Directorate of Airspace Policy

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

Name:								
Organisation:								
Postal Address:								
Telephone:								
Email:								
Group/Sector:	**Aerial Work**	**Air Taxi**	**Air Ambulance**	**Aircraft Leasing**	**Airline Operator**	**ANSP**	**Avionics Manufacturer**	**Avionics Vendor**
	☐	☐	☐	☐	☐	☐	☐	☐
	Flying Club	**Flying School**	**Freight Operator**	**Government**	**Maintenance Organisation**	**Private Pilot**	**User Group**	**Other**
	☐	☐	☐	☐	☐	☐	☐	☐

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 a 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. 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

[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
Issue 1: Replacement of 'Classical' SSR	☐	☐	☐	☐	☐
Issue 2: Need to Improve Collision Avoidance Measures	☐	☐	☐	☐	☐
Issue 3: International Obligations and Co-operation	☐	☐	☐	☐	☐
Issue 4: Support for Future Surveillance Technology	☐	☐	☐	☐	☐
Issue 5: Efficiency of the Use of Lower Airspace	☐	☐	☐	☐	☐
Issue 6: Integration of UAV Operations	☐	☐	☐	☐	☐
Issue 7: Impact of Wind Turbines on Aviation	☐	☐	☐	☐	☐
Issue 8: Spectrum Availability for Primary Radar	☐	☐	☐	☐	☐

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

Continued on additional sheet Yes / No

[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	Views on the Presented Options	Strongly Support	Support	No Opinion	Oppose	Strongly Oppose
1	**Do Nothing**	☐	☐	☐	☐	☐
2	**SSR Mode S on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
2(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability[1] on all Aeroplanes[2] and Helicopters**	☐	☐	☐	☐	☐
3	**SSR Mode S on all Aircraft[3]**	☐	☐	☐	☐	☐
3(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft**	☐	☐	☐	☐	☐
	Views on Other Potential Options Currently Discounted by the CAA					
2(a)/3(a)	***Full 1090ES (ADS-B 'Out') Functionality[4] that is 'Populated' with an Approved GPS***	☐	☐	☐	☐	☐
2(a)/3(a)	***Full 1090ES (ADS-B 'Out') Functionality on IFR Flights Only***	☐	☐	☐	☐	☐
2(a)/3(a)	***Full 1090ES (ADS-B 'Out') Functionality on Aeroplanes and Helicopters Only***	☐	☐	☐	☐	☐
-	***Non-SSR Options such ADS-B via VDL Mode 4 or UAT and FLARM***	☐	☐	☐	☐	☐
-	***Airspace Segregation of Non-Interoperable Aircraft***	☐	☐	☐	☐	☐

[1] 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.
[2] 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.'
[3] 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.'
[4] 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**	☐	☐	☐
2(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters**	☐	☐	☐
3	**SSR Mode S on all Aircraft**	☐	☐	☐
3(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft**	☐	☐	☐
	Full 1090ES (ADS-B 'Out') Functionality with Approved GPS	☐	☐	☐

[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.)***

Continued on additional sheet Yes / No

[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**	☐	☐	☐	☐	☐
2	**SSR Mode S on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
2(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
3	**SSR Mode S on all Aircraft**	☐	☐	☐	☐	☐
3(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft**	☐	☐	☐	☐	☐
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		☐	☐	☐	☐	☐

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.)***

Continued on additional sheet Yes / No

[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**	☐	☐	☐	☐	☐
2	**SSR Mode S on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
2(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
3	**SSR Mode S on all Aircraft**	☐	☐	☐	☐	☐
3(a)	**SSR Mode S and 1090ES (ADS-B 'Out') Capability on all Aircraft**	☐	☐	☐	☐	☐
	Costs of Equipment Set Out in Tables 5 and 6 of the RIA Document	☐	☐	☐	☐	☐

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.)***

Continued on additional sheet Yes / No

[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	☐	☐	☐	☐	☐
Costs to be met fully by the private aircraft operators on which they fall	☐	☐	☐	☐	☐
Costs to be met fully by funding from Government	☐	☐	☐	☐	☐
Costs to be met fully by funding from industry sources such as commercial airlines, ATC providers, Wind Energy, UAVs etc	☐	☐	☐	☐	☐
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	☐	☐	☐	☐	☐
Costs to be subsidised by funding from Government	☐	☐	☐	☐	☐
Costs to be subsidised by funding from industry sources such as commercial airlines, ATC providers, Wind Energy, UAVs etc	☐	☐	☐	☐	☐
Costs to be subsidised by funding from a combination of Government and industry sources	☐	☐	☐	☐	☐

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.)***

Continued on additional sheet Yes / No

[RESPONSE 8 – SMALL BUSINESSES ONLY]

Please indicate the number of employees in your business.

0-4	5-9	10-19	20-29	30-49
☐	☐	☐	☐	☐

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		
Maximum take-off mass of 750 kg or greater but less than 1,200 kg		
Maximum take-off mass of 1,200 kg or greater but less than 3,700 kg		
Maximum take-off mass of 3,700 kg or greater but less than 5,700 kg		
Maximum take off mass of 5,700 kg or greater		

[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**	☐	☐	☐	☐	☐
2	**SSR Mode S on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
2(a)	**SSR Mode S and 1090ES Capability on all Aeroplanes and Helicopters**	☐	☐	☐	☐	☐
3	**SSR Mode S on all Aircraft**	☐	☐	☐	☐	☐
3(a)	**SSR Mode S and 1090ES Capability on all Aircraft**	☐	☐	☐	☐	☐
	Full 1090ES (ADS-B 'Out') Functionality with Approved GPS	☐	☐	☐	☐	☐
	Airspace Segregation of Non-Interoperable Aircraft	☐	☐	☐	☐	☐

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.)***

Continued on additional sheet Yes / No

[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.)

Continued on additional sheet Yes / No

[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	☐

[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.