act as mitigation against level bust, altimeter setting error etc. However, the CAA has acknowledged that as the concept is refined, it may be possible to extend the use of nominal VSM more widely and that there may be scope to include use of the proposed altimeter setting change procedure in the nominal VSM safety report in a non-surveillance environment.

Q23: Do you or your organisation agree or disagree with the proposed positions of the Altimeter Setting Region (ASR) boundary lines? (GEN 8)⁷

Agree	34
Disagree	5
Not applicable	5

General comments: GATCO believes that the design introduces more complexity and more risk at and close to the ASR boundaries. It believes that units in these areas will be operating on multiple altimeter settings, resulting in increased workload. GATCO is concerned about the potential impact of complexity of operations on units at and close to ASR boundaries, especially smaller ones with lower staffing numbers. It also notes the possibility of the need to change ASR boundary positions in future due to changes of traffic flows and densities.

Whilst some GA responses state that the ASRs are too small and that there are too many of them, the BGA believes that they are too large and too complex.

⁷ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 15.

Q24: Do you or your organisation agree or disagree with the proposed names of the Altimeter Setting Regions (ASRs)? (GEN 9)⁸

Agree	31
Disagree	6
Not applicable	6

CAA comment

Amongst those who disagreed with the proposed names of the ASRs, several alternative suggestions were put forward. Stakeholders will not necessarily be aware of the restrictions on the TA Project Team when choosing possible names for the ASRs, nonetheless, all suggestions have been forwarded to the Team for their consideration.

Q25: Which of the proposed methods of communicating Altimeter Setting Region (ASR) data best suits your operation? (GEN 10.1)⁹

The RPS data provisioned by the FOUK70 Met Office bulletin via the Aeronautical Fixed Telecommunications Network (AFTN) will be discontinued in the future. However, for a short period of time post the ASR bulletin introduction the FOUK70 will be revised or modified to provision ASR data	3
The ASR bulletin will be provisioned by an Extensible Markup Language (XML) message over the Aeronautical Message Handling System (AMHS)	2
The ASR bulletin (map, pressures and warnings, etc) will be available via a web based XML service over the Internet	21
Not applicable	16

⁸ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 16.

⁹ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 17.

CAA comment

At the start of the TA Consultation, the CAA recognised that the likely final method of communicating ASR data was not known. Nonetheless, it was felt appropriate to ask stakeholders about their preferences in an effort to gauge the general opinion of those likely to be most affected by the change.

Q26: With reference to the Altimeter Setting Region (ASR) bulletin format, what will be the impact to your operation in terms of cost? (GEN 10.2)^{10,11}

	Costs year 1	Costs year 2	Costs years 3-6
No financial cost	21	24	25
Less than £5,000	5	6	5
£5,000 - £10,000	5	2	2
£10,000 - £20,000	0	1	1
£20,000 - £50,000	1	0	0
£50,000 - £100,000	2	0	0
£100,000 - £250,000	9	1	1
£250,000 - £500,000	0	0	0
More than £500,000	0	0	0

General comments: HIAL has stated that if the format for ASR provision is not compatible with their current AFTN system, their costs are likely to be substantial. Other ANSPs have also let it be known that their costs could be considerably higher than suggested if they are forced to change the way they receive ASR data.

¹⁰ See ICAO Annex Update Annex 3 amendment 77 for digital data references & ICAO Doc 10003 for iWXXM.

¹¹ Bulletin format costs are analysed in greater detail in the Key Themes document at Appendix A, serial no. 18.

CAA comment

An important consideration for all ANSPs is that AFTN will not be supported by BT after 2018, so there is a driver to move away from this legacy protocol. This change is outside of any new procedures introduced as part of the TA project. Additionally there is a move to using technologies that will enable the aviation industry to make use of greater levels of data richness i.e. Data Exchange models.

Q27: With reference to the Altimeter Setting Region (ASR) bulletin format, how long would it take to implement this within your organisation? (GEN 10.3)¹²

3 to 6 months	19
6 to 9 months	1
9 to 12 months	4
12 to 18 months	2
18 to 24 months	3
If greater than 24 months please specify	0

General comment: Whilst BAe Systems Warton has stated a nine to twelve month implementation period for its preferred option of a revised FOUK70, it has also stated that the option of an XML message over the AMHS would take 18-24 months to implement.

Q28: Is a review of the CTA naming policy a worthwhile project for the State to pursue? (GEN 12)

Very worthwhile	12
Worthwhile	10
Not worthwhile	7
Not sure	9

¹² This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 19.

CAA comment

There are mixed views among a varied stakeholder group on whether or not the State should review the CTA naming policy. 59 per cent consider it worthwhile or very worthwhile, 19 per cent consider it not worthwhile and 22 per cent are not sure.

CAA conclusion: Based on the feedback, there is enough evidence for the CAA to initiate the process of scoping out such a change to make the CTA naming policy more user friendly.

Q29: Do you or your organisation agree or disagree with the proposed management of the interfaces between airfield QNH and ASR QNH or between airport and en-route airspace connectivity? (GEN 14)¹³

Agree	28
Disagree	5
Not applicable	5

Q30: Do you or your organisation agree or disagree with the proposed move to the common European method of the use of actual pressures every 30 minutes? (GEN 15)

Agree	35
Disagree	2
Not applicable	1

General comments: There is broad support for the change to actual pressures issued every 30 minutes, particularly amongst GA pilots. However, whilst the MOD is content with the concept of 30 minute promulgation of actual pressures, such promulgation is only valid when its aircraft are talking to a service provider that can

¹³ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 20.

update this information. As such, when an aircraft is not in direct contact with an ATS provider, the MOD does not believe that any method of distribution that needs verbal prompts meets the level of safety assurance it requires. The MOD will therefore continue to provide its pilots with forecast QNHs for their autonomous low level flight operations.

One response noted that there could be a significant pressure change over a 30 minute period, however the CONOPs already allows for this as pilots will be updated. The IATA and Virgin Atlantic responses took the opposite stance, pointing out that during stable pressure situations the time between readings could be extended to an hour, which apparently works well in the USA.

Eastern Airways disagrees with this proposal. The airline recognises that whilst the size of change in QNH will be lower, the frequency of change is likely to be higher. The company feels that it is the number of changes and the controller/pilot time on the RT which will contribute to the high workload and associated risk.

HIAL is concerned that controller workload at non-surveillance ATC Units may increase in terms of additional planning of procedural separations associated with actual pressures over that of forecasts.

BAe Systems Warton agrees with the proposed move to actual pressures every thirty minutes, subject to a satisfactory and cost effective method of distribution of actual pressures and a successful mitigation of additional area controller workload and RTF loading as a result of such changes.

CAA conclusion: Given the nature of the MOD's operations which can preclude the provision of a regularly updated atmospheric pressure setting, they have decided to pursue the introduction of a 'Low Flying Pressure' to mitigate the specific risks associated with their autonomous low flying operations. That notwithstanding, in view of the overall support for this proposal from most stakeholders, it is concluded that the UK should move to the common European method of the use of actual pressures every 30 minutes as part of a harmonised, raised TA. Consideration could also be given to this procedure being set up as a separate project to be implemented at an earlier stage.

Q31: Do you or your organisation agree or disagree with the proposed method of ensuring terrain and obstacle clearance whilst using either an Altimeter Setting Region (ASR) or airfield derived pressure datum? (GEN 16)¹⁴

Agree	32
Disagree	2
Not applicable	4

General comments: There is broad support for the proposed method of ensuring terrain and obstacle clearance, particularly amongst the GA community, however, the MOD disagrees with this proposal in relation to autonomous flight within Class G airspace. This is because, when an aircraft is not in direct contact with an ATS provider, the MOD does not believe that any method of distribution that needs verbal prompts meets the level of safety assurance it requires. The MOD will therefore continue to provide its pilots with forecast QNHs for their autonomous low level flight operations.

Q32: Do you or your organisation agree or disagree with the proposed methodology to ensure the safe underflight or overflight of airspace reservations (such as danger areas) in Class G airspace)? (GEN 17)¹⁵

Agree	31
Disagree	1
Not applicable	6

Q33: If there was room for improvement of RTF phraseology within the UK, what would you or your organisation propose? (GEN18)

(Individual responses to this question are analysed in the Key themes document at Appendix A, serial no. 23).

¹⁴ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 21.

¹⁵ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 22.

Q34: How would you like this difference to be shown on the charts? (GEN 13)

(Individual responses to this question are analysed in the Key themes document at Appendix A, serial no. 24).

Q35: Do you or your organisation agree or disagree with the proposed management of the UK's 18,000ft TA and the Class C DFL 195? (GEN 19)

Agree	23
Disagree	0
Not applicable	13

General comment: MOD analysis indicates that there is an issue regarding the provision of UK FIS within active TRAs (FL195-FL245) as a result of a raised TA of 18,000ft. This issue is introduced by virtue of Mode C/S conversion for aircraft operating at an altitude against those operating above at Flight Levels, and the requirement to assess the vertical distance between them. In conjunction with the CAA and NATS, the MOD would like to conduct a review UK FIS, as provided within active TRAs, as part of the implementation process.

CAA comment

Whilst one comment recognises the restriction to operators who naturally utilise this level band, amongst those to whom this procedure is relevant, there is overwhelming agreement that this is an appropriate method of addressing this issue.

CAA conclusion: In view of the overall support for this proposal, it is concluded that the procedures in the CONOPs for management of the UK's 18,000ft TA and the Class C DFL 195 are acceptably safe. As part of the implementation process, the MOD, CAA and NATS should review UK FIS as provided within active TRAs.

Q36: Do you or your organisation agree or disagree with the proposed Nominal Vertical Separation Minima concept? (GEN 21)¹⁶

Agree	23
Disagree	2
Not applicable	12

Q37: Bearing in mind your financial plans or the financial plans of your organisation, when would you or your organisation prefer a raised TA to be implemented? (GEN 23)¹⁷

2016 – 2020	23
2021-2022	4
2023-2024	1
2025-2026	5

CAA comment

Those whose costs are not affected, particularly the GA community, would prefer the TA change as soon as possible, whereas those who will largely be responsible for the costs, such as the ANSPs, have a greater need for a structured implementation.

¹⁶ This issue is analysed in greater detail in the Key Themes document at Appendix A, serial no. 25.

¹⁷ This issue is analysed in greater detail in the Key Themes document at Appendix A; it has been included under serial no. 14: Forecast & future benefits/