



**PROPOSAL TO AMEND THE AIR NAVIGATION ORDER 2005 FOR THE PURPOSE OF IMPROVING THE TECHNICAL INTEROPERABILITY OF ALL AIRCRAFT IN UK AIRSPACE**

**PARTIAL RIA CONSULTATION RESPONSE DOCUMENT**

(For responses to the Partial RIA Issue 1.2)

**[Deadline for Submission is 1700 hours on 29 August 2006]**

Please enter your details in the following grid to assist in the assessment of responses

<b>Name:</b>	3 <sup>rd</sup> Draft 26th July							
<b>Organisation:</b>								
<b>Postal Address:</b>								
<b>Telephone:</b>								
<b>Email:</b>								
<b>Group/Sector:</b>	<b>Aerial Work</b>	<b>Air Taxi</b>	<b>Air Ambulance</b>	<b>Aircraft Leasing</b>	<b>Airline Operator</b>	<b>ANSP</b>	<b>Avionics Manufacturer</b>	<b>Avionics Vendor</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Flying Club</b>	<b>Flying School</b>	<b>Freight Operator</b>	<b>Government</b>	<b>Maintenance Organisation</b>	<b>Private Pilot</b>	<b>User Group</b>	<b>Other</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes on Completion:**

The consultation responses will be used by the CAA to refine its proposal and make recommendations to the Secretary of State for Transport.

**Only respondents from small aviation businesses of less than 50 employees should provide answers to ‘RESPONSE 8’ and ‘RESPONSE 9’.**

There are three methods of completing/submitting your response to the Partial RIA. The files and links for which can be obtained via the DAP area of the CAA Web-site at the following address - [www.caa.co.uk/dapconsultations](http://www.caa.co.uk/dapconsultations). The methods are:

1. The completion of a secure ‘online’ form lodged on a Third Party specialist web-site.
2. The completion of a MS Word form that should be e-mailed to **mode.s@dap.caa.co.uk**
3. The completion of a paper version of this ‘Response Document’, available as a PDF, that should be sent to:

Mgr S&SM  
 CAA House K6 G6  
 45-59 Kingsway  
 London  
 WC2B 6TE.

If you have any queries or difficulties in completing this form, please contact us on the following:  
 tele: +44 (0) 20 7453 6534/6 Fax: +44 (0) 20 7453 6565 E-mail: [mode.s@dap.caa.co.uk](mailto:mode.s@dap.caa.co.uk)

## [RESPONSE 1 – Comments on the Issues that the Proposals Seek to Address]

Please indicate whether or not you agree that the issues identified in Paragraph 2.2 from pages 2 to 9 of the Partial RIA document need to be addressed. Please indicate your opinion on each issue:

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
<b>Issue 1: Replacement of ‘Classical’ SSR</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Issue 2: Need to Improve Collision Avoidance Measures</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Issue 3: International Obligations and Co-operation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Issue 4: Support for Future Surveillance Technology</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Issue 5: Efficiency of the Use of Lower Airspace</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Issue 6: Integration of UAV Operations</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Issue 7: Impact of Wind Turbines on Aviation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Issue 8: Spectrum Availability for Primary Radar</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide any additional comments on the issues identified in the Partial RIA. **(Click in the top left-hand corner to enter text.)**

Issue 2. While it is clear that it is in all stakeholders interest to reduce the risk of collision and that appropriate technology has a part to play, the BGA view is that the RIA does not inform stakeholders of the limited risk demonstrated by gliding or adequately consider a number of implications including limitations associated with the options identified within the RIA.

In the past 18 years (the period in which verifiable data has been collated and analysed), the UK fatal accident rate where a sailplane has collided with a commercial air transport flight or military aircraft is zero per 100 000. The airprox trend involving civilian sailplanes compares extremely well compared with trends involving other UK airspace user groups including CAT. The BGA believes that the RIA does not address the limitations of the technological risk mitigation solution that is clearly supported by the RIA author, and in particular where the operation of sailplanes is concerned.

The BGA believe that prior to any recommendation to Government, there is a pressing need for DAP to further explore in depth and discuss with UK and European gliding experts all the operational and technical alternatives, as well as fully appreciate the enormous economic and subsequent social impact on many small businesses and individuals of a UK wide technological solution that is out of step with Eurocontrol and therefore EU implementation policy on this issue. There are many ways to accommodate VFR flight even in an IFR environment when the right procedures and techniques are used and with mutual

understanding. This issue is too important for the limited dialogue that has taken place to date on the specific issues highlighted within this RIA to be recognised as satisfactory consultation.

Issue 3. The BGA understands the need for UK Government to meet its International obligations. It is clear, however, that the RIA is based on a DAP concept of a total UK airspace known air traffic environment solution that appears to be closely aligned to the needs of commercial airport and airline operators rather than International obligations which specifically identify a need to provide uncontrolled airspace for non-transponder equipped aircraft. It is not clear that autonomous protection against collision risk through Mode S is an ICAO objective.

The European Mode S initiative is aimed at existing airspace that requires the use of transponders. This RIA suggests a requirement the carriage of Mode S in all UK airspace, including that currently classified as Class G.

The BGA believe that the DAP should further explore the implications of the stated position regarding the mandating of transponders across the entire UK by discussing this issue in detail with stakeholders, including owner operators of non-UK EU member state sailplanes that may need to operate in the UK.

The BGA believe that this carefully designed RIA response document is limited in depth and does not provide in this case a satisfactory communication channel.

## [RESPONSE 2 – Comments on the Proposed Policy Options]

Please indicate your opinion on the proposed policy options that have been set out in Section 4 from pages 14 to 18 of the Partial RIA document to address the background issues. Please indicate your opinion on all options:

Option	<u>Views on the Presented Options</u>	Strongly Support	Support	No Opinion	Oppose	Strongly Oppose
1	<b>Do Nothing</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<b>SSR Mode S on all Aeroplanes and Helicopters</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2(a)	<b>SSR Mode S and 1090ES (ADS-B 'Out') Capability<sup>1</sup> on all Aeroplanes<sup>2</sup> and Helicopters</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	<b>SSR Mode S on all Aircraft<sup>3</sup></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<sup>1</sup> Capability means that the transponders are able to support 1090ES (ADS-B 'Out') without modification but do not need to be connected to a suitable source of GPS information i.e. 1090ES (ADS-B 'Out') does not have to be 'populated' with GPS data.

<sup>2</sup> ICAO Annex 6 defines aeroplane as: 'A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which are fixed under given conditions of flight.'

<sup>3</sup> ICAO Annex 6 defines an aircraft as: 'any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.'

3(a)	<b>SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<b><u>Views on Other Potential Options Currently Discounted by the CAA</u></b>					
2(a)/3(a)	<b><i>Full 1090ES (ADS-B 'Out') Functionality<sup>4</sup> that is 'Populated' with an Approved GPS</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2(a)/3(a)	<b><i>Full 1090ES (ADS-B 'Out') Functionality on IFR Flights Only</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2(a)/3(a)	<b><i>Full 1090ES (ADS-B 'Out') Functionality on Aeroplanes and Helicopters Only</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-	<b><i>Non-SSR Options such ADS-B via VDL Mode 4 or UAT and FLARM</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-	<b><i>Airspace Segregation of Non-Interoperable Aircraft</i></b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<sup>4</sup> Functionality means that the transponders are able to provide 1090ES (ADS-B 'Out') information and are connected to a suitable source of GPS information i.e. 1090ES (ADS-B 'Out') has to be 'populated' with GPS data to the required standard. This standard is explained at Page E-2 of Annex E in the Partial RIA document.

### [RESPONSE 3 – Comments on the Need for Regulation]

Please indicate your opinion on whether regulatory or non-regulatory measures should be adopted to implement the policy options set out in pages 14 to 18 of the Partial RIA document. Please indicate your opinion on all options:

Option		Mandatory Equipage Through Changes to Regulations	Voluntary Equipage	No Opinion
2	SSR Mode S on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	SSR Mode S on all Aircraft	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Full 1090ES (ADS-B 'Out') Functionality with Approved GPS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### [RESPONSE 4 – Comments on the Groups and Sectors Affected]

Other than those already listed in Paragraph 5.1 of the Partial RIA document at Page 19, what other sectors or groups could be affected by the CAA proposals contained in the Partial RIA document? *(Click in the top left-hand corner to enter text.)*

The British Gliding Association (BGA) Ltd is the representative body of some 95 gliding clubs and some 38500 regular and occasional participants in the sport of gliding and is the recognised UK national governing body of gliding that for 57 years has effectively governed all aspects of sport gliding within the UK.

The BGA is recognised as the UK and a European gliding expert body and is consulted on related issues by UK and European government agencies. The BGA is committed to developing and improving standards of safety within the sport and its operating environment and achieves its safety related aims with internal and external stakeholders through the BGA Safety Management System based on ICAO SARPs and good practice in UK, Europe and elsewhere.

In principal, the BGA might support Mode S or other technical equipment in controlled airspace ater considered testing, if suitable equipment becomes available.

The BGA is not listed as a group in paragrpah 5.1 that is affected by this RIA. It is strongly recommended that on this issue the DAP both develops effective communication with the BGA as a major UK airspace stakeholder and recognises the potential negative economic and safety impact of their

recommendations on the BGA Ltd.

## [RESPONSE 5 – Comments on the Potential Benefits of the Proposed Policy Options]

Please indicate whether or not you agree with the potential safety and economic benefits of the proposed policy options that are identified in Paragraph 5.2 from pages 19 to 22 of the Partial RIA document. Please indicate your opinion on all options:

Option		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1	Do Nothing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	SSR Mode S on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	SSR Mode S on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Please indicate whether or not you believe that, in principle, the carriage and operation of SSR Mode S transponders by aircraft throughout UK airspace would improve overall safety levels		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Please provide any supplementary information that you may have on benefits of the policy proposals, or expand on your selected responses. *(Click in the top left-hand corner to enter text.)*

all sailplanes, many of which fly sorties of five to nine hours in duration, maintain their height or climb by gliding in rising air which has either been energised by the sun or by topographical or atmospheric deflection.

normal sailplane flight requires significant and abrupt changes in direction and pitch to obtain energy from the air - a change in height of several hundred feet in a 'zoom' climb is quite normal. the bga believe that mode s should be subject to objective testing to formally determine if any benefit will be obtained by requiring sailplanes to fly with mode s transponders. moreover, with significant numbers of circling and zooming sailplanes around the main gliding centres on a normal summers' day, the effect of concentrations of transponder outputs on atc and acas/tcas systems has yet to be investigated.

of the 2500 uk sailplane fleet, approximately 1800 have carbon fibre structures. these block radio transmissions. for this reason, gliders have radio aerials installed at manufacture within the vertical fin. the mounting of an external transponder aerial poses a significant problem in performance - mounted above the carbon fuselage, the signal may be useful for acas/tcas, but almost invisible to atc, mounted below the fuselage renders it invisible to all traffic above. whilst suitable mode s equipment may in future become commercially available, the technical solution of aerial mounting must be solved to optimise its usage. the bga recommends further technical testing on representative aircraft.

## [RESPONSE 6 – Comments on the Estimated Costs of the Proposed Policy Options]

Please indicate whether or not you agree with the estimated costs that are identified in Paragraph 5.3 from pages 23 to 27 of the Partial RIA document:

Option		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1	Do Nothing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	SSR Mode S on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	SSR Mode S on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3(a)	SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Costs of Equipment Set Out in Tables 5 and 6 of the RIA Document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Please provide any supplementary information that you may have on the costs equipment or the policy proposals, or expand on your selected responses. **(Click in the top left-hand corner to enter text.)**

The economic burden on gliding is significant. It is estimated the total installation economic impact to gliding will be £8m \*, with a continuing airworthiness and licensing burden at Cof A of circa £0.75m (normal Cof A charges will increase for the extra paperwork and electronic installation consideration, plus the actual test fee). The cost will fall on individual owner operators and club participants. The BGA is extremely concerned that the RIA indicates a total economic impact to industry of less than £20m without consulting with stakeholders, nor is clarification offered on how the economic impact to stakeholders will be requested during any subsequent impact assessment process.

The BGA believes strongly that those benefitting from regulation should pay. As such the RIA should consider the economic impact to the commercial airport, ATS providers, commercialair transport industry and treasury as the benefitting stakeholders who should be mandated to take full responsibility for the significant economic burden their activities place on sporting and recreational aviation.

\*Capital cost of units say £1400 x 2500 number sailplanes

500 sailplanes with no existing or minimal electronic circuitry say 500 x £1200 to upgrade

2500 approved installations, with particular reference to aerial location 2500x£1200

CAA certification? say 2500 x £80

Cof A transponder test say 2500 x £200 plus travel to test site (current BGA inspectors will not be able to afford prohibitive capital cost of test equipment)

Travel average 100 miles travel to testing facility for glider trailer at 50ppm x 2500  
Increase in Cof A fee to cover extra electrical installation testing, battery testing, CofA paperwork increase say 2500 x £50  
Total cost £8,050,000  
CofA recurring charge £750,000

In addition it is assumed many sailplanes, which of course cannot generate a power supply and operate at times on sorties of between five and nine hours, will have to upgrade their battery storage and replacement shedule. This has not been included above.

## [RESPONSE 7 – Comments on the Means by Which the Costs of the Proposed Policy Options should be Financed]

Please indicate your views on how the estimated costs of the proposed policy options set out set in pages 23 to 27 of the Partial RIA document should be financed.

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Costs to be met fully by the business aircraft operators on which they fall	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to be met fully by the private aircraft operators on which they fall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Costs to be met fully by funding from Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Costs to be met fully by funding from industry sources such as commercial airlines, ATC providers, Wind Energy, UAVs etc	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to be met fully by funding from a combination of private, business, Government and industry sources in proportion to the benefits that will be realised by those sectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Costs to be subsidised by funding from Government	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to be subsidised by funding from industry sources such as commercial airlines, ATC providers, Wind Energy, UAVs etc	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to be subsidised by funding from a combination of Government and industry sources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide any supplementary information or views that you may have on how the policy proposals should be financed, or expand on your selected responses. **(Click in the top left-hand corner to enter text.)**

In the view of the BGA, the options supplied in response 7 are incomplete.

The BGA would strongly agree to full funding by a PPP comprising commercial airlines, ATC providers, UAV's, commercial airports and Government.

**[RESPONSE 8 – SMALL BUSINESSES ONLY]**

Please indicate the number of employees in your business.

0-4	5-9	10-19	20-29	30-49
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In the table below, please enter the number of aircraft operated by your business and for which you are responsible for equipping with the required systems/avionics:

	Motorised	Non-motorised
Maximum take-off mass of less than 750 kg	0	2
Maximum take-off mass of 750 kg or greater but less than 1,200 kg	1	0
Maximum take-off mass of 1,200 kg or greater but less than 3,700 kg	0	0
Maximum take-off mass of 3,700 kg or greater but less than 5,700 kg	0	0
Maximum take off mass of 5,700 kg or greater	0	0

## [RESPONSE 9 – SMALL BUSINESSES ONLY]

This question refers the small business issues set out in pages 27 to 29 of the Partial RIA document. Please highlight all adverse impacts that the proposed policy options **could** have on your business:

Option		No impact	Minor Impact	Major Impact	Cease trading	Competition Affected
1	Do Nothing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	SSR Mode S on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2(a)	SSR Mode S and 1090ES Capability on all Aeroplanes and Helicopters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	SSR Mode S on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3(a)	SSR Mode S and 1090ES Capability on all Aircraft	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Full 1090ES (ADS-B 'Out') Functionality with Approved GPS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Airspace Segregation of Non-Interoperable Aircraft	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide any additional comments/information to help quantify the financial impact of the proposed policy options on your business and any likely affect on competition. Where appropriate, please suggest any Simplification Measures that could be considered to offset the financial burden. **(Click in the top left-hand corner to enter text.)**

The negative economic impact of installation and continued airworthiness of SSR Mode S equipment and the severely depleted available flight time caused by the power supply requirements required to operate as an SSR Mode S equipped aircraft in a UK-wide known environment would severely limit the operation of our aircraft and gliders which are primarily employed in the training of gliding instructors and sport coaches as an integral element of the BGA SMS. The third party effect is difficult to clarify, however the training need is forecast to increase in the future and any reduction in BGA training capability will negatively impact both economically and in terms of safety management on the 95 member clubs as stand alone businesses.

The BGA SMS is funded from an interdependent business model that meets the airworthiness, operations and sporting needs of all sport gliding in the UK. This BGA, and its integrated Safety Management System, is extremely vulnerable to threats to any of the income streams within the business model.

It will be impossible for the existing gliding Cof A testing facilities to afford the capital cost of Mode S testing equipment. It is possible some gliding maintenance and certification businesses will cease trading if UK registration is moved to France for example, where transponder installations are subsidised.

## **[RESPONSE 10 – Additional Comments and Feedback]**

Please provide any additional comments or information that you feel the CAA should take into account.

*(Click in the top left-hand corner to enter text.)*

It is the BGA's intention to continue to work closely with the CAA (and others) in progressing the issue of aviation safety. The BGA has sympathy with the hypothesis that new technologies might be able to offer valuable improvements in aviation safety, but the importance of thorough assessments prior to adopting and implementing new policies/legislation has led to significant BGA concern that the current proposal does not represent an appropriate starting point given fundamental and practical operational, technical and economic issues.

The BGA will expect this consultation to provide feedback to the BGA regarding the responses received and how the consultation process influenced the policy recommendation that is expected as an output from this RIA. This is of course particularly important as up until this RIA was published, the DAP had advised the BGA that gliders would receive a general exemption from the requirement to carry SSR Mode S transponders.

Sailplanes present a case for exemption because of their particular technical structure and modus operandi.

The BGA can supply an expert opinion developed in consultation with the European Gliding Union regarding Mode S in controlled airspace as mandated by Eurocontrol, but discussing the RIA content via this document that has been constructed in a contrived manner to drive the answers towards a supporting a specific outcome is less than satisfactory.

The BGA strongly believes a program of appropriate testing on equipment and gliders is required before any mandated introduction of Mode S to the UK sailplane fleet. ATS colleagues have already suggested 'off the record' that some gliding centres will have so many blips as to make whole areas unworkable and therefore request transponders to be switched off. However, there is no suggested mandate for radio, or communication with ATC, so at what position would they be switched on? On a typical summers' day soaring, it is commonplace for gliders to soar tasks of well over 500km within uncontrolled airspace.

Potential technical solutions need more exploration. For example, the BGA would like to encourage development of a cost comparison with CAA estimates for 100% SSR Mode S and a hybrid GPS-based system for sporting and recreational aircraft and restrict mandatory Mode S to aircraft above a MTOM break. This comparison could encompass the possibility of developing a hybrid ADS-B/FLARM data transmission to aircraft fitted with TCAS to provide anti-collision cues.

In 2005, the BGA hosted the Junior Gliding World Championships with visitors from all over the world. With mandated Mode S in all UK airspace, international events would be impossible within the UK, with the associated loss of social, economic and international kudos.

## **[RESPONSE 11 – Publication of Consultation Responses]**

For consultation exercises such as this, the CAA by default makes all responses/information available on request. It is accepted, that under exceptional circumstances, this may not be conducive to open/frank responses. Consequently, please indicate here if you desire to have your personal details withheld in the event of any general enquiry against this consultation:

	Yes
Please withhold my personal details in the event of any general enquiry	<input type="checkbox"/>

*[At the end of the consultation period for the Partial RIA document, all comments and feedback will be analysed. The policy proposals will be reviewed in light of the feedback received from the public consultation and a Full RIA document will be prepared for submission to the Secretary of State for Transport. The Full RIA will contain any updated information, together with a recommendation on how to proceed and what policy option should be adopted. The consultation feedback will also be recorded in the Full RIA so that it can be taken into account by the Minister. The intention is to submit the Full RIA document and, if appropriate, any draft regulatory amendments to the Air Navigation Order 2005 by the end of 2006.]*

**Thank you very much for taking the time to complete this consultation response document. All responses will be analysed and taken into account when forming the final recommendations to Government.**