regulatory review of general aviation in the UK

REGULATORY REVIEW OF GENERAL AVIATION IN THE UNITED KINGDOM

This Review Group comprised members of the General Aviation community and the Civil Aviation Authority. It has, inter alia:

- **Reviewed the current General Aviation concerns on regulatory matters.**
- **Detailed sectoral trends and future developments.**
- **Determined the accident rate for UK General Aviation.**
- **Examined the present regulatory structure and the likely effects of the European Aviation Safety Agency.**
- **Considered the process for consultation taken between the Civil Aviation Authority and the General Aviation community.**

It has proposed 19 recommendations which, if implemented, will improve the regulatory environment.

All of the recommendations, if accepted, will be considered by a revised General Aviation Consultative Committee, comprising members of the General Aviation community and the Civil Aviation Authority.

Report to the CAA Board

June 2006

Members of the General Aviation Regulatory Review Group were:

General Aviation

Captain A Robinson	- Guild of Air Pilots and Air Navigators (GAPAN)
Professor L Balthazor	- Royal Aeronautical Society (RAeS) & General Aviation Safety Council (GASCo)
Mr C Finnigan	- British Microlight Aircraft Association (BMAA)
Mr T Hardie	- British Hang Gliding and Paragliding Association (BHPA)
Mr P Norton	- British Helicopter Advisory Board (BHAB)
Mr D Roberts	- British Gliding Association (BGA), Royal Aero Club of the UK (RAeC), Europe Air Sports (EAS)
Mr M Robinson	- Aircraft Owners and Pilots Association (AOPA)
Mr J Thorpe	- on behalf of Professor Balthazor

CAA

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Acknowledgements

The Civil Aviation Authority wishes to express its appreciation to those General Aviation members of the Regulatory Review Group for their support and contribution to this Review which was undertaken within extremely demanding timescales and which could not have been completed without their full co-operation.

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1. EXECUTIVE SUMMARY & RECOMMENDATIONS

1.1 INTRODUCTION

On 15 June 2005 the Civil Aviation Authority (CAA) Chairman invited, inter alia, the UK General Aviation (GA) community and the Department for Transport (DfT) to join the CAA in carrying out a Strategic and Regulatory Review of GA in the United Kingdom (UK).

In making the proposal the Chairman considered:

- The concerns expressed by the GA community, following the CAA/Industry Joint Review Team study on Future Costs and Charges.
- The need to re-engage with the GA community and to revitalise and enhance the relationship.
- The need to demonstrate to the GA community that the CAA is fully committed to the principles of better regulation.
- This was an essential element in the CAA's programme of continuous improvement.

This was the first time such an activity had been undertaken and the GA community welcomed the initiative. Following discussions within the CAA it was agreed, by the CAA Chairman, that separate review groups would be formed to undertake the Strategic and Regulatory Reviews. The Chairmen of each Review Group kept in close contact throughout the process and there was some common Industry and CAA membership across the two Review Groups to ensure consistency.

The aim of the Regulatory Review was to assess the current framework and propose a preferred framework for future UK GA regulation and, where necessary, to make appropriate recommendations.

The Group was chaired by Captain D J Chapman of the CAA's Safety Regulation Group (SRG) and a total of nine meetings were held between September 2005 and May 2006.

The hallmark of this Review was the transparent manner in which all approved data, reports and minutes of meetings were placed on a specific Internet site for the general public to observe and to comment upon progress of the Reviews; in the event few comments were received.

The definition of GA was subject to considerable debate but it was concluded:

For the purpose of this review GA is considered to mean a civil aircraft operation other than a Commercial Air Transport (CAT) operation.

1.2 OBJECTIVES AND SCOPE OF THE REVIEW

The objectives of the review were to agree and record:

a) A description and definition of GA in the UK.

b) The history of regulation within the UK, the existing UK policy on GA regulation and best practice guidelines.

c) Sectoral trends and major and future developments which are likely to affect UK GA.

d) The accident rate for UK GA over the past 10 years compared with the rates in selected other European States and the USA. Appropriate safety targets for GA were to be considered.

e) Other regulatory models used within Europe and elsewhere.

f) The effects of the European Aviation Safety Agency (EASA) (through Regulation (EC) 1592/2002) upon future UK regulation of GA.

g) Methods and effectiveness of consultation and dialogue between GA interests and CAA/Government/regional bodies.

h) Proposed options for future UK regulation of GA including details of:

- Possible legal changes.
- Costs of administration.
- Costs to industry.
- Advantages and disadvantages of each proposal.
- Cost effectiveness and risk analysis.

The scope of the review excluded the following items:

a) Fractional ownership.

b) Unmanned Aerial Vehicles (UAVs).

c) Foreign-registered aircraft resident in the UK.

1.3 SUMMARY OF RECOMMENDATIONS

The Regulatory Review Group has made 19 recommendations shown below:

Recommendation 1

The Regulatory Review Group recommends that the Board takes note of the disadvantage to UK GA compared with other regulatory models that do not seek to recover the total GA regulatory cost from the Industry.

Context - The UK is almost alone in Europe in seeking full cost recovery (including Return on Capital Employed) from the aviation Industry. This places an additional cost burden on the GA aviation Industry compared with Europe and affects the competitiveness of certain sectors within GA in the UK. **(para 4.16.1)**

Recommendation 2

The Regulatory Review Group recommends that, when the output from the EASA Working Groups MDM.032 and M.017 is mature, the General Aviation Consultative Committee (GACC) assesses the effects of any likely changes to Regulation (EC) 1592/2002 as they affect GA aircraft and activity.

Context - EASA Working Group MDM.032 is debating the issues associated with GA regulation (and M.017 will start shortly). **(para 5.4)**

Recommendation 3

The Regulatory Review Group recommends that the CAA approach to regulating non-EASA aircraft should be investigated as part of the GACC's review of the EASA proposals.

Context - Whilst EASA will detail how GA is to be regulated, this will only apply to EASA aircraft. **(para 5.4)**

Recommendation 4

The Regulatory Review Group recommends that the CAA, with input from Industry, investigates methods for improving safety education amongst the GA community generally. In particular, the Group recommends that the CAA facilitates safety education for GA pilots through, inter alia, the medium of reinstated hard copy Safety Sense Leaflets.

Context - The analysis conducted by the Regulatory Review Group indicated a need for improved pilot education. In particular, loss of control in visual conditions was the most common accident category for all classes of aircraft. For aircraft other than helicopters, lack of flight handling skills and lack of training, currency and/or experience were the most frequently allocated factors for fatal accidents involving loss of control. **(para 6.3)**

Recommendation 5

The Regulatory Review Group recommends that the CAA should use the Group's GA fatal accident statistics to identify high-risk areas for attention in flight training and biennial reviews.

Context - The analysis showed that the most common accident category for helicopters was loss of control in poor visibility and/or night conditions, which tended to involve pilot disorientation, whilst many of the fatal aeroplane accidents involved stall/spin scenarios. **(para 6.3)**

Recommendation 6

The Regulatory Review Group recommends that the CAA carries out further work to investigate possible correlation between regulatory regime and GA Fatal Accident Rates (FARs) and causal factors. One area of investigation could be the licensing/training regime.

Context - The estimated FAR per 100,000 hours for the group of aircraft in the conventional aeroplane full regulation category were statistically better than those for aircraft in the devolved and self-regulation groups. In comparison, the FAR for fully regulated helicopters is very similar to self-regulated gliders, paragliders and partially devolved microlights. **(para 6.3)**

Recommendation 7

The Regulatory Review Group recommends that the CAA and Industry campaign for a common standard for the collection of fatal GA accident information, including causal factors, from European Member States. This should also include an estimate of utilisation so that FARs can be calculated.

Context - Meaningful comparison of the UK with other States was not possible due to differences in the definition of GA and the lack of available information, particularly utilisation. **(para 6.3)**

Recommendation 8

The Regulatory Review Group recommends that the CAA carries out further work to determine the most appropriate form of safety forecast/target to be used for GA, including whether GA should be divided into separate classes of aircraft or types of activity. This work should include a review of systems used in other States.

Context - The current CAA methodology for producing safety forecasts was considered to be appropriate. Safety targets are, however, notoriously difficult to establish and many questions remain as to their final form. **(para 6.5)**

Recommendation 9

The Regulatory Review Group recommends that the CAA should report the results of its Global Navigation Satellite System (GNSS) Approach Trials as soon as practicable, with a view to expediting approval of GNSS approaches to all appropriate aerodromes used by GA aircraft, if so indicated by the trial results.

Context - The CAA is currently trialling GNSS approaches and is due to publish the results in early 2007. The results are expected to enable the CAA to assess whether the use of GPS approaches is safe and practicable in terms of design and flight management aspects, and is therefore fit for approval. **(para 7.2.3)**

Recommendation 10

The Regulatory Review Group recommends that the CAA should ensure, through monitoring, that any proposed increases in controlled airspace do not exceed the minimum required for demonstrated safety reasons and to satisfy the environmental considerations. In addition, the CAA should act to ensure that adequate and equitable access to airspace is provided for and achieved and have an active programme of periodic review of the need for existing controlled airspace.

Context - UK airspace is a national asset and private sector Air Navigation Service Providers (ANSPs) are given the privilege and responsibility of managing it for all users. Adequate and equitable access to airspace should be achieved by an active CAA programmed review of controlled airspace requirements and monitoring of ANSP infrastructure, eg monitoring of access refusals to ensure ANSPs give appropriate priority to transit and GA traffic. **(para 7.3.1)**

Recommendation 11

The Regulatory Review Group recommends that the CAA invites the Ministry of Defence (MoD) to review its policy on access to military aerodromes and consider addressing the issue of military controllers understanding GA (and vice versa) through the medium of Military/Civilian Air Safety Days.

Context - There is a reduction in GA activity at MoD aerodromes due to complicated access and indemnity requirements. **(para 7.3.4)**

Recommendation 12

The Regulatory Review Group recommends that the CAA considers, in conjunction with the appropriate Industry bodies, re-aligning the current UK classification of sailplanes with the European model.

Context - UK sailplanes fall into four different categories compared to just two categories in Europe. **(para 7.3.5)**

Recommendation 13

The Regulatory Review Group recommends that, following completion of the MDM.032 activity and associated EASA Working Groups, the CAA should review its Certificate of Airworthiness (C of A)/Permit to Fly (PtF) policy to establish, where possible and appropriate, compatibility with future EASA policy.

Context - Several EASA Working Groups are currently debating Permits to Fly (PstF), the list of Annex II aircraft and the outcome of these groups will impact on future CAA policy. **(para 7.3.6)**

Recommendation 14

The Regulatory Review Group recommends that the CAA and the GA community seek to influence, at every opportunity, the Commission, EASA and the European Parliament to ensure that the detailed preparatory work to extend the remit of EASA is undertaken at an appropriate pace to ensure that the future regulatory structure is both pragmatic and viable before ceding legal competence to EASA.

Context - The Regulatory Review Group is concerned that the Commission and EASA are moving too fast in trying to extend the remit of EASA to cover Operations and Licensing matters. **(para 8.1.1)**

Recommendation 15

The Regulatory Review Group recommends that the Industry/CAA officials on the MDM.032 Working Group should endeavour to present unified views thereby influencing the debate on how EASA should regulate GA.

Context - The establishment of the Regulatory Review Group in September 2005 has allowed the GA community and CAA to debate the options for a future regulatory structure. There is considerable agreement between the parties and it is therefore important that, wherever possible, a unified view is expressed in the EASA MDM.032 Working Group by the UK members. **(para 8.1.1)**

Recommendation 16

The Regulatory Review Group recommends that Industry considers further devolution and/or delegation, in conjunction with the CAA, in the issue, renewal of PtF or Cs of A, modifications and reissue of Certificates of Validity (Cs of V) for non-EASA aircraft.

Context - A CAA Feasibility Study has shown that there appears to be scope for further devolution or some delegation, to the GA community/approved companies, in some certification areas for non-EASA aircraft. **(para 8.6)**

Recommendation 17

The Regulatory Review Group recommends that the list of GA consultative fora, their participants and Terms of Reference (ToR) should be placed on the CAA website.

Context - The CAA consults extensively with many parties but the details of these groups are not transparent to the GA community. **(para 9.5)**

Recommendation 18

The Regulatory Review Group strongly endorses the concept of an Issues Log and recommends that this should be taken forward as a permanent mechanism for consideration by the GACC.

Context - The GA community has many issues with CAA regulation and would like to propose ideas for improvement and considers that an Issues Log would enable them to represent their concerns and ideas, formally, to the CAA. **(para 9.7.1)**

Recommendation 19

The Regulatory Review Group recommends that, whilst the National Air Traffic Management Advisory Committee (NATMAC) is in the process of reviewing its ToR, the GACC should also undertake a similar exercise. In addition, it is recommended that the membership of GACC should be expanded to include the DfT and, if deemed necessary, other CAA Groups such as the Economic Regulation Group (ERG).

Context - Industry and CAA agree that, for regulatory matters, NATMAC and the GACC should be the principal focal points for GA debate. **(para 9.7.2)**

1.4 REGULATION - THE PRESENT SYSTEM

1.4.1 History of Regulation Within the UK

The CAA came into being on 1 April 1972. Prior to that date aviation was seen as a trade rather than a transport issue. Since 1982, the CAA has been required to cover the cost involved in performing its regulatory functions and in the provision of assistance and advice, from those being regulated or receiving the advice. The functions of the CAA are set out in Section 3 of the Civil Aviation Act 1982.

For the majority of GA these regulatory provisions are limited to providing assurance of:

- appropriate standards of airworthiness,
- pilot qualification,
- the rules for the movement of aircraft, and
- equipment to be carried.

There is no CAA involvement in the oversight of GA operations, except for certain flying training organisations - compliance being the responsibility of the operator and commander of the aircraft.

In addition to the Civil Aviation Act 1982, European Directives and Regulations are applicable. The first significant piece of European aviation safety legislation was EU Regulation 3922/91 to which was annexed a number of Joint Aviation Requirements (JARs) developed by the Joint Aviation Authorities (JAA). Much more significantly in 2002 came the basic EASA Regulation 1592/2002 under which two Implementing Rules (IRs) have been made in the form of Commission Regulation 1702/2003 dealing with certification (and to which is annexed Part 21) and Commission Regulation 2042/2003 (dealing with continuing airworthiness maintenance under which Parts M, 145, 66 and 147 are annexed).

1.4.2 EASA and Non-EASA Aircraft

All aircraft are designated as EASA aircraft except for two categories which are not subject to the basic EASA Regulation or its IRs. These are:

a) EU Regulation 1592/2002 Annex II aircraft eg amateur-built, ex-military, microlights and historical aircraft.

b) State aircraft ie aircraft engaged in military, customs, police or similar services.

1.4.3 Summary of Current UK Regulation

The present system for the regulation of UK GA is examined in this report together with a review of other regulatory models used throughout the world. It was concluded that the UK system of regulation goes further than most NAAs in devolving tasks to separate organisations; Germany appears close to the UK in this regard. The UK's unregulated status of gliding airworthiness and pilot licensing (although now changing due to EASA) is an example of a successful pragmatic UK approach.

1.4.4 Better Regulation

The CAA is a strong supporter of the Better Regulation initiatives and, whilst it considers that it already complies with many aspects of the current Government initiatives, it continues to strive for excellence in this field. The CAA also continues to look at opportunities for reducing the regulatory burden imposed upon the GA community commensurate with statutory safety responsibilities. The most recent example of this is the recommendation to the DfT, in April 2006, to partially deregulate single-seat microlights (up to 115 kgs empty weight).

1.5 REGULATION - THE INFLUENCE OF THE EASA

Future EASA regulation will apply to all UK aircraft except those outside the scope of the Regulation (see paragraph 1.4.2 above). EASA will therefore have a fundamental influence on the future regulation of the GA community.

The GA community and the CAA are largely in agreement about the possible impact of EASA and the IRs on future GA regulation in the UK. However, the proposed amendment to Regulation (EC) 1592/2002, dated 16 November 2005, is very unclear in many areas. To assist EASA in clarifying matters, the Agency has instituted Working Group MDM.032, comprising representatives from Industry and some NAAs, to examine, in detail, future regulatory arrangements. The UK (both GA community and the CAA) is well represented on this Group and a common position between Industry and the CAA has been established to take forward into negotiations within this Group.

Working Group MDM.032 is tasked with, amongst other matters:

- Developing a concept for the regulation of aircraft other than "complex motor-powered aircraft"[1] when used in non-commercial activities.
- Developing IRs for the issue of a Recreational Pilot's Licence (RPL).
- Developing general IRs for the operations of the concerned aircraft.

[1] Complex is defined in the proposed amendment to Regulation (EC) 1592/2002.

Once the output of MDM.032 is considered mature then the CAA and GA community should examine the impact on the current UK regulatory model. Notwithstanding the existence of the MDM.032 Working Group, the Review considered various options for the future regulation of UK GA. For EASA aircraft no firm conclusions were drawn and the Review Group preferred to wait until the output of MDM.032 was known. However, for the non-EASA aircraft there was universal agreement that Industry should be encouraged to consider further devolution, in conjunction with the CAA, in the area of issue and renewal of PstF or Cs of A.

1.6 THE ACCIDENT RATE & SAFETY TARGETS FOR UK GENERAL AVIATION

1.6.1 Fatal Accident Rate

The FAR is one measure to determine how the GA community compares, in safety matters, to other activities. Other measures could be used but the data on the number of fatal accidents is highly accurate and this determinant is used widely in other comparative studies. It should be noted however that best estimates are used for the numbers of hours flown. Nevertheless the FAR remains the most reliable measure available.

A comprehensive study of UK GA fatal accidents was undertaken for a 10-year period from 1995 to 2004. The study detailed 235 fatal accidents involving UK GA aircraft resulting in 340 fatalities. The estimated FAR per 100,000 hours flown ranged from 1.3 for aeroplanes to 45.8 for gyroplanes. The rates for all other classes of aircraft (helicopters, microlights, gliders, self-propelled hang gliders, hang gliders and paragliders) were below 4 fatal accidents per 100,000 hours flown. It was encouraging to note that the number and rate of aeroplane accidents showed a decreasing trend during the second half of the study period. Meaningful comparison of the UK data with other foreign States was not possible due to differences in the definition of GA and a lack of available information, particularly utilisation. However, the estimated FARs for the various classes of UK GA were found to be similar to those for Australia and the USA and better than the rate for most European States.

1.6.2 Fatal Accident Rate versus Regulatory Environment

The estimated FAR per 100,000 hours for the group of aircraft in the conventional aeroplane full-regulation category was statistically better than that for aircraft in the devolved and self-regulation groups. However, it would not necessarily be correct to attribute this difference solely to the amount of regulation in place as, for example, the FAR for fully-regulated helicopters is very similar to self-regulated gliders, paragliders and partially devolved microlights. There was no difference, at a 95% level of statistical confidence, between the FARs for the group of aircraft in the devolved and self-regulation categories. Further study would be required to establish any such relationship.

1.6.3 Causal Factors in Accidents

Loss of control in visual conditions was the most common accident category for all classes of aircraft, apart from helicopters, and was allocated in 40% of fatal accidents. Many of these fatal accidents involved stall/spin scenarios.

The most common accident category for helicopters was loss of control in poor visibility and/or night conditions, which tended to involve pilot disorientation.

Lack of flight handling skills and lack of training, currency and/or experience were the most frequently allocated factors; both overall and for fatal accidents involving loss of control in Visual Meteorological Conditions (VMC).

1.6.4 Safety Forecasts for UK General Aviation

The current methodology for producing GA safety forecasts was considered to be appropriate. Lack of time precluded further investigation into other, possibly better, methods of deriving forecasts and subsequent targets and it has been recommended that this be accomplished outside the GA Regulatory Review.

Any future discussion on the most appropriate form of GA safety forecast/target would need to address, inter alia, the following questions:

- Should there be an overall GA forecast/target or should GA be divided into separate classes of aircraft or types of activity?
- What measure should be used (FAR, fatality rate, etc)?
- If a European GA forecast/target was to be introduced that was less strict than that currently observed in the UK, should an increase in the FAR be tolerated even if it was still below the acceptable European value?

1.7 SECTORAL TRENDS & OTHER MAJOR DEVELOPMENTS LIKELY TO AFFECT THE REGULATION OF UK GENERAL AVIATION (EXCLUDING EASA)

1.7.1 Sectoral Trends

There has been a steady increase in the number of UK-registered GA aircraft over the last 10 years. This has been accompanied by an unquantifiable increase in the number of UK based foreign-registered GA aircraft, particularly on the US register. Over the past 10 years the total number of hours flown by GA aircraft has remained remarkably steady at approximately 1.4 million flying hours per annum. Two thirds of GA aircraft are privately owned but business use (including flying training) accounts for two thirds of the hours flown. Over the last 10 years there has been a marked change in the utilisation of airfields. The development of some regional airports has had a negative impact on GA - from hours restrictions imposed to higher landing, parking and mandatory user fees. However, a number of small aerodromes (including private strips) have seen increases in their utilisation. It is notable that instrument flying training is becoming more difficult due to restricted access and the increased charges, as this activity tends to be carried out at the larger airfields with the necessary infrastructure.

The total number of pilots licensed to fly powered aircraft in the UK is 47,160. Of these, 19,036 are professional licence holders and 28,124 are private pilots. Out of the private licence holders, 3,394 hold National Private Pilot's Licences (NPPLs). Since 1998 the number of Private Aeroplane Licences issued per annum has been declining whereas the number of Professional Licences issued has been reasonably steady over the past 5 years. It has to be remembered that many professional licence holders also use that licence to fly privately, and there are 8,100 gliding and around 7,000 foot launched pilots who do not need a licence.

1.7.2 Major Developments Likely to Affect Regulation of UK General Aviation (Excluding EASA)

Introduction

Technological change is taking place currently at an ever-increasing rate, in all sectors of the aviation Industry. It is likely that emerging and future technological developments will have a significant impact on GA. Examples of currently emerging technologies include: powerplant developments (such as diesel aero engines), electronic flight bags, glass cockpit instrumentation systems and UAVs. In order to keep abreast of such developments, so that appropriate strategies and policies may be formulated, it will be necessary for informed and apposite dialogue to take place between the GA industry and the CAA.

The topics detailed below are an example of the technological issues facing the GA community. All of these issues will have associated regulatory challenges and will require attention by the CAA.

Mode S

Most sectors of GA are very concerned about the potential cost of Mode S Lightweight Transponders, compared to the benefits they are likely to provide to the purchaser, particularly when applied to very lightweight and inexpensive aircraft.

A Regulatory Impact Assessment (RIA) was published by the CAA in June 2006.

Global Navigation Satellite System (GNSS) Instrument Approach Procedures

GNSS instrument approach procedures are now widely available in the US with 1,178 stand-alone procedures published and 3,466 other Area Navigation (RNAV) procedures capable of use by Global Positioning System (GPS)-driven RNAV equipment. To a lesser extent this is also the case in other countries throughout the world, including in Europe. The GPS signal is free to use and there is reasonably priced GPS equipment for GA aircraft. In 2006 there are 2,811 aircraft on the UK register with a Maximum Take-Off Weight (MTOW) of less than 5,700 kgs with GNSS equipment installed. This represents a sizeable proportion of the UK-registered fleet that is capable of transport and training operations.

The CAA is trialling six GNSS approach procedures to be flown by GA aircraft in VMC. The results are due to be published in early 2007, with the aim of allowing the CAA to assess whether GNSS approaches are safe to introduce as permanent procedures.

Very Light Jets (VLJs)

There is a new sector developing, mainly led in the US, for very light “personal” jets. A handful of manufacturers will be bringing these to the market within the next few years. Such aircraft typically have a four-seat cabin and cost in the region of £0.5m–£1m, with lower operating costs than other aircraft with comparable performance. VLJs could be expected to operate out of smaller aerodromes that are presently the preserve of the lower end of GA, including recreational flying, as well as flying in the airways system at high altitudes along with CAT operations. Regulatory issues associated with VLJs include training and licensing.

Access to Airspace

Increases in controlled airspace at regional airports have the potential to create choke points in the open Flight Information Region (FIR), if adequate access arrangements for GA traffic are not in place.

UK airspace is a national asset and private sector ANSPs are given the privilege and responsibility of managing it for all users. Adequate and equitable access to airspace should be achieved by an active CAA programmed review of controlled airspace requirements and monitoring of ANSP infrastructure, eg monitoring of access refusals to ensure ANSPs give appropriate priority to GA traffic.

Microlight Aeroplanes

From investigations it appears that some airfields still refuse to accept microlights/flexwing microlights. It is understood that the BMAA is continuing to campaign for all airfields that accept GA traffic to accept microlight aeroplanes.

Light Aviation Airports Study Group (LAASG)

The recent LAASG recommended that detailed proposals to remove the requirement for certain flying training to be conducted at licensed aerodromes be developed together with alternative arrangements, eg an Industry Code of Practice supplementing JAR-FCL in order to maintain safety levels for flying training. The LAASG also recommended a review of Article 126 of the Air Navigation Order (ANO) 2005 and a review of the Rescue and Fire Fighting Service (RFFS) requirements and light category aerodromes. A two-tier consultation process on these proposals is to be conducted in late 2006.

Military Aerodromes

The GA community suggests that access to military aerodromes for GA aircraft is becoming more expensive due to complicated access and indemnity requirements. This has led to a reduction in GA activity at these aerodromes and a consequent reduction in understanding of GA issues by the MoD.

Classification of Sailplanes

In the UK, sailplanes fall into four different categories: gliders, self-sustaining motor gliders, self-launching motor gliders and touring motor gliders, each of which has different training and licensing requirements. Elsewhere in Europe such aircraft fall into just two categories: sailplanes and powered sailplanes. The BGA proposes an alignment of the UK classification of sailplanes with the European model.

Qualification Criteria for Certificate of Airworthiness versus Permit to Fly

The ANO states that an aircraft shall not fly unless it possesses a C of A. This follows from the normal process that requires an aircraft to be designed and certificated to certain prescribed standards. Accordingly such aircraft, whether built in the UK or elsewhere, will be designed against a suitable code or certification specification and will usually be granted a Type Certificate and each example of that aircraft type issued with a C of A. CAA policy has therefore largely been focused on the premise that if an aircraft can qualify for a C of A it should hold one. For many years however, a number of aircraft that were the subject of Type Certificates in other countries have been imported into the UK and have been issued with a PtF for a variety of reasons.

As a consequence of EASA and the introduction of European legislation, this policy has been reviewed and the acceptance of such aircraft for a PtF upon import has stopped. These aircraft are now required to qualify for an EASA or National C of A as appropriate. It is clear that since many of these aircraft can be considered as vintage types, they potentially fall under the criteria set by EASA for Annex II aircraft. The reviews and discussions currently being conducted by EASA on such vintage types, as part of the review of Annex II to Regulation (EC) 1592/2002, and in the EASA Part 21 21.023 PtF/Restricted C of A Working Group, may well have an impact upon what the CAA is required to do in relation to these aircraft.

1.8 REGULATION - PROPOSED OPTIONS FOR UK REGULATION

1.8.1 Proposed Options - EASA Aircraft

The future UK regulatory environment for those GA aircraft for which EASA has responsibility is unclear at present. The proposed amendment to Regulation (EC) 1592/2002 contains many concepts which the CAA and Industry agree should enhance regulatory options if appropriately implemented. These include:

- The use of Qualified Entities.
- The use of Assessment Bodies.
- The use of a sub-ICAO private pilot licence.
- The principle of regulatory proportionality commensurate with risk.

1.8.2 EASA Aircraft

There is considerable concern, within the GA community and the CAA members of the Regulatory Review Group, that a proposed amendment to Regulation (EC) 1592/2002 is being rushed through the legislative process without due consideration being given to all the issues affecting the GA community. An example of this is the formation of the EASA Working Group MDM.032. This Group has been given an extremely challenging timescale in which to complete its work on the future regulatory structure for the GA community within Europe. Many of the UK Group members on MDM.032 consider that to produce a tenable solution within these timescales is impossible. The Regulatory Review Working Group members also consider that the present difficulties experienced by EASA, in certification matters, are about to be replicated if the extension to Regulation (EC) 1592/2002 is granted without taking appropriate time in which to consider all the implications of the proposals.

The work of the GA Regulatory Review Group has been important in establishing a common UK Industry/CAA view on how EASA should regulate the GA sector.

1.8.3 Proposed Options - Non-EASA Aircraft

As part of the SRG Costs and Charges Joint Review Team activity, a proposal (GAMTA/01) was made by Industry, that approval of non-EASA aircraft be in effect devolved by the CAA either by using the existing Popular Flying Association (PFA) model or by establishing partnerships with external bodies, while retaining certain CAA core competencies. The recommendation that a Feasibility Study be added to the 2005/06 Business Plan was acted upon (SRG Business Plan 2005/2006, item 8.2.1.6). The Feasibility Study detailed a number of areas where changes in working practices may be possible as suggested in the GAMTA/01 action. Further work will be necessary to examine these opportunities in more detail.

Further devolution depends upon the sectors of Industry having the competence and the resource to take on the associated responsibilities.

1.9 METHODS AND EFFECTIVENESS OF CONSULTATION AND DIALOGUE BETWEEN THE GENERAL AVIATION/CAA/GOVERNMENT/ REGIONAL BODIES

This subject is more comprehensively dealt with in the GA Strategic Review including consultation with Government and regional bodies. Therefore this Review will address issues that apply to regulatory development between GA and CAA only.

The CAA places significant emphasis on the need for effective consultation with interested parties and regards this as an important aspect of being a world-class regulator.

1.9.1 Formal Consultation

CAA formal consultations follow set procedures following government guidelines. The CAA, on occasion, has published consultations during August and over the Christmas period. It is recognised that this could have reduced the ability of representative organisations to devote the necessary time to their comments and, if possible, should be avoided in future.

The responsibility for consultation on EASA and European legislative matters rests with the DfT.

1.9.2 Informal Consultation

Informal consultation covers a broad spectrum of activities. It often takes place at the early development of a proposal. The early identification of issues can lead to more effective proposals and sometimes consensus prior to formal consultation. Moreover, it can also help reduce the workload of CAA staff associated with introducing new regulations. This process can also build up trust and cooperation between the various parties that can result in better implementation and compliance when introducing new regulations.

1.9.3 A Single GA Representative Organisation

There have been suggestions that there should be a single GA umbrella organisation that can present a single viewpoint to the CAA, to improve upon the current arrangements. However, it is acknowledged that the variety of different aircraft and operations in GA, as well as the different functions (such as trade, recreational, sport, personnel) make such a noble aim difficult to achieve. There was consensus among the Regulatory Review Group that appropriate alliances would best present a unified view on particular issues. This will be particularly so when other sectors of the aviation industry are involved in such issues.

1.9.4 Committees

The National Air Traffic Management Advisory Committee (NATMAC)

The CAA consults on airspace matters through NATMAC. GA has its own subgroup of NATMAC, the General Aviation Working Group (GAWG).

Present and Future Role of the General Aviation Consultative Committee

The GACC has been SRG's main forum for consultation with a wide range of GA representative organisations in the UK since 1997.

The GACC aims to develop technical and operational policy that would help to improve GA safety standards whilst encouraging the development of UK GA. This aim is reflected in the current ToR. However, the Regulatory Review Group recommends that it review its ToR to broaden its membership and to seek to improve its status such that it becomes a principal focal point for debate.

1.9.5 Issues Log

During the Regulatory Review Group debates in plenary session, it became clear that the Industry has many issues with CAA regulation and had ideas on how to improve policies and processes.

Many of these issues are specific and, whilst germane to the Review, were too detailed to include within this report. It was therefore agreed that these issues should be recorded separately. An Issues Log was created and these were dealt with as a parallel activity to this Review. Several issues have already been responded to by the relevant CAA specialist/department whilst others remain open. It is intended to respond to the present and future Industry concerns and ideas, within the GAAC, using this mechanism.

1.10 GENERAL AVIATION REGULATION UNDERTAKEN BY THE CAA ON BEHALF OF THE GOVERNMENT

The DfT has required the CAA to carry out two aspects of GA regulation that would otherwise be beyond the CAA's remit:

- Insurance; and
- Safety Assessment of Foreign Aircraft (SAFA).

The CAA is reimbursed by the DfT for those activities in relation to foreign-registered aircraft.

1.11 IMPACT OF REGULATORY REVIEW RECOMMENDATIONS

1.11.1 Impact on the CAA

All recommendations addressed to the CAA will entail the use of existing resources to permit their consideration and, where appropriate, implementation. It is not expected that any reduction in CAA manpower will be evident in the short to medium-term. In the meantime, the CAA continues to review the processes and staffing levels to ensure that the regulatory oversight of the GA community is cost effective and proportionate. The only envisaged manpower reductions could be in the area of future devolution to an Assessment Body for the issue of the RPL.

1.11.2 Impact on Statutory Requirements

Until EASA Working Group MDM.032 has completed its task it is difficult to estimate the changes required to UK legislation. There will, inevitably, be changes required as a consequence of the proposed amendment to Regulation (EC) 1592/2002 when enacted and any further changes stemming from consideration of the adoption of MDM.032 should be implemented at the same time.

1.11.3 Impact on General Aviation

There are many questions to be answered as to EASA's (and CAA's) role in the future regulation of GA. Until Working Groups MDM.032 and M.017 (EASA Part M Assessment Group) have completed their tasks it is difficult to estimate the impact on the GA Industry.

There will be, in all probability, opportunities for non-regulatory bodies to act as either Qualified Entities or Assessment Bodies in a wide range of oversight activities. It could be argued that the BMAA and National Pilot Licensing Group (NPLG) already act as Qualified Entities in their role as NPPL application assessors. It would be a relatively short step for these organisations to become assessment bodies, issuing the proposed EASA RPL in their own right.

The improved communication links, through the Issues Log and revised GACC, will ensure that the GA community has a robust and significant platform on which to debate issues with the CAA.

1.12 SUMMARY OF THE GENERAL AVIATION REGULATORY REVIEW

The Regulatory Review has made 19 recommendations and it is proposed that all be progressed through a revised GACC.

As these recommendations are progressively implemented, the relationship between the GA community and the CAA will continue to develop.

This Review has:

- **Resulted in a fundamental re-energising of the relationship between the GA community and the CAA.**
- **Provided a formalised on-going system (the Issues Log) for dealing with GA community concerns with or ideas for improving the CAA's regulatory policies and processes.**
- **Proposed an enhanced GACC with a wider membership (including DfT) and revised ToR to establish sub-groups to examine all aspects of mutual concern or interest.**
- **Provided a platform for debating and agreeing a joint GA community/CAA position on the most appropriate regulatory model to be used by the EASA. This agreed position will be important in trying to influence the current debate on this issue.**
- **Suggested the structure (the revised GACC) in which to consider the detailed proposals from the Commission, the European Parliament and EASA on the future regulation of GA.**
- **Proposed new safety initiatives which will assist in reducing the accident rate within the GA community.**

The Regulatory Review has played a major role in highlighting the issues of concern and made proposals to improve the regulatory environment for the benefit of both the GA community and the CAA. Whilst there is good agreement between both parties on the regulatory models to be employed, further progress in many areas must await the conclusion of the EASA MDM.032 study but where there is scope for further action this will be progressed through the recommendations in the GACC.

The Review was timely in allowing the GA community and the CAA to debate and agree a common position to take forward into the EASA study.

2. THE REVIEWS

2.1 INTRODUCTION

On 15 June 2005 the CAA Chairman invited, inter alia, the UK GA community and the DfT to join the CAA in carrying out a Strategic and Regulatory Review of GA in the UK **(Annex A)**.

This was the first time such an activity had been undertaken and the GA community welcomed the initiative. Following discussions within the CAA it was agreed, by the CAA Chairman, that separate review groups would be formed to undertake the Strategic and Regulatory Reviews. The Chairmen of each Review Group kept in close contact throughout the process and there was some common Industry and CAA membership across the two Review Groups to ensure consistency.

The Strategic Review Group was chaired by Mr Alex Plant of the CAA's ERG and the Regulatory Review Group was chaired by Captain David Chapman of the CAA's SRG.

The aim of the GA Regulatory Review was to assess the current framework and propose a preferred framework for future UK GA regulation and, where necessary, to make appropriate recommendations.

Throughout the period September 2005 to June 2006 both Groups worked together very closely, using a common reporting style and Information Technology format. The hallmark of these Groups was the transparent manner in which all approved data, reports and minutes of meetings were placed on a specific Internet site for the general public to observe and to comment upon progress of the Reviews; in the event few comments were received.

A total of nine meetings were held by the Regulatory Review Group between September 2005 and May 2006.

Underpinning the Regulatory Review initiative the following CAA policy is germane:

- The CAA's Corporate Plan 2006/07 - 2010/11 states, "The UK has one of the best aviation safety records in the world, and maintaining the UK's high level of aviation safety remains the top priority for the CAA".

- The CAA's SRG goal is to, "Develop our UK world-class aviation safety environment, in partnership with industry, by driving continuous improvements in aviation safety in the UK, and in partnership with EASA, across Europe".

2.2 WORKING METHODOLOGY

Each objective of the ToR **(Annex B)** was allocated to a Workstream with a rapporteur and GA community/CAA members **(Annex C)**. The Workstreams are detailed below:

- Workstream 1 - Description and definition of GA in the UK.

- Workstream 2 - The history of regulation within the UK, the existing UK policy on GA regulation and best practice guidelines.

- Workstream 3 - Sectoral trends and major and future developments which are likely to affect UK GA.

- Workstream 4 - The accident rate for UK GA over the past 10 years compared with selected other European NAAs and the FAA. Consider appropriate safety targets for GA.

- Workstream 5 - Other regulatory models used within Europe and elsewhere.

- Workstream 6 - The effects of EASA (through Regulation (EC) 1592/2002) upon future UK regulation of GA.

- Workstream 7 - Methods and effectiveness of consultation and dialogue between GA interests and CAA/Government/regional bodies.

- Workstream 8 Proposed options for future UK regulation of GA including details of.

  - Possible legal changes.
  - Costs of administration.
  - Costs to Industry.
  - Advantages and disadvantages of each proposal.
  - Cost effectiveness and risk analysis.

The results of each Workstream have been incorporated into the main text of this report with, where applicable, supporting Annexes.

3. DESCRIPTION AND DEFINITION OF GENERAL AVIATION IN THE UK

3.1 GENERAL AVIATION

The term GA does not have the same meaning throughout the world, nor even within countries. Many consider it to mean, “all aviation activity except that performed by major airlines and the armed services”. Some find it helpful to recognise that all operations below a particular weight/mass threshold (eg 5,700 kgs for aeroplanes) share much in common, irrespective of the purpose of flight. The Group reviewed definitions used in International Civil Aviation Organization (ICAO) documentation, and those being proposed by EASA for inclusion in Article 3 of Regulation (EC) 1592/2002 ('the Basic Regulation') **(Annex D)**.

Not wishing to rule any particular sector totally out of bounds, the Group preferred instead to take an inclusive view regarding the possible remit of the review. On this basis it was decided that, for the purpose of scoping this review only:

For the purpose of this review GA is considered to mean a civil aircraft operation other than a CAT operation.

In reaching a consensus, the Group also agreed that there would probably be a need, at some points in the report, to consider minor CAT operations; for example those providing A to A leisure flights to the public, balloon operators and air-taxi services. It was considered sensible to depart from the ICAO definition to some extent by including aerial work operations within the scope of the review[2].

3.2 MILITARY AVIATION

As regards the activities of the armed services, 'Military aircraft'[3] have not been considered since the majority of these are military registered and operated directly by the armed services or through civil contractors. They are not within the remit of the CAA, nor the DfT. However, a number of aircraft, which are civil registered, are operated by civil contractors on behalf of the military but the activities these undertake are focused upon primary flying training, including training of civil pilots, and therefore subject to the normal requirements and legislation for similar civil operations. In addition, a small number of operations, due to their nature and equipment fit, are conducted using civil registered GA aircraft and, since they are excluded from regulation by EASA under Article 1 of the Basic Regulation, have to be regulated by the CAA as national aircraft. The group decided that it would be appropriate to include such operations using civil registered aircraft in the scope of the review.

There was, in addition, some consideration of the various services that are needed in support of the GA flying activities, and these were thought to be adequately included within the adopted definition.

[2] The ICAO definitions necessarily reflect the fact that there are no international standards for aerial work operations.
[3] 'Military aircraft' is as defined in Article 155 of the Air Navigation Order 2005.

4. REGULATION - THE PRESENT SYSTEM

4.1 NATURE OF REGULATION

In his presentation to the Conference on Aviation and Regulation in Europe held in Edinburgh in November 2005, the Chairman of the CAA identified regulation as controlling, overseeing, governing or incentivising behaviour to achieve outcomes that would not be delivered by individuals or companies acting alone.

The Chairman described the associated regulatory functions as including drafting legislation, interpreting legislation, rulemaking, consultation, exercising discretion, guidance, oversight/inspection, data analysis, enforcement.

The Chairman noted that there is a wide variety of alternative regulatory approaches – at one extreme the exercise of “command and control”, at the other a system of “pure self regulation”. He suggested that one size may not fit all and that we should look for differentiated and appropriate approaches. Best practice regulation involves recognition that all regulation brings direct and indirect costs so we should regulate only where necessary and should stand back wherever possible.

He further stated that the CAA should use approaches that are targeted, proportionate and consistent, where regulators have clear accountability for their actions and adopt a transparent approach to their work with effective consultation and high service standards.

4.2 HISTORY OF REGULATION WITHIN THE UK

The CAA came into being on 1 April 1972. Prior to that date, aviation was seen as a trade rather than a transport issue. The Edwards Committee, set up in 1967 to inquire into the British civil aviation Industry, recommended that all aspects of civil aviation regulation should be brought into one organisation, which would be responsible, jointly with the MoD, for air navigation services. Thus the CAA was established as a statutory corporation rather than a Government department. Since 1982, the CAA has been required to recover the costs incurred in performing its regulatory functions and in the provision of assistance and advice, from those being regulated or receiving the advice. Some of the key events are summarised in the attached chronology **(Annex E)**.

The functions of the CAA are set out in Section 3 of the Civil Aviation Act 1982. Section 60(2) of the Act enables provision to be made:

a) for carrying out the Chicago Convention and the Annexes to the Convention; or

b) generally for regulating air navigation.

Without prejudice to the generality of subsection (2), subsection (3) makes provision for the contents of an ANO, inter alia "for securing the safety ... of air navigation and the safety of aircraft and of persons and property carried therein, [and] for preventing aircraft endangering other persons and property". The UK Rules of the Air Regulations are enabled under the ANO.

For the majority of GA, these regulatory provisions are limited to providing assurance of:

- appropriate standards of airworthiness;
- pilot qualification;
- the rules for the movement of aircraft; and
- equipment to be carried.

There is no CAA involvement in the oversight of GA operations, except for certain flying training organisations - compliance being the responsibility of the operator and commander of the aircraft.

The main areas of activity for which the CAA is required to sanction operations are:

- oversight of CAA approved flying training activities;
- parachuting;
- public transport balloon operations[4];
- public flying displays;
- exemptions from the regulations; and
- to a lesser extent, the operation of ex-military aircraft.
- Crop spraying operators require an aerial application certificate, which will probably be subsumed under EASA IRs for aerial work operating certificates.

In the latter part of the 1980s and early 1990s, CAA planning in respect of GA regulation reflected the deregulation initiative of the Government in that period. It was agreed by the then Department of Transport in 1995 that opportunities should continue to be sought for reducing regulation in the GA sector, but for the purposes of the deregulation initiative the CAA should restrict consideration to personal leisure flying where no passengers were carried and where there was minimal risk to third parties. CAA approval of the British Parachute Association followed in 1996, and was compatible with this policy as it facilitated the devolution of regulatory oversight functions as opposed to total deregulation.

Following the general election in 1997, the Government emphasis was towards "better regulation". Accordingly, this has remained central to the CAA's strategy in relation to GA, continually keeping its regulatory activities under review, and seeking opportunities to reduce the burden of regulation wherever possible. Such action has always been taken on the assumption that safety levels should be maintained or, if possible, improved.

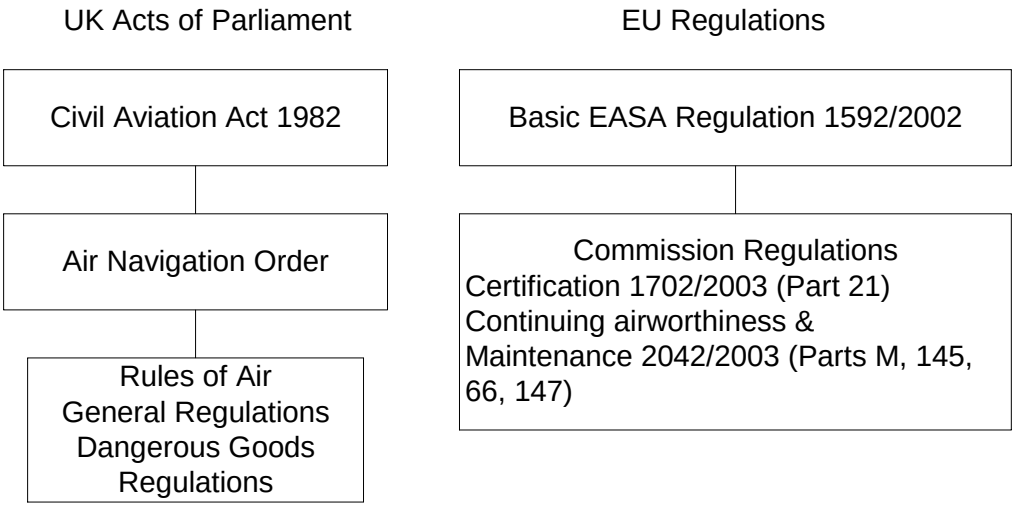
The other Annexes to this section provide further details of airworthiness certification **(Annex E1)**; and significant alleviations and regulatory reduction initiatives are summarised in three tables under the headings “Certification”, “Operations” and “Licensing” **(Annex E2, E3 and E4 respectively)**. A further table **(Annex E5)** provides a chronology of “Continued Airworthiness & Maintenance Controls”.

[4] Such balloon operations, in common with other minor public transport operations, are not included within the definition of General Aviation adopted for this review.

4.3 TWO ROOTS OF LEGISLATION

The UK has two independent roots of aviation safety legislation - UK Acts of Parliament and EU Regulations.

4.1 Table of Roots of UK Aviation Safety Legislation

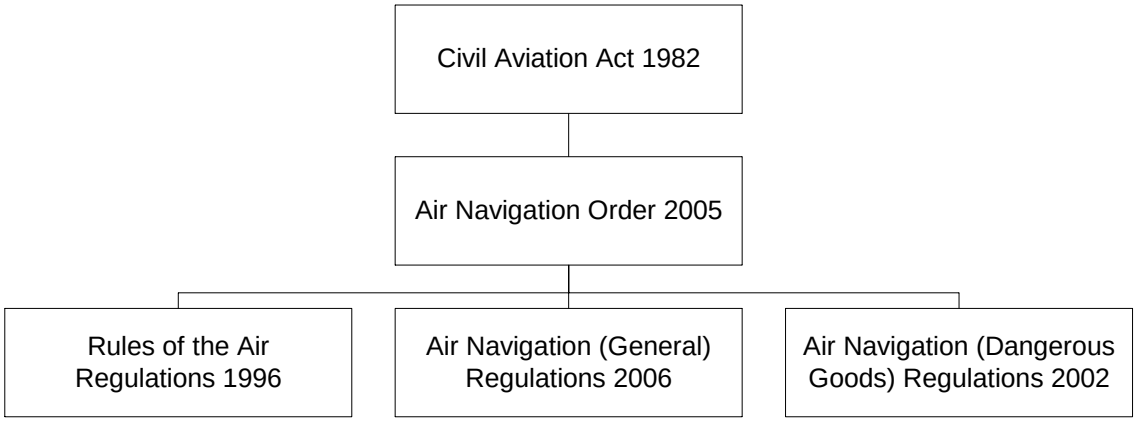


4.4 UK DOMESTIC CIVIL AVIATION SAFETY LEGISLATION

Until 1991, UK aviation safety legislation was to be found only in UK domestic law. This was principally in the form of statute law although certain common law concepts, such as nuisance, trespass, negligence and recklessness were of some relevance. The principal piece of primary legislation is the Civil Aviation Act 1982. This provides at Section 2 for the existence of the CAA. Section 60 contains an enabling power for the making of an ANO. Such an Order may be used to implement Annexes to the Chicago Convention and generally for regulating air navigation. Section 61 of the Act provides that breaches of an Order can be made criminal offences.

An ANO, currently the Air Navigation Order 2005, has been made under Section 60. The Order contains most of the specific aviation safety provisions. Certain Articles of the Order provide further powers enabling detailed Regulations to be made. It is under such Articles that the Rules of the Air Regulations, the Air Navigation (General) Regulations and the Air Navigation (Dangerous Goods) Regulations are made.

4.2 Table of UK Aviation Safety Legislation



4.5 EUROPEAN LEGISLATION

4.5.1 EU Regulations, Directives and Implementing Rules

European law comes in two main forms, namely Regulations and Directives. An EU Regulation is directly binding throughout the Community. Examples of such Regulations include the Basic EASA Regulation, the IRs described below and the Single European Sky Regulations.

IRs may be made by the comitology procedure. This means that they may be adopted by a Committee and do not need to be approved by the European Parliament and the Council of Ministers. Rules adopted in this way are termed "Commission Regulations". Despite the expedited procedure however, they are European Regulations and, as such, are just as binding throughout the Community as a Regulation made by the co-decision procedure.

The other main form of European law is a Directive. A Directive is not generally directly binding but amounts to an order to each Member State to amend its own domestic legislation so as to achieve the objective of the Directive. One example of a Directive concerning aviation safety is the Occurrence Reporting Directive. This has been implemented in the UK by Article 142 of the ANO 2005.

4.5.2 European Aviation Safety Legislation

Over the past 15 years, European law has begun to include aviation safety requirements binding on all Member States including the UK. The first significant piece of European aviation safety legislation was EU Regulation 3922/91 to which was annexed a number of JARs developed by the JAA. Much more significantly, in 2002 came the Basic EASA Regulation 1592/2002 under which two IRs have been made in the form of Commission Regulation 1702/2003 (dealing with certification and to which is annexed Part 21) and Commission Regulation 2042/2003 (dealing with continuing airworthiness and maintenance and to which Parts M, 145, 66 and 147 are annexed).

4.6 EASA

4.6.1 The Basic EASA Regulation

Regulation (EC) 1592/2002 (the Basic EASA Regulation) can be seen as the European equivalent of the Civil Aviation Act 1982. It establishes the existence of EASA, sets out the functions of EASA, contains the essential requirements for airworthiness and authorises the making of IRs (which can be seen as akin to the enabling power in Section 60 of the Civil Aviation Act 1982 to make an ANO).

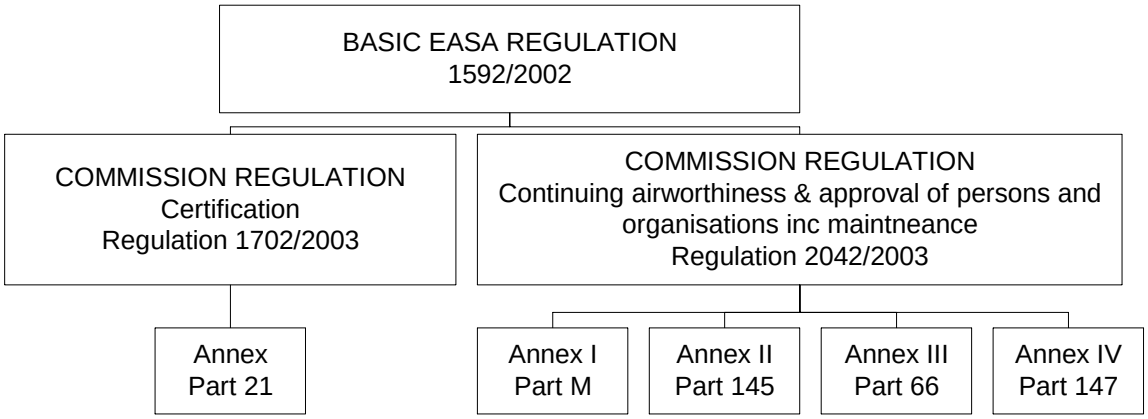
The Basic EASA Regulation has been made by the co-decision procedure. This requires the involvement of the European Parliament and the Council of Ministers and is thus the highest form of European legislation.

4.6.2 The Implementing Rules

At present, two IRs have been made under the Basic EASA Regulation. The first of these is the Certification Regulation (1702/2003). This provides for airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as the certification of design and production organisations. The detailed requirements are set out in an Annex entitled Part 21.

The second IR which has been adopted is the Continuing Airworthiness Regulation (2042/2003). This deals with the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and the approval of organisations and personnel involved in these tasks (including maintenance). Detailed provisions are contained in four Annexes to this Regulation entitled Parts M, 145, 66 and 147. The Basic EASA Regulation and the two IRs are referred to in this report as the EASA Regulations.

4.3 Table of EU Regulations



4.7 THREE EASA FUNCTIONS

4.7.1 Rulemaking

EASA is responsible for developing three types of “rule”:

- EASA is responsible for drafting amendments to the Basic EASA Regulation, amendments to the current IRs and new IRs. It presents these drafts (which are termed “opinions”) to the Commission which is responsible for progressing them via the appropriate (co-decision or comitology) procedure.

- EASA develops and adopts its own guidance material.

- EASA develops and adopts certification specifications. These are essentially means of compliance with the essential requirements and include airworthiness codes such as CS25 (Certification Specification for Large Aeroplanes).

4.7.2 Issue of Certain Certificates and Approvals

In accordance with the Basic EASA Regulation and the IRs, EASA is responsible for the issuing of certain certificates and approvals including:

- Type certificates for aircraft.
- Certificates for parts and appliances.
- Environmental certificates.
- Design Organisation Approvals (DOAs).
- Outside Member State territories the issue and oversight of:
    - Maintenance Organisation Approvals.
    - Production Organisation Approvals.
    - Maintenance Training Organisation Approvals.

4.7.3 Standardisation of National Aviation Authorities

Article 16 of the Basic EASA Regulation provides that EASA must conduct standardisation inspections in order to monitor the application by NAAs of the Regulation and IRs. This will be the subject of a separate EU Regulation for Standardisation.

4.8 NATIONAL AVIATION AUTHORITY FUNCTIONS UNDER THE EASA REGULATION

The Basic EASA Regulation and IRs give to the NAAs responsibility for issuing certain certificates and approvals. These include individual Cs of A, production organisation approvals, maintenance organisation approvals and individual licences and approvals.

The CAA is designated by the UK DfT as the Competent Authority for the UK.

4.8.1 Flexibility Provisions of Article 10 of the Basic EASA Regulation

This Article specifies three cases in which a Member State may depart unilaterally from the rules established under the EASA Regulation. The basis upon which such departure or flexibility is applied can be directly safety related (Article 10.1), an unforeseen exemption (Article 10.3) or equivalent safety provision to the Regulation (Article 10.5). In each case, a procedure is established under which the Commission will review any such unilateral departure. The Commission may require the Member State to reverse its action and resume full compliance with the EASA Regulation and its IRs, or revise the Rules to accommodate the difference.

4.9 EASA AND NON-EASA AIRCRAFT

All aircraft are designated as EASA aircraft except for two categories which are not subject to the Basic EASA Regulation or its IRs. These are:

a) Aircraft coming within one of the categories described in Annex II to the Basic EASA Regulation:

   i) Aircraft having a clear historical relevance.
   ii) Aircraft specifically designed or modified for research.
   iii) Aircraft of which at least 51 % is built by an amateur.
   iv) Aircraft initially designed for military purposes.
   v) Microlight aeroplanes.
   vi) ‘Gliders’ less than 80 kgs (100 kgs for two seater).

   vii) Unmanned aircraft less than 150 kgs.
   viii) Any other aircraft less than 70 kgs.

b) State aircraft, being aircraft engaged in military, customs, police or similar services.

A survey of the CAA aircraft register indicates that approximately 53% are EASA aircraft and 47% are non-EASA aircraft.

4.10 ENFORCEMENT AND LICENCE ACTION

4.10.1 Enforcement

As noted above, Section 61 of the Civil Aviation Act 1982 provides that UK aviation safety requirements may be made subject to criminal law. Any breach of a provision of the ANO or of any of the Regulations made under the ANO is a criminal offence. The CAA has been given responsibility by the DfT to enforce these provisions. The CAA has a team of Investigation Officers to investigate and the CAA prosecutes where appropriate.

4.10.2 Licence Action

As noted above, a licence (or approval, certificate etc) is required from the CAA for many types of aviation related activity. Where the CAA can no longer be satisfied that an individual or organisation is fit or competent to continue to exercise the privileges bestowed upon it, the CAA must propose to vary, suspend or revoke the licence etc. The CAA cannot, however, vary, suspend or revoke a licence for punitive reasons. Thus, where it considers that an individual or organisation has acted in a way deserving of punishment but remains fit and competent, the appropriate action is to prosecute and not to suspend or revoke the licence. In some cases where the individual is neither fit nor competent and is deserving of punishment then both actions may be appropriate.

Before the CAA can substantively suspend or revoke, it must offer the individual or organisation a right to have the proposal reviewed by Members of the Board of the CAA in accordance with the procedure set out in Regulation 6 of the Civil Aviation Authority Regulations 1991. However, where the CAA has grounds to suspect that safety will be seriously compromised unless licence action is taken immediately, it is able to vary, suspend or revoke the licence provisionally, pending further enquiry into or consideration of the case. The conduct of a Regulation 6 appeal procedure, as previously mentioned, constitutes such further enquiry or consideration, or the CAA may need to carry out other investigations to establish whether substantive licence action is indeed necessary.

4.11 PRIVATE FLYING, AERIAL WORK AND PUBLIC TRANSPORT

The UK civil aviation legislation currently distinguishes between private flying, aerial work and public transport. Aircraft with a C of A can generally be used for any of these purposes, subject to the carriage of certain equipment necessary for the purpose of the flight. Provision is also made for a PtF that allows aircraft that are unable to satisfy fully the requirements for a C of A to be flown privately subject to additional conditions (eg clear of congested areas, within UK airspace only - unless with the permission of another State where it is intended to fly).

Some activities which would normally be regarded as recreational flying are regulated by a combination of CAA control and the appropriate representative body for the sport or activity. Where regulatory tasks are carried out by a body other than the CAA, this is termed "devolution". This may extend to both airworthiness and operational activities. In all cases, however, overall responsibility for safety regulation remains with the CAA and this responsibility has not been delegated.

Private gliding in the UK has, so far as airworthiness, most aspects of operations and pilot licensing are concerned, remained unregulated - that is, there have been no legally enforceable requirements. EASA has now imposed airworthiness requirements but pilot certification remains, for the time being, unregulated.

Within this formally unregulated environment the BGA and BHPA have established their own requirements to be observed by their members. The BGA issues its own gliding certificates under the Fédération Aéronautique Internationale (FAI) system. It also does most of its own administration and rule making. The level of safety achieved by these means has been such that there has been no public or political pressure for formal regulation by the State. Only in exceptional circumstances for the purposes of commercial gliding or international flying activities would the CAA issue a C of A to gliders.

As noted in paragraph 4.2, footnote 4, above, this review excludes the activities of balloon AOC holders, of which there were 82 in May 2006.

4.12 ASSOCIATED GENERAL AVIATION REVIEWS ON PROPOSED OPTIONS

In response to requests from the UK's Overseas Territories for increased regulation of corporate aviation, the CAA's Air Safety Support International (ASSI) commissioned Cranfield University (Department of Air Transport) to carry out a Risk Assessment for this sector of aviation, and to make recommendations. In June 2005, the International General Aviation and Corporate Aviation Risk Assessment (IGA-CARA) Project report was published. Although the report did not reveal a pressing need for increased regulation, ASSI instituted a formal consultation process and RIA for the various available options, taking into account the report's recommendations, the results of which are awaited. However, the Regulatory Review Group did not consider that any decisions by ASSI about the future regulation of corporate aviation in the Overseas Territories should have a bearing on its own conclusions and recommendations concerning this sector of Industry in the UK. For mainland UK future regulation of this sector will be decided by amendment to Regulation (EC) 1592/2002.

4.13 SUMMARY OF CURRENT UK REGULATION

The EASA Regulations are not implemented by the ANO, but are directly binding under European law. The ANO does contain certain enforcement and penalties provisions applicable to the EASA Regulations. For example, the reason why an EASA aircraft must have an EASA C of A is because the EASA Regulations require it. But the EASA Regulations (as is usual with EU legislation) do not contain any sanctions for non-compliance. This is left to Member States to address in their domestic law. Hence Article 148 of the ANO provides that it will be a criminal offence to fail to comply with the various EASA Regulations.
Annex F details the current UK position for all aircraft.

4.14 BETTER REGULATION

The Better Regulation Task Force (BRTF) was an advisory body set up in 1997, following the change of emphasis from the previous Government's deregulation initiative. It established the 'Principles of Good Regulation', and was chaired initially by Lord Haskins and latterly by Sir David Arculus. It delivered a report in March 2005 entitled *"Regulation - Less is More"*[5]. The work of the BRTF was summarised in its final annual report for the year 2005[6], prior to commencing an expanded remit as the Better Regulation Commission (BRC) in January 2006, under the chairmanship of Rick Haythornthwaite. In addition, a Better Regulation Executive (BRE) has been set up to oversee the work of the BRC and ensure that the planned agenda is carried out.

4.14.1 The Principles of Good Regulation

The BRTF identified the following principles of good regulation:

Proportionality - Regulators should only intervene when necessary. Remedies should be appropriate to the risk posed, and costs identified and minimised.

Accountability - Regulators must be able to justify decisions, and be subject to public scrutiny.

Consistency - Government rules and standards must be joined up and implemented fairly.

Transparency - Regulators should be open, and keep regulations simple and user friendly.

Targeting - Regulation should be focus on the problem, and minimise side effects.

Two key conclusions of the report *"Regulation - Less is More"* were:

- Government should adopt the successful Dutch approach of reducing the administrative burden of regulation and its cost. This involves first measuring the administrative burden and then setting a target to reduce it.

- Government should also apply the 'One in One out' approach to new regulation, with Ministers and departments giving as high a priority to simplifying or removing over-complex and burdensome regulation as they do to the introduction of new.

[5] Available on the BRC website www.brc.gov.uk > Publications
[6] Available on the BRC website www.brc.gov.uk > Publications

4.15 THE HAMPTON REVIEW

In the March 2004 budget the Chancellor announced that he had asked Philip Hampton to lead a review into regulatory inspection and enforcement, with a view to reducing the administrative cost of regulation to the minimum consistent with maintaining the UK's excellent regulatory outcomes. The final report of the Hampton review *"Reducing administrative burdens: effective inspection and enforcement"*[7] was published coincident with the BRTF *"Less is More"* report mentioned above, in March 2005. Three parts of the CAA were within the scope of the Hampton Review: the SRG, the Consumer Protection Group, and Air Regulation Enforcement.

One of the major themes of the Hampton Review is the importance of regulators providing advice. The review has set out a number of principles, recommending that the regulatory system should move towards these goals.

4.15.1 The Hampton Principles of Inspection and Enforcement

- Regulators to use comprehensive risk assessment to concentrate resources on areas that need them most. *[But see note below.]*
- Regulations should be written so that they are easily understood, easily implemented, and easily enforced, and all interested parties should be consulted when they are being drafted.
- No inspection should take place without a reason.
- Businesses should not have to give unnecessary information, nor give the same information twice.
- Regulators should provide authoritative, accessible advice easily and cheaply.
- Businesses that persistently break regulations should be identified quickly, and face proportionate and meaningful sanctions.
- When new policies are being developed, explicit consideration should be given to how they can be enforced to minimise the administrative burden imposed.
- Regulators should be of the right size and scope.
- Regulators to recognise a key element of their activity will be to allow/encourage economic progress and only intervene when clear case for protection.

Note: Different levels of risk may be acceptable depending on the nature of the activity. For example, UK aviation legislation generally applies higher standards where payment is made. Where it is clear that participants in a particular aviation activity are prepared to accept increased risks, lesser standards may be appropriate.

[7] Available on the HM Treasury website www.hm-treasury.gov.uk

4.15.2 CAA Stance in Relation to Better Regulation

The CAA is a strong supporter of the Better Regulation initiatives and, whilst it considers that it already complies with many aspects of the current Government initiatives, it continues to strive for excellence in this field. The CAA also continues to look at opportunities for reducing the regulatory burden imposed upon the GA community commensurate with statutory safety responsibilities.

The CAA is working with the DfT in pursuit of the Government's simplification and administrative burden reduction initiatives. These seek to remove unnecessary requirements and to reduce the administrative burden on Industry of demonstrating compliance with those regulations that remain. The most recent example of this is the recommendation to the DfT, in April 2006, to partially deregulate single-seat microlights (up to 115 kgs empty weight).

The DfT and, hence, the CAA are committed to the conduct of RIAs when changes to the requirements are being proposed. This practice is strongly endorsed by the Regulatory Review Group

4.16 OTHER REGULATORY MODELS - QUESTIONNAIRE

A questionnaire **(Annex G)** was devised by the UK CAA and sent to other NAAs and Industry organisations. A 56% response was achieved from the 32 questionnaires, including some responses from the AOPA; a list of countries and their responses is detailed at **Annex H**. Although the wording and nature of the questions did not lead to the possibility of a rigorous analysis, a number of observations can be made.

- 10 of 17 (59%) use ICAO definition of GA (Question 1). Most differences concern the inclusion or otherwise of commercial operations.

- Microlight aeroplanes, Parachutists, Hang Gliders and Gliders are often subject to separate regulation, delegated (devolved in CAA definition) to other organisations in 7 of 16 NAAs (Question 2, Question 8b).

- Excluding USA figures, of a total of 119,769 aircraft registered/identified, 37,490 (31%) are conventional aeroplanes, 33,046 (28%) microlight aeroplanes, 24,783 (21%) gliders, 18,698 (16%) hang gliders, 5,126 (4%) helicopters, and 626 (0.01%) gyroplanes (Question 2).

- In 2004, of 575,687 'GA' pilots' licences held, 120,325 (21%) were to a lower level than ICAO (eg 'Recreational/Sports/NPPL' licences) (Question 3).

- 50% of responses indicated that staff involved in the regulation of GA did not need a GA background (Question 6).

- No other NAA is required to recover the total GA regulatory cost from the Industry except the UK CAA (Question 7a).

- 5 of 16 (31%) recovered only the cost of pilots' licences (Question 7b).

- 7 of 16 (44%) delegated some tasks to others, especially parachuting, gliding, microlight aeroplanes, light or sports aircraft (Question 8a).
- 33% of consultation is through bodies other than the NAA (Question 10).

- Accident investigation is always carried out by an independent body (Question 11.1).
- Accident records are maintained by a range of bodies (Question 11.2).
- Aircraft registers are maintained by a range of organisations to which responsibility is delegated (Question 11.3).
- 19 of 24 responses (79%) (including 7 responses from Europe Air Sports survey not in main results) carried out safety education (Question 13).

Note 1: Some of the data provided could not be corroborated by other means, so any analysis should be treated with an element of caution.

Note 2: Amateur-built aircraft were not subject to the questionnaire although they do form a significant part of the GA community.

4.16.1 Other Regulatory Models - Discussion

There are a large number of regulatory models evident throughout Europe, Australia and the United States. The UK's system of regulation goes further than most NAAs in devolving approvals to separate organisations; Germany appears close to the UK in this regard. The UK's unregulated status of gliding airworthiness and pilot licensing (although now changing due to EASA), and the introduction of the NPPL, are examples of a successful pragmatic UK approach. Most NAAs regard safety education as a vibrant and important part of their regulatory functions.

The UK is almost alone in Europe in seeking full cost recovery (including Return on Capital Employed) from the GA community. This places an additional cost burden on the GA community compared with Europe and affects the competitiveness of certain sectors within GA in the UK.

Recommendation 1

The Regulatory Review Group recommends that the Board takes note of the disadvantage to UK GA compared with other regulatory models that do not seek to recover the total GA regulatory cost from the Industry.

Context - The UK is almost alone in Europe in seeking full cost recovery (including Return on Capital Employed) from the aviation Industry. This places an additional cost burden on the GA community compared with Europe and affects the competitiveness of certain sectors within GA in the UK.

5. REGULATION - THE INFLUENCE OF THE EUROPEAN AVIATION SAFETY AGENCY

5.1 INTRODUCTION

Future EASA regulation will apply to all UK aircraft, except those outside the scope of the regulation by virtue of Article 1, paragraph 2 of Regulation (EC) 1592/2002 (when products, parts, appliances, personnel and organisations are engaged in military, customs, police, or similar services, ie State aircraft) and those aircraft listed in Annex II to that regulation (see paragraph 4.9). EASA will therefore have a fundamental influence on the future regulation of the GA community.

In the recitals of the legislative proposal for amendment to Regulation (EC) 1592/2002 the European Commission expressed the view: "Consideration should notably be given to aeroplanes and helicopters with a low maximum take-off mass and whose performance is increasing, can circulate all over the Community and are produced in an industrial manner, which therefore might be better regulated at Community level to provide for the necessary uniform level of safety and environmental protection." Consequently it may be anticipated that the categories of aircraft in Annex II, and therefore to be regulated under national arrangements, may change in the future.

5.2 UK LEGISLATION

The UK civil aviation legislation will have to be amended in future, as follows -

- To disapply its provisions in areas that come under EC/EASA regulation.
- To continue to make appropriate provisions for non-EASA aircraft and other aspects not subject to EC/EASA regulation.
- To ensure that appropriate provisions are made for compliance with ICAO Standards and Recommended Practices, for freedom of international air navigation rights. UK obligations under the Chicago Convention mean this will be a continuing need in areas where compliance is not achieved by the EASA IRs.

Some of the possible effects of EASA on future regulation are set out in the table at **Annex I**.

5.3 EASA WORKING GROUPS

The GA community and the CAA are largely in agreement about the possible impact of EASA and the IRs on future GA regulation in the UK. However, the proposed amendment to Regulation (EC) 1592/2002, dated 16 November 2005, is very unclear in many areas. A meeting was held on 31 January 2006, between members of the Regulatory Review and EASA, to try and clarify matters and, whilst very useful, it was clear that EASA is also uncertain on how to regulate various sectors of the GA community. To assist EASA in clarifying matters, the Agency has instituted a Working Group MDM.032 (ToR at **Annex J**), comprising representatives from the Industry and some NAAs to examine, in detail, future regulatory arrangements. The UK (both GA community and CAA) is well represented on these Groups.

In addition, the Part M RIA undertaken on behalf of EASA resulted in the establishment of another Working Group (M.017) (ToR at **Annex K**) to look at specific areas of concern. The burden on Industry in implementing the new requirements, as written, was likely to be reflected in an increasingly bureaucratic continuing airworthiness system and the associated higher administration costs against a background where little improvement in safety standards was expected to result. The analysis and recommendations from that RIA highlighted a number of issues where it was felt that the requirements were ambiguous or too onerous if applied equally to all areas of aviation, particularly some sectors of the GA community. The Working Group is therefore considering a number of these issues to consider their relevance and suitability when applied to GA activities.

5.4 THE INFLUENCE OF EASA - SUMMARY

EASA's influence on the GA community will be profound. It is vital therefore that the GA community and CAA continue to engage with EASA, at every opportunity to try to influence future policy on how the GA community should be regulated by EASA. These shared views will be extremely important in influencing the EASA Working Groups MDM.032 and M.017. As soon as these groups have concluded their deliberations the CAA and Industry should consider the impact at the earliest opportunity.

Whilst there is good conceptual agreement between Industry and the CAA on the possible effects of EASA, further progress must await consideration of the output of the MDM.032 and M.017 Working Groups.

Recommendation 2

The Regulatory Review Group recommends that, when the output from the EASA Working Groups MDM.032 and M.017 is mature, the GACC assesses the effects of any likely changes to Regulation (EC) 1592/2002 as they affect GA aircraft and activity.

Context - EASA Working Group MDM.032 is debating the issues associated with GA regulation (and M.017 will start shortly).

Recommendation 3

The Regulatory Review Group recommends that the CAA approach to regulating non-EASA aircraft should be investigated as part of the GACC's review of the EASA proposals.

Context - Whilst EASA will detail how GA is to be regulated, this will only apply to EASA aircraft.

6. THE FATAL ACCIDENT RATE AND SAFETY TARGETS FOR UK GENERAL AVIATION

6.1 INTRODUCTION

The FAR is one measure to determine how the GA community compares, in safety matters, to other activities. Other measures could be used but the data on the number of fatal accidents is highly accurate and this determinant is used widely in other comparative studies. It should be noted, however, that best estimates are used for the numbers of hours flown. Nevertheless the FAR remains the most reliable measure available.

The FAR for UK GA established over the 10-year period from 1995 to 2004 was compared with selected other States. The methodology for calculating forecasts and selecting appropriate safety targets for UK GA were considered.

The ToR for Workstream 4 are listed below:

- To gather relevant fatal accident information for the 10-year period from 1995 to 2004 for UK GA in order to calculate FARs and, where possible, determine causes;
- To investigate the possibility of breaking down the UK GA FAR by type of regulatory regime;
- To compare UK GA FARs with other selected European States, Australia, New Zealand and USA; and
- To consider appropriate future safety targets for UK GA.

6.2 FATAL ACCIDENT RATE - ANALYSIS

A detailed analysis of the accident statistics and a comparison with other States are given at **Annex L**. **Annex L1** details the analysis criteria and caveats; **Annex L2** details a list of fatal accidents during the review period whilst **Annex L3** details a description of the types of accident.

6.3 FATAL ACCIDENT RATE - DISCUSSION

There were 235 fatal accidents involving UK GA aircraft resulting in 340 fatalities in the 10 years from 1995 to 2004.

The estimated FAR per 100,000 hours flown ranged from 1.3 for aeroplanes to 45.8 for gyroplanes. The rates for all other classes of aircraft were below 4 fatal accidents per 100,000 hours flown.

Gyroplanes have a significantly higher FAR than other classes of recreational aircraft. The CAA has been investigating the reasons behind this and has identified some specific actions in the 2006/2007 Safety Plan to help improve the safety record of these machines.

The number and rate of aeroplane accidents showed a decreasing trend during the second half of the study period.

Loss of control in visual conditions was the most common accident category for all classes of aircraft, apart from helicopters, and was allocated in 40% of fatal accidents. Many of these fatal accidents involved stall/spin scenarios. The GASCo Chief Executive is collating all the factors from the 115 fatal aeroplane accidents between 1980 and 2004 in which stall/spin was a feature. These will be reviewed by a small GASCo Working Group and will be passed to the CAA's General Aviation Safety Review Working Group (GASRWG) for their meeting in August 2006.

The most common accident category for helicopters was loss of control in poor visibility and/or night conditions, which tended to involve pilot disorientation.

Lack of flight handling skills and lack of training, currency and/or experience were the most frequently allocated factors; both overall and for fatal accidents involving loss of control in VMC.

The estimated FAR per 100,000 hours for the group of aircraft in the conventional aeroplane full-regulation category was statistically better than that for aircraft in the devolved and self-regulation groups. However, it would not necessarily be correct to attribute this difference solely to the amount of regulation in place as, for example, the FAR for fully regulated helicopters is very similar to self-regulated gliders, paragliders and partially devolved microlights, whilst devolved non public transport ballooning in the UK has a zero fatal accident record. There was no difference, at a 95% level of statistical confidence, between the FARs for the group of aircraft in the devolved and self-regulation categories. Further study would be required to establish any such relationship.

Meaningful comparison of UK with other States was not possible due to differences in the definition of GA and a lack of available information, particularly utilisation. However, the estimated FARs for the various classes of UK GA were found to be similar to that for Australia and USA, and favourable in comparison to most European States.

There was no statistical evidence, based on FARs, to suggest that a fundamental change in the UK GA regulatory model was required. However, statistics should continue to be collected in order to monitor the effect of EASA-related issues and other regulatory changes on UK GA safety. For example, the possible devolution of approvals for non-EASA aircraft, which has been investigated in Workstream 8.1, could result in faster approval of new equipment and contribute to a reduction in the accident rate.

Recommendation 4

The Regulatory Review Group recommends that the CAA, with input from Industry, investigates methods for improving safety education amongst the GA community generally. In particular, the Group recommends that the CAA facilitates safety education for GA pilots through, inter alia, the medium of reinstated hard copy Safety Sense Leaflets.

Context - The analysis conducted by the Regulatory Review Group indicated a need for improved pilot education. In particular, loss of control in visual conditions was the most common accident category for all classes of aircraft. For aircraft other than helicopters, lack of flight handling skills and lack of training, currency and/or experience were the most frequently allocated factors for fatal accidents involving loss of control.

Recommendation 5

The Regulatory Review Group recommends that the CAA should use the Group's GA fatal accident statistics to identify high-risk areas for attention in flight training and biennial reviews.

Context - The analysis showed that the most common accident category for helicopters was loss of control in poor visibility and/or night conditions, which tended to involve pilot disorientation, whilst many of the fatal aeroplane accidents involved stall/spin scenarios.

Recommendation 6

The Regulatory Review Group recommends that the CAA carries out further work to investigate possible correlation between regulatory regime and GA FARs and causal factors. One area of investigation could be the licensing/training regime.

Context - The estimated FAR per 100,000 hours for the group of aircraft in the conventional aeroplane full regulation category were statistically better than those for aircraft in the devolved and self-regulation groups. In comparison, the FAR for fully regulated helicopters is very similar to self-regulated gliders, paragliders and partially devolved microlights.

Recommendation 7

The Regulatory Review Group recommends that the CAA and Industry campaign for a common standard for the collection of fatal GA accident information, including causal factors, from European Member States. This should also include an estimate of utilisation so that FARs can be calculated.

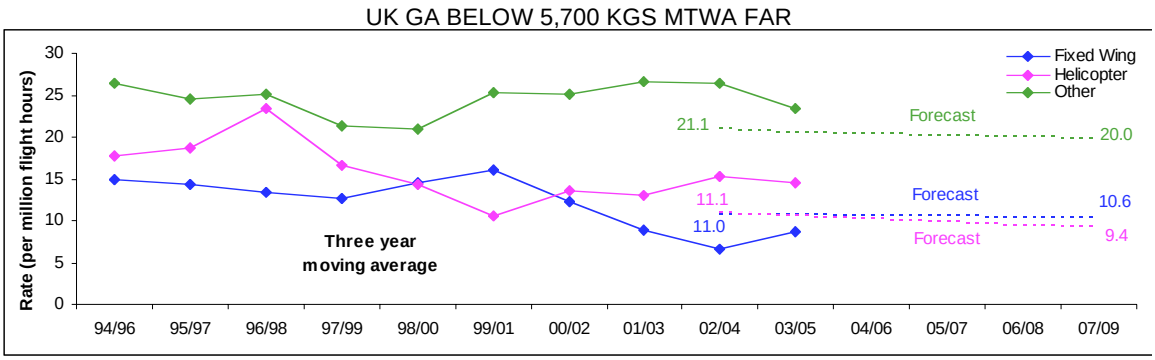
Context - Meaningful comparison of the UK with other States was not possible due to differences in the definition of GA and the lack of available information, particularly utilisation.

6.4 SAFETY FORECASTS FOR UK GA

6.4.1 Current Situation

The current safety forecasts for UK-registered GA, as found in the CAA Corporate Plan 2006/07, are shown in Figure 6.1 for aeroplanes, helicopters and 'other' aircraft (all below 5,700 kgs Maximum Total Weight Authorised (MTWA)), where "other" includes: microlights, gyroplanes, gliders, airships and balloons. The measure of safety is fatal accidents per million flight hours based on a three-year moving average.

Figure 6.1 Presentation of Safety Forecasts for UK-Registered General Aviation Aircraft in 2006/07 CAA Corporate Plan



6.4.2 Discussion on Future Safety Forecasts/Targets for UK General Aviation

The current methodology for producing GA safety forecasts was considered to be appropriate. Lack of time precluded further investigation into other, possibly better, methods of deriving forecasts and subsequent targets and it has been recommended that this be accomplished outside the GA Regulatory Review.

Any future discussion on the most appropriate form of GA safety forecast/target would need to address, inter alia, the following questions:

- Should there be an overall GA forecast/target or should GA be divided into separate classes of aircraft or types of activity?
- What measure should be used (FAR, fatality rate, etc)?
- If a European GA forecast/target was to be introduced that was less strict than that currently observed in the UK, should an increase in the FAR be tolerated even if it was still below the acceptable European value?

6. THE FATAL ACCIDENT RATE AND SAFETY TARGETS FOR UK GENERAL AVIATION

The New Zealand CAA has recently developed safety outcome targets to be achieved by the year 2010. These targets apply to public air transport, other commercial operations and non-commercial operations (with further sub-divisions within each of the three main categories) and are based on the social cost to the nation (eg cost of a life), rather than accident rates. A report on the subject quoted that 3.5% of New Zealand's aviation activity, measured in seat hours and involving aircraft below 5,670 kgs, was responsible for 97% of the social cost. It was felt that this innovative use of safety information warranted further investigation. More information can be found at http://www.caa.govt.nz/fulltext/caa_news/caa_news_05_5_sept_oct.pdf.

The current methodology for producing CAA GA safety forecasts was considered to be appropriate and is described in **Annex L4**. However, further work was recommended to determine whether a different approach was required, both in terms of the type of forecast chosen and the need to establish safety targets with possible further subdivision by class of aircraft.

Recommendation 8

The Regulatory Review Group recommends that the CAA carries out further work to determine the most appropriate form of safety forecast/target to be used for GA, including whether GA should be divided into separate classes of aircraft or types of activity. This work should include a review of systems used in other States.

Context - The current CAA methodology for producing safety forecasts was considered to be appropriate. Safety targets are, however, notoriously difficult to establish and many questions remain as to their final form.

7. SECTORAL TRENDS AND OTHER MAJOR DEVELOPMENTS LIKELY TO AFFECT THE REGULATION OF UK GENERAL AVIATION (EXCLUDING EASA)

7.1 SECTORAL TRENDS - GENERAL AVIATION AIRCRAFT[8]

In 2005, the GA sector accounted for about 9,000 UK-registered aeroplanes (excluding microlights), 4,100 microlights, 1,300 helicopters and 1,800 balloons/ airships[9]. In addition, there were around 2,500 gliders, and 7,000 hang gliders and paragliders including powered versions. The total has been increasing steadily, but the number of helicopters and microlights, for example, has recently grown strongly (Table 7.1).

Table 7.1

	1995	2005	% growth
Aeroplanes (excluding microlights)	7,830	8,900	+14%
Microlights	3,200	4,100	+28%
Helicopters	840	1,310	+55%
Gyroplanes	260	250	-4%
Balloons & Airships	1,690	1,830	+8%
Gliders (excluding Touring Motor Glider)	2,460	2,540	+3%
Hang Gliders & Paragliders	6,380*	5,960*	-7%
Powered Hang Gliders & Paragliders	60*	1,050*	≈+1,500%

**Estimates for 1995 and 2004.*

In recent years there has been a rise in the number of foreign-registered GA aircraft based in the UK; the majority are aeroplanes. Because these aircraft are not on the UK register they are not captured by the CAA's database. Therefore their expansion in number and the hours they fly are necessarily not reflected in this chapter.

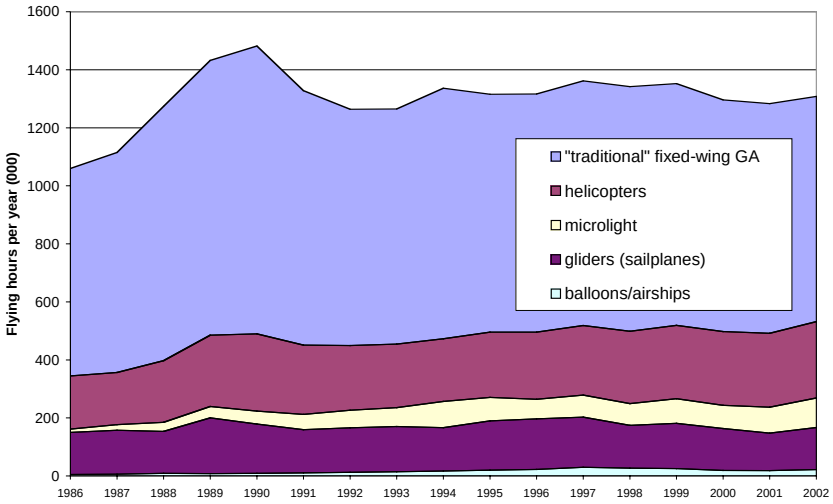
The average age of GA aircraft has been steadily increasing. Single and multi-engined piston aircraft have an average age of 19-20 years. GA turbine aircraft are comparatively younger, with an average age of 10 years[10].

[8] All data referenced in Chapter 7 was obtained from either CAA sources or the relevant Industry bodies.
[9] CAA, G-INFO database.
[10] Lober, General Aviation Small Aerodrome Research Study, UCL, 2006.

7.1.1 Hours Flown

The total number of hours flown by GA aircraft (excluding hang gliders, paragliders and parachuting) rose during the second half of the 1980s from an estimated 1.1m in 1986 to a peak of nearly 1.5m in 1990. Since then flying hours have remained relatively steady in the 1.25-1.35m range (Figure 7.1)[11]. Within this total figure there has been a steady increase in microlight and helicopter flying, although these remain a relatively small proportion[12]. These figures exclude foreign-registered aircraft based in the UK. If these were treated as UK aircraft, total flying hours would be higher, and given the growth in the foreign-registered fleet it seems likely that their inclusion would also show some growth in flying hours over the last few years.

Figure 7.1 Total General Aviation Hours Flown by Aircraft Type



The combination of increasing aircraft numbers but unchanged flying hours means that the average annual flying hours per aircraft has fallen, from 175 in 1989 to 125 in 2001, having previously risen from 150 in 1984[13]. It is unclear whether the decline during the 1990s is a matter for concern.

Two thirds of GA aircraft are privately owned, but business use accounts for two thirds of hours flown[14]. Business use includes flying training.

[11] CAA, G-INFO database.
[12] Lober, General Aviation Small Aerodrome Research Study, UCL, 2006.
[13] Lober, General Aviation Small Aerodrome Research Study, UCL, 2006.
[14] Lober, General Aviation Small Aerodrome Research Study, UCL, 2006.

7.1.2 Pilots

The total number of pilots licensed to fly powered aircraft in the UK is 47,160. Of these, 19,036 have professional licences (Airline Transport Pilot's Licence (ATPL), Commercial Pilot's Licence (CPL), Basic Commercial Pilot's Licence (BCPL)) and 28,124 have private licences. Out of the private licence holders, 3,394 hold an NPPL. Since 1998 the number of Private Aeroplane Licences issued has been declining (see Figure 7.2 below), whereas the number of Professional Licences issued has started to rise after a falling from a high in the late 1990s (see Figure 7.3 below). In the case of Private Licences, there has been an impact from the increase in microlight licence issues. There are now approximately 6,000 pilots with microlight ratings and 1,500 with a microlight NPPL. It has to be remembered that many professional licence holders also use their licence to fly privately.

In 2005 there were 8,105 glider pilots, 5,900 hang glider and paraglider pilots and 1,000 self-propelled hang glider pilots who did not need a licence. In addition there were 371 CPL (Balloons) holders and 1,745 PPL (Balloons and Airships) holders, of which 224 and 97 respectively held a current medical certificate.

Figure 7.2 CAA Private Pilot Licence Issues Per Annum

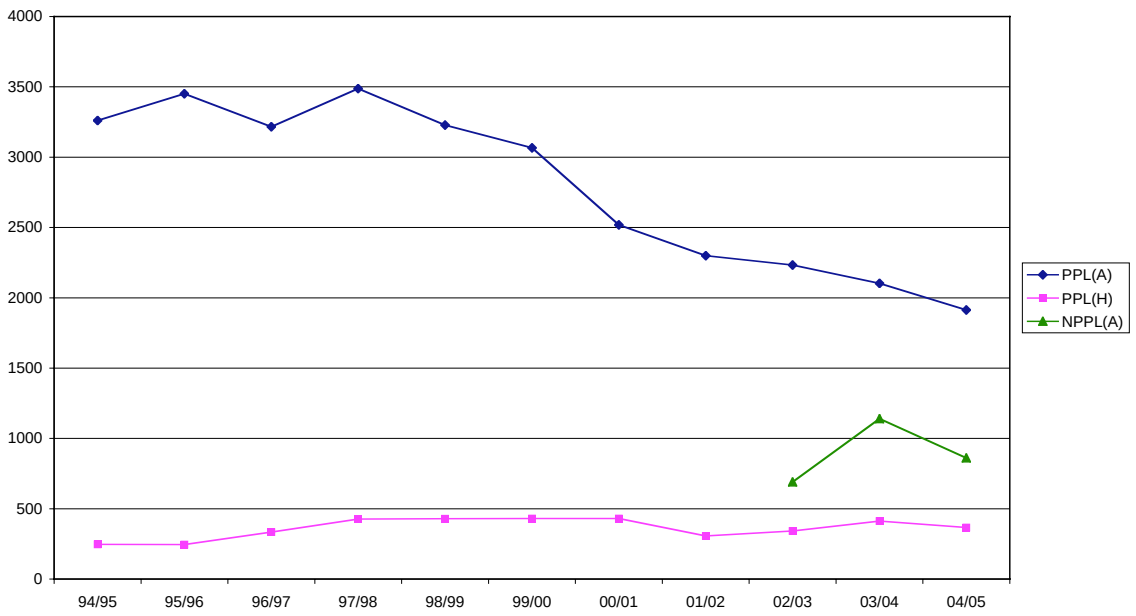
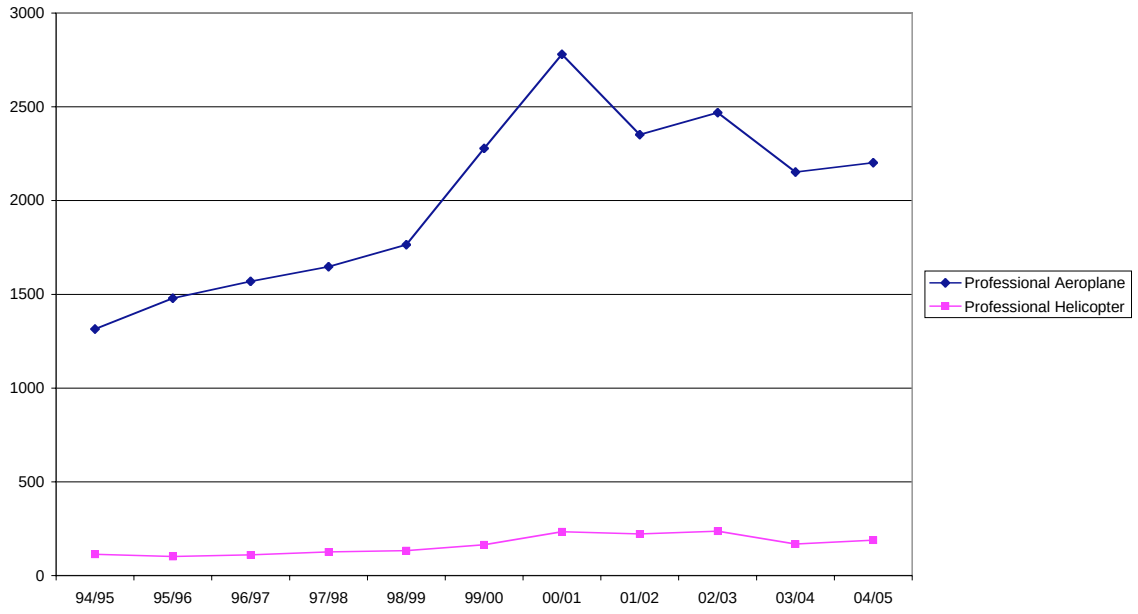


Figure 7.3 CAA Professional Pilot Licence Issues Per Annum



Lober also conducted a survey of GA pilots[15]. Although the survey is not representative of all GA pilots, with for example microlight pilots being underrepresented and only powered pilots being targeted, it does provide useful information. The survey suggests that pilots fly on average 45 to 55 hours a year, on 70 flights, with the average flight lasting an hour. This data is inconsistent, reflecting the problems in conducting the survey.

The survey also suggests that 14% of flights were work related, and that 37% of overseas flights were work related. Half of reported flights took off and landed at the same airport, and only 9% led to a night or more away. A third of trips just involved the pilot, whilst half carried just one passenger.

7.1.3 Flying Costs

The total costs of flying a GA aircraft are made up of a number of factors, ranging from the capital cost of purchasing an aircraft and the fuel costs of running it to the costs of parking it or purchasing a hangar space.

Flying costs do of course vary widely across the different types of aircraft used within the GA sector. A perfectly serviceable second-hand paraglider can cost £1,000. Microlights can cost between £2,000 and £65,000 whereas large corporate aircraft can cost tens of millions of pounds. Similarly fuel costs vary widely, with small microlights costing as little as £10 an hour to fly, and large corporate aircraft £3,000.

Fuel forms a significant part of the overall cost of flying, and it is unclear what impact the recent increases in the fuel price have had. However, they will have had a detrimental impact on the amount of flying, and this can be expected to show through over the next few years.

[15] Lober, General Aviation Small Aerodrome Research Study, UCL, 2006.

7.1.4 Aerodrome Utilisation

The development of some regional airports has had a negative impact on GA - from hours restrictions imposed to higher landing, parking and mandatory user fees. However, a number of small aerodromes (including private strips) have seen increases in their utilisation. It is notable that instrument flying training is becoming more difficult due to restricted access and increased charges as this activity tends to be carried out at the larger airfields with the necessary infrastructure.

7.2 MAJOR TECHNOLOGICAL DEVELOPMENTS

7.2.1 Introduction

Technological change is taking place currently at an ever-increasing rate, in all sectors of the aviation Industry. It is likely that emerging and future technological developments will have a significant impact on GA. Examples of currently emerging technologies include: powerplant developments (such as diesel aero engines), electronic flight bags, glass cockpit instrumentation systems and UAVs. In order to keep abreast of such developments, so that appropriate strategies and policies may be formulated, it will be necessary for informed and apposite dialogue to take place between the GA industry and the CAA.

The topics detailed below are examples of the technological issues facing the GA community. All of these issues will have associated regulatory challenges and will require attention by the CAA.

7.2.2 Mode S

Most sectors of GA are very concerned about the potential cost of Mode S Lightweight Transponders, compared to the benefits they are likely to provide to the purchaser, particularly when applied to very lightweight and inexpensive aircraft.

The technical feasibility of fitting Mode S transponders in microlights, vintage aircraft, gliders, foot-launched aircraft and large model aircraft, both in terms of ergonomics and pilot health and safety, has not yet been proven. However, in the ANSPs' and CAA's view, the safety benefits of Mode S are compelling. The carriage of Mode S will enable the ANSPs to provide a more efficient and safer air traffic service to all users.

A RIA was published by the CAA in June 2006 with a comment closure date of end August 2006.

7.2.3 Global Navigation Satellite System Instrument Approach Procedures

Instrument approach procedures have historically been designed to be used by aircraft utilising ground-based navigation infrastructure. It is now possible to design instrument approach procedures using space-based navigation infrastructure (GNSS). One such satellite navigation system is the US GPS.

GNSS instrument approach procedures are now widely available in the US with 1,178 stand-alone procedures published and 3,466 other RNAV procedures capable of use by GPS-driven RNAV equipment. To a lesser extent this is also the case in other countries throughout the world, including in Europe. The GPS signal is free to use and there is reasonably priced GPS equipment for GA aircraft. In 2006 there are 2,811 aircraft on the UK register with a MTOW of less than 5,700 kgs with GNSS equipment installed. This represents a sizeable proportion of the UK-registered fleet that is capable of transport and training operations. In addition non-UK-registered aircraft, flying in UK airspace, tend to be well equipped, including GNSS equipment. However, not all of these aircraft will have a GNSS installation that enables them to perform GNSS instrument approaches, as the equipment may not have all the functions for this purpose.

The CAA is trialling six GNSS approach procedures to be flown by GA aircraft in VMC. The results are due to be published in early 2007, with the aim of allowing the CAA to assess whether GNSS approaches are safe to introduce as permanent procedures. The introduction would offer improved accuracy over existing Non-Directional Beacon (NDB) and VHF Omnidirectional Range (VOR) instrument approaches.

Recommendation 9

The Regulatory Review Group recommends that the CAA should report the results of its GNSS Approach Trials as soon as practicable, with a view to expediting approval of GNSS approaches to all appropriate aerodromes used by GA aircraft, if so indicated by the trial results. .

Context - The CAA is currently trialling GNSS approaches and is due to publish the results in early 2007. The results are expected to enable the CAA to assess whether the use of GPS approaches is safe and practicable in terms of design and flight management aspects, and is therefore fit for approval.

7.2.4 Very Light Jets

There is a new sector developing, mainly led in the US, for very light “personal” jets. A handful of manufacturers will be bringing these to the market within the next few years. Such aircraft typically have a four-seat cabin and cost in the region of £0.5m–£1m, with lower operating costs than other aircraft with comparable performance. VLJs could be expected to operate out of smaller aerodromes that are presently the preserve of the lower end of GA, including recreational flying, as well as flying in the airways system at high altitudes along with CAT operations. Regulatory issues associated with VLJs include training and licensing.

Just how successful VLJs are will depend on their integration into these smaller aerodromes and on whether the pilot owners will be able to meet the necessary standards to operate safely within controlled airspace. The current Private Pilot Licence (PPL) training system may prove insufficient to provide all the skills necessary to operate these relatively sophisticated aircraft within the complex high density UK airspace environment. However, this may be tackled through the correct specification of training and licensing for the type rating for these aircraft.

Flights outside controlled airspace will suffer the same problems as military and CAT in that the higher speeds involved reduce the effectiveness of "see and avoid" principles. There are already aircraft flying in the UK, potentially by single-pilot owners, that are capable of speeds greater than 250 knots. However, these aircraft are sometimes flown by professional pilots on behalf of the owner or by the owner with the help of a professional pilot.

VLJs are likely to open up high-speed transport from rural areas and the UK regions to more high-worth individuals, creating economic benefit for those regions. This will only be possible if there is a sufficient network of suitable airports with adequate runway lengths.

The main regulatory impact therefore of VLJs would seem to be on training and licensing issues and increased pressure on the use of airports and airspace.

7.2.5 Unmanned Aerial Vehicles

There is on-going CAA work on the integration of UAVs into UK airspace. It is far from clear as to how many of these aircraft there will be operating in the UK, however what is certain is that VFR "See and Avoid" principles cannot be applied as they are currently. In April 2006, the FAA Associated Administrator for Aviation Safety, Mr Nicholas Sabatini, speaking to the US House of Representatives Aviation subcommittee said, "currently there is no recognised technology solution that could make these aircraft capable of meeting regulatory requirements for see and avoid, and command and control".

7.3 OTHER MAJOR DEVELOPMENTS

7.3.1 Access to Airspace

Increases in controlled airspace at regional airports have the potential to create choke points in the open FIR, if adequate access arrangements for GA traffic are not in place.

UK airspace is a national asset and private sector ANSPs are given the privilege and responsibility of managing it for all users. Adequate and equitable access to airspace should be achieved by an active CAA programmed review of controlled airspace requirements and monitoring of ANSP infrastructure, eg monitoring of access refusals to ensure ANSPs give appropriate priority to transit and GA traffic.

Recommendation 10

The Regulatory Review Group recommends that the CAA should ensure, through monitoring, that any proposed increases in controlled airspace do not exceed the minimum required for demonstrated safety reasons and to satisfy the environmental considerations. In addition, the CAA should act to ensure that adequate and equitable access to airspace is provided for and achieved and have an active programme of periodic review of the need for existing controlled airspace.

Context - UK airspace is a national asset and private sector ANSPs are given the privilege and responsibility of managing it for all users. Adequate and equitable access to airspace should be achieved by an active CAA programmed review of controlled airspace requirements and monitoring of ANSP infrastructure, eg monitoring of access refusals to ensure ANSPs give appropriate priority to transit and GA traffic.

7.3.2 Microlight Aeroplanes

From investigations it appears that some airfields still refuse to accept microlights/flexwing microlights. It is understood that the BMAA is continuing to campaign for all airfields that accept GA traffic to accept microlight aeroplanes.

There are some concerns whether the UK airworthiness standard for microlights is still appropriate in the light of recent technological developments. However, the CAA is carrying out a review of BCAR Section S (Small Light Aeroplanes) with Industry.

7.3.3 Light Aviation Airports Study Group

The recent LAASG recommended that detailed proposals to remove the requirement for certain flying training to be conducted at licensed aerodromes be developed together with alternative arrangements, eg an Industry Code of Practice supplementing JAR-FCL in order to maintain safety levels for flying training. The LAASG also recommended a review of Article 126 of the ANO and a review of the RFFS requirements and light category aerodromes. A two-tier consultation process on these proposals is to be conducted in late 2006.

The Regulatory Review Group supports the LAASG recommendations, in particular the proposal to remove the requirement for certain flying training to be conducted at licensed aerodromes, subject to the outcome of the consultation process.

7.3.4 Military Aerodromes

The GA community suggests that access to military aerodromes for GA aircraft is becoming more expensive due to complicated access and indemnity requirements. This has led to a reduction in GA activity at these aerodromes and a consequent reduction in understanding of GA issues by the Ministry of Defence (MoD).

Recommendation 11

The Regulatory Review Group recommends that the CAA invites the MoD to review its policy on access to military aerodromes and consider addressing the issue of military controllers understanding GA (and vice versa) through the medium of Military/Civilian Air Safety Days.

Context - There is a reduction in GA activity at MoD aerodromes due to complicated access and indemnity requirements.

7.3.5 Classification of Sailplanes

In the UK, sailplanes fall into four different categories: gliders, self-sustaining motor gliders, self-launching motor gliders and touring motor gliders, each of which has different training and licensing requirements. Elsewhere in Europe such aircraft fall into just two categories: sailplanes and powered sailplanes. The BGA proposes an alignment of the UK classification of sailplanes with the European model.

Recommendation 12

The Regulatory Review Group recommends that the CAA considers, in conjunction with the appropriate Industry bodies, re-aligning the current UK classification of sailplanes with the European model.

Context - UK sailplanes fall into four different categories compared to just two categories in Europe.

7.3.6 Qualification Criteria for Certificate of Airworthiness versus Permit to Fly

The ANO states that an aircraft shall not fly unless it possesses a C of A. This follows from the normal process that requires an aircraft to be designed and certificated to certain prescribed standards. Accordingly such aircraft, whether built in the UK or elsewhere, will be designed against a suitable code or certification specification and will usually be granted a Type Certificate and each example of that aircraft type issued with a C of A. CAA policy has therefore largely been focused on the premise that if an aircraft can qualify for a C of A it should hold one. For many years however, a number of aircraft that were the subject of Type Certificates in other countries have been imported into the UK and have been issued with a PtF for a variety of reasons.

As a consequence of EASA and the introduction of European legislation, this policy has been reviewed and the acceptance of such aircraft for a PtF upon import has stopped. These aircraft are now required to qualify for an EASA or National C of A as appropriate. It is clear that since many of these aircraft can be considered as vintage types, they potentially fall under the criteria set by EASA for Annex II aircraft. The reviews and discussions currently being conducted by EASA on such vintage types, as part of the review of Annex II to Regulation (EC) 1592/2002, and in the EASA Part 21 21.023 PtF/Restricted C of A Working Group, may well have an impact upon what the CAA is required to do in relation to these aircraft. This is particularly true where the original manufacturers or any other designated body no longer support the type from a continuing airworthiness perspective (the aircraft being loosely termed as ‘Orphan Aircraft’ types).

In addition, the aircraft that are already type certificated but operating on a PtF, have been operated and modified under the PtF system. This presents a problem in that the modification standard of the aircraft may no longer fully satisfy the requisite standards to be eligible for a C of A. The need to require re-substantiation of these modifications will be dependent upon EASA's deliberations and therefore the CAA's ability to apply a degree of flexibility in seeking a continuance of the situation.

Recommendation 13

The Regulatory Review Group recommends that, following completion of the MDM.032 activity and associated EASA Working Groups, the CAA should review its C of A/PtF policy to establish, where possible and appropriate, compatibility with future EASA policy.

Context - Several EASA Working Groups are currently debating PstF, the list of Annex II aircraft and the outcome of these groups will impact on future CAA policy.

8. REGULATION - PROPOSED OPTIONS FOR UK GENERAL AVIATION

8.1 PROPOSED OPTIONS - EASA AIRCRAFT

The future UK regulatory environment for those GA aircraft for which EASA has responsibility is unclear at present. The proposed amendment to Regulation (EC) 1592/2002 contains many concepts which the CAA and Industry agree should be implemented. These include:

- The use of Qualified Entities.
- The use of Assessment Bodies.
- The use of a sub-ICAO private pilot licence.
- The principle of regulatory proportionality commensurate with risk.

8.1.1 EASA Aircraft - Discussion

There is considerable concern, within the GA community and the CAA members of the Regulatory Review Group, that a proposed amendment to Regulation (EC) 1592/2002 is being rushed through the legislative process without due consideration being given to all the issues affecting the GA community. An example of this is the formation of the EASA Working Group MDM.032. This Group has been given an extremely challenging timescale in which to complete its work on the future regulatory structure for the GA community within Europe. Many of the UK Group members on MDM.032 consider that to produce a tenable solution within these timescales is impossible. The Regulatory Review Group members also consider that the present difficulties experienced by EASA, in certification matters, are about to be replicated if the extension to Regulation (EC) 1592/2002 is granted without taking measured time in which to consider all the implications of the proposals.

Recommendation 14

The Regulatory Review Group recommends that the CAA and the GA community seek to influence, at every opportunity, the Commission, EASA and the European Parliament to ensure that the detailed preparatory work to extend the remit of EASA is undertaken at an appropriate pace to ensure that the future regulatory structure is both pragmatic and viable before ceding legal competence to EASA.

Context - The Regulatory Review Group is concerned that the Commission and EASA are moving too fast in trying to extend the remit of EASA to cover Operations and Licensing matters.

Until the work of the EASA Group MDM.032 is complete, the future regulatory environment with the UK cannot be determined.

The work of the GA Regulatory Review Group has been important in establishing a common UK Industry/CAA view on how EASA should regulate the GA sector.

Recommendation 15

The Regulatory Review Group recommends that the Industry/CAA officials on the MDM.032 Working Group should endeavour to present unified views thereby influencing the debate on how EASA should regulate GA.

Context - The establishment of the Regulatory Review Group in September 2005 has allowed the GA community and CAA to debate the options for a future regulatory structure. There is considerable agreement between the parties and it is therefore important that, wherever possible, a unified view is expressed in the EASA MDM.032 Working Group by the UK members.

8.2 PROPOSED OPTIONS - NON-EASA AIRCRAFT

As part of the SRG Costs and Charges Joint Review Team activity, a proposal (GAMTA/01) was made by Industry that approval of non-EASA aircraft be in effect devolved by the CAA either by using the existing Popular Flying Association (PFA) model or by establishing partnerships with external bodies, while retaining certain CAA core competencies. The recommendation that a Feasibility Study be added to the 2005/06 Business Plan was acted upon (SRG Business Plan 2005/2006, item 8.2.1.6).

8.3 CAA FEASIBILITY STUDY - NON-EASA AIRCRAFT

The CAA Feasibility Study (noted in paragraph 8.2) had previously been undertaken to assess whether there appeared to be scope for further devolution or delegation in each of the activities associated with each non-EASA aircraft. The results, shown at 8.4 et al, are endorsed by the Regulatory Review members.

In reaching its findings, the Feasibility Study took into account:

- which functions could be delegated or devolved and for which aircraft types;
- which bodies could undertake such functions without conflict of interest;
- cost implications; and
- necessity for changes to the ANO.

When considering delegation/devolution, it has been recognised that the CAA has fundamental statutory functions under the ANO. In order that overall responsibility for these functions could be totally delegated, legislative changes to remove this responsibility from the CAA would be required.

In considering devolving or delegating significant new tasks to private bodies a number of what might be called "governance issues" will need to be addressed. These include:

- Whether such bodies should be made subject to the Freedom of Information Act.

- Whether such bodies should be required to meet public standards of record keeping, confidentiality and data protection.

- How appeals against decisions of such bodies will be dealt with, having regard in particular to the Human Rights Act.

- Whether and if so how should their charges be regulated.
- Whether the CAA will be expected to act as regulator of last resort if one of these bodies were to become insolvent or otherwise unable to carry out the tasks allotted to it.

In addition, consideration will need to be given to how the rules for which such bodies will be given responsibility will be enforced. If, for example, the CAA were to remain responsible for enforcement, including criminal investigation and prosecution, the body to which a task had been devolved or delegated would need to be prepared to support the CAA, both in terms of documentary evidence and in providing an expert witness where necessary.

8.4 ISSUE AND RENEWAL OF PERMITS TO FLY OR CERTIFICATES OF AIRWORTHINESS

8.4.1 Amateur-Built Aircraft

Amateur-built aircraft are operated on PtF. The recommendations for issue of PstF may originate from the PFA or the BMAA systems. The initial PtF is issued by the CAA following a recommendation from the PFA or BMAA. All PstF are now 'non-expiring', and require a C of V to be periodically re-issued to attest that the aircraft is airworthy. The PFA and the BMAA are approved by the CAA for the issue and re-issue of Cs of V.

If the aircraft concerned is outside the terms of approval of the PFA and BMAA, then the aircraft will be under the CAA's direct control, in which case CAP 659, "Amateur Built Aircraft A Guide to Approval, Construction and Operation of Amateur Built Aircraft" specifies involvement of a design team up to a full DOA depending on the level of complexity. CAP 659 also identifies the need for a Licensed Aircraft Engineer (LAE) acceptable to the CAA to supervise the project.

The Study suggests that there is possible scope for further devolution. See Recommendation 16.

8.4.2 Vintage and Historical Aircraft

Vintage and historical aircraft may be operated on either a PtF or a C of A.

Permit to Fly Aircraft

a) PtF aircraft tend to be the smaller aircraft types and many of these are under the control of the PFA or BMAA. The initial PtF is issued by the CAA following a recommendation from the PFA or BMAA. All PstF are now 'non-expiring', and require a C of V to be periodically re-issued to attest that the aircraft is airworthy. The PFA and the BMAA are approved by the CAA for the issue and re-issue of Cs of V. The CAA has little involvement in these aircraft and regulatory airworthiness oversight is by audit of the approved organisations together with a small sample survey of representative aircraft. The outcome of EASA Working Group Part 21 21.023 PtF/Restricted C of A may be germane to the debate.

The Study suggests that there is no scope for further devolution and therefore no recommendation is made.

b) A number of owners of Permit aircraft opt to stay with the CAA for the issue and renewal of their C of V. The CAA cannot refuse to undertake this activity. For these aircraft, a CAA surveyor has to visit annually, to survey the aircraft and records, in order to issue a C of V. The current PtF renewal fee for an aircraft of 500-2,730 kgs is £275; this is probably well short of the true cost. If the cost were to be increased to a more realistic level, this may encourage owners to place their aircraft within the PFA approval system. Another option would be to introduce a system similar to that in place for C of A aircraft ie an annual re-validation of C of V by a LAE, or approved person, following inspection to determine the aircraft is airworthy, and at 3 yearly intervals reissue of the C of V by an appropriately approved organisation. There is scope for encouraging further devolution. However, it needs to be recognised that owners currently not within the PFA regime opt for direct CAA oversight by choice.

Certificate of Airworthiness Aircraft

Cs of A are valid for a period of 3 years. At the time of initial C of A issue, CAA staff survey the aircraft and the associated records. Monitoring of continuing airworthiness after issue, and between renewals, is by periodic inspections in accordance with a CAA approved maintenance programme; a type rated licensed engineer or an authorised person in an approved organisation certifies these inspections. The C of A renewal process, at present, requires an inspection and recommendation from an appropriately approved organisation and does not normally involve CAA technical staff. The CAA has little involvement in these aircraft subsequent to the C of A issue and regulatory airworthiness oversight is by audit of the approved organisations together with a small sample survey of representative aircraft.

The Study suggests that there is little scope for further devolution. See Recommendation 16.

8.4.3 Research and Experimental Aircraft

Research and experimental flying is conducted on Permits to Test under the PFA system, under the BMAA's F1 B Conditions approval, or under other F1 or F3 B Conditions approvals issued by the CAA (with associated flight, design and quality elements).

The Study suggests that there is scope for further devolution. See Recommendation 16.

8.4.4 Ex-Military Aircraft

For intermediate and complex ex-military aircraft an A8-20 (E4) organisation may recommend the issue of a PtF and the M5 organisation may recommend the re-issue of the C of V (by the CAA). There may be scope for delegation of re-issue of the C of V to an M5 organisation.

The Study suggests that there is scope for further devolution. See Recommendation 16.

For simple ex-military aeroplanes below 2,730 kgs the recommendation for initial issue of the PtF and C of V and re-issue of the C of V does not need to be supported by an A8-20 organisation. Some operators use an M5 organisation to support the recommendation for re-issue of the C of V. If the privileges of an M5 approval were extended to the re-issue of the C of V, and if charges for direct CAA involvement were higher, it is likely that this would encourage operators to use the M5 organisation. The extension of BCAR A8-20 to cover all ex-military aircraft types has been considered before, although not progressed to a conclusion, but would allow less direct CAA involvement in individual aircraft types.

The Study suggests that there is scope for further devolution. See Recommendation 16.

8.4.5 Microlight Aeroplanes

Under their current terms of approval the BMAA may recommend the issue of a PtF, and may issue and re-issue Cs of V.

The CAA has recently recommended to the DfT, in April 2006, to partially deregulate single-seat microlights (up to 115 kgs empty weight).

The Study suggests that there is possible scope for further devolution. See Recommendation 16.

8.4.6 Unmanned Aerial Vehicles Less Than 150 kgs

UAVs less than 150 kgs are subject to an exemption from most of the provisions of the ANO 2005, subject to appropriate operating conditions and a recommendation is made from an appropriate body (see light UAVS policy in CAP 722, “Unmanned Aerial Vehicle Operations in UK Airspace - Guidance”').

The Study suggests that there may be scope for further devolution. See Recommendation 16.

8.4.7 Options for National Certificates of Airworthiness

CAA is reviewing the options for national Cs of A to be non-expiring, together with a periodically issued national Airworthiness Review Certificate. This approach has already been adopted for national PtF aircraft. This could have benefits in that it would mirror the existing EASA C of A system and thus avoid the additional complexity and cost associated with administering two distinct processes for aircraft with a C of A.

It has been suggested that the PFA should be allowed to handle C of A renewals as well as re-issue of Cs of V for permit aircraft, in a similar manner to the BGA, which has a BCAR Group M3 and B1 approval in order to facilitate maintenance and C of A renewal activity on their glider tugs and self launching motor gliders. This is already possible under the current rules. The PFA have already been advised of the need to apply for an M3 approval and show that they have the appropriate procedures and competence.

8.5 APPROVAL OF MODIFICATIONS

8.5.1 Certificate of Airworthiness Aircraft

Today, all modifications to non-EASA aircraft must be approved by the CAA. Minor modifications may be approved by the CAA directly or through an approved organisation. Major modifications must be approved through a design organisation (ANO 2005 Article 9 and BCAR A2-5).

The CAA is able to issue an 'ANO Supplement' that allows a Part 21 DOA to be used instead of a BCAR design approval. There is greater scope for devolution in the case of a DOA (eg self classification of modifications and approval of minor modifications).

The CAA is reviewing the remaining BCARs to identify what changes should be made 'post EASA'. One of the main activities is a review of BCAR Section A, and in particular to draft a new BCAR A8-21 for design and production approvals. Once the scope of the work has been estimated, Industry will be approached with the aim of setting up a joint working group to develop this material. Extension of the privileges of BCAR design approvals to cover classification of modifications and approval of minor modifications will be considered.

The Study suggests that there is scope for further devolution. See Recommendation 16.

8.5.2 Permit to Fly Aircraft

Modifications on PtF aircraft may be handled by the PFA and the BMAA where the aircraft is within their capability, otherwise, BCAR design organisations or Part 21 DOA may be used. Similar issues apply as for C of A aircraft identified above.

CAA will accept applications for major modifications from un-approved organisations, for simple aircraft. Criteria are defined in CAP 659 and relate the level of complexity of the aircraft or modification to the level of design support required. CAP 659 is written for amateur-built aircraft, but similar principles would be applied for other PtF aircraft.

The Study suggests that there is no scope for further devolution.

8.6 NON-EASA AIRCRAFT - DISCUSSION

There are a number of areas where changes in working practices may be possible as suggested in the GAMTA/01 action (see para 8.2). Further work will be necessary to examine these opportunities in more detail.

Further devolution depends upon the sectors of Industry having the competence and the resource to take on the associated responsibilities.

When the BMAA's scope was extended to include initial issue of PtF for factory built microlights, only half of the manufacturers took up this option. The remainder preferred to remain with the CAA, even though this cost more.

The matter of cost also needs to be taken into account. An initial study would need to include an objective for a reduction in CAA staff resource in order to make this a cost effective initiative in the long term.

No change is needed for non-EASA aircraft that are currently unregulated for airworthiness, eg hang gliders and paragliders.

Recommendation 16

The Regulatory Review Group recommends that Industry considers further devolution and/or delegation, in conjunction with the CAA, in the issue, renewal of PtF or Cs of A, modifications and reissue of Cs of V for non-EASA aircraft.

Context - A CAA Feasibility Study has shown that there appears to be scope for further devolution or some delegation, to the GA community/approved companies, in some certification areas for non-EASA aircraft.

9. METHODS AND EFFECTIVENESS OF CONSULTATION AND DIALOGUE BETWEEN GENERAL AVIATION/ CAA/GOVERNMENT/REGIONAL BODIES

9.1 INTRODUCTION/AIMS

This subject is more comprehensively dealt with in the GA Strategic Review including consultation with Government and regional bodies. Therefore this Chapter will address issues that apply to regulatory development between GA and CAA only.

The CAA places significant emphasis on the need for effective consultation with interested parties and regards this as an important aspect of being a world class regulator.

9.2 PURPOSE OF CONSULTATION

Consultation enables the CAA to seek information and advice from the GA Industry so as to make better decisions, regulations, and maintain safety oversight.

In particular, consultation provides information and data on the impact of proposed regulations. It also provides valuable feedback into the functioning of the organisation and provides a means of transparency to the stakeholders.

Ultimately it ensures the CAA has adequate information to make appropriate decisions.

There can be a perception that the purpose of consultation is to allow organisations to influence or participate in the decision making process. Decisions made by the CAA can be taken to appeal or ultimately Judicial Review. The responsibility for any decision must therefore rest with the CAA. However, the CAA must be cognisant of expert opinion and views in determining any decision and therefore places a very high value on dialogue and consultation with its stakeholders.

9.3 METHODS OF CONSULTATION AND DIALOGUE

There are different types of both formal and informal consultations. Formal consultations are generally in written format and are used for proposed changes of regulations. Informal consultations can take various forms, including, meetings, open days, forums, and telephone calls. The CAA uses most forms of consultation, some on a constituted planned basis, and some very much ad hoc.

9.3.1 Formal Consultation

CAA formal consultations follow set procedures following government guidelines. The CAA, on occasion, has published consultations during August and over the Christmas period. It is recognised that this could have reduced the ability of representative organisations to devote the necessary time to their comments and, if possible, should be avoided in future.

The responsibility for consultation on EASA and European legislative matters rests with the DfT.

9.3.2 Informal Consultation

Informal consultation covers a broad spectrum of activities. It often takes place at the early development of a proposal. The early identification of issues can lead to more effective proposals and sometimes consensus prior to formal consultation. Moreover, it can also help reduce the workload of CAA staff associated with introducing new regulations. This process, if correctly managed, can also build up trust and cooperation between the various parties that can result in better implementation and compliance when introducing new regulations. However if incorrectly managed it can lead to mistrust and increased workload.

This is backed by the view from representative organisations that examples of successful initiatives have grown from sound informal consultation. It is therefore important that the CAA places sufficient resources into informal consultations at the development stages of proposed changes to legislation.

9.4 REPRESENTATIVES

9.4.1 Role of Participating General Aviation Representatives

When the CAA consults with a representative of an organisation, there is an assumption that they correctly represent their organisation. If the CAA acts on information presented by a representative that does not correctly represent interests of their organisation then this could result in inappropriate decisions.

Some representatives for GA bodies are paid employees of their respective organisations. However, many organisations employ volunteers, in particular in the sporting and recreational areas. Participation can be on top of full time employment in another unrelated occupation. The participant may not be able to devote a great amount of time to researching issues and reading papers. They may not be trained or experienced in the work of committees and consultation process. As a result, despite the best intentions, this type of consultation can fail.

There are technology opportunities for the CAA to prepare information in a more easily digestible format and allow representatives to be better briefed. Moreover, it is incumbent on the GA community organisations to ensure that representatives understand their responsibility in representing the view of their organisation, and, if appropriate, present conflicting views.

9.4.2 Role of CAA Representatives

The CAA, in consideration of cost, does not always send representatives of all interested departments to meetings or have active participation in consultations. Therefore CAA representatives have a responsibility to understand what their role is at meetings. There is clearly an advantage to having one GA consultative body to coordinate consultation across the various CAA departments and divisions. This is also recommended in the Cabinet Office guidelines on consultation.

9.5 GENERAL AVIATION REPRESENTATIVE ORGANISATIONS

Annex M details the list of GA consultative fora and how they link with various groups and departments of the CAA. However, the details and ToR of these fora are not transparent to the GA community; it is therefore proposed that they be shown on the CAA Internet website.

The GA community encompasses a wide diversity of activities. These range from piloting a hang glider to operating a high value complex corporate jet. As a result a large number of associations have emerged to represent the interests of the various sectors of the Industry. Each association has issues that are unique to its activities, but there are also issues that are common to many associations.

Recommendation 17

The Regulatory Review Group recommends that the list of GA consultative fora, their participants and ToR should be placed on the CAA website.

Context - The CAA consults extensively with many parties but the details of these groups are not transparent to the GA community.

9.5.1 A Single General Aviation Representative Organisation

There have been suggestions that there should be a single GA umbrella organisation that can present a single viewpoint to the CAA, to improve upon the current arrangements. However, it is acknowledged that the variety of different aircraft and operations in GA, as well as the different functions (such as trade, recreational, sport, personnel) make such a noble aim difficult to achieve. There was consensus among the Regulatory Review Group that appropriate alliances would best present a unified view on particular issues. This will be particularly so when other sectors of the aviation industry are involved in such issues.

Industry and CAA agree that the GACC is an excellent focal point, within SRG, for debate. Both parties agree that the standing of the GACC should be elevated to that of the NATMAC and that other interested parties should be invited to attend eg DfT and other groups of the CAA eg ERG.

9.6 COMMITTEES

9.6.1 The National Air Traffic Management Advisory Committee

The CAA consults on airspace matters through NATMAC. The ToR can be found at **Annex N**. GA has its own subgroup of NATMAC, the GAWG.

The ToR of NATMAC and the methods of working are currently under review. This review will determine if there are improvements in the way that information can be presented to representatives and methods of working, including electronic means.

9.6.2 Present and Future Role of the General Aviation Consultative Committee

The ToR for the GACC can be found at **Annex O**. The GACC has been SRG's main forum for consultation with a wide range of GA representative organisations in the UK since 1997.

The role of SRG is to ensure that UK civil aviation standards are set and achieved in a co-operative and cost-effective manner. Prior to 1997 this process of consultation was carried out through the medium of standing consultative committees, one of which was the General Aviation Airworthiness Consultative Committee (GAACC). The GAACC dealt with technical topics and it was decided to broaden that remit to include operational as well as airworthiness issues relevant to GA in the UK.

The GACC aims to develop technical and operational policy that would help to improve GA safety standards whilst encouraging the development of UK GA. This aim is reflected in the current ToR.

The ToR were amended in 2003 to include the provision of expert advice to SRG on research priorities and current research projects. This is achieved by means of a standing agenda item and the deliberations of the GA Research Advisory Group.

Meeting agendas reflect a wide cross-section of subjects of interest and concern to GA organisations and to the CAA. A total of 26 organisations send representatives to GACC and a variety of SRG and DAP departments attend.

9.7 CONSULTATION - DISCUSSION

9.7.1 Issues Log

During the Regulatory Review Group debates in plenary session, it became clear that the Industry has many issues with CAA regulation and had ideas on how to improve policies and processes.

Many of these issues are specific and, whilst germane to the Review, were too detailed to include within this report. It was therefore agreed that these issues should be recorded separately. An Issues Log was created and the issues raised and their status at the end of May 2006 is shown at **Annex P**. These were dealt with as a parallel activity to the Regulatory Review and the Issues Log itself updated. Several issues have already been responded to by the relevant specialist department within the CAA, whilst others remain open. It is intended to respond to present and future Industry concerns and ideas, within the GACC, as a permanent feature of the GACC. One idea would be for the GACC to form a sub group comprising industry and relevant CAA members, to consider an Issues Log item and then report back to the GACC; on completion, the sub group would be disbanded.

Recommendation 18

The Regulatory Review Group strongly endorses the concept of an Issues Log and recommends that this should be taken forward as a permanent mechanism for consideration by the GACC.

Context - The GA community has many issues with CAA regulation and would like to propose ideas for improvement and considers that an Issues Log would enable them to represent their concerns and ideas, formally, to the CAA.

9.7.2 Industry and CAA agree that, for regulatory matters, NATMAC and the GACC should be the principal focal points for debate.

Recommendation 19

The Regulatory Review Group recommends that, whilst NATMAC is in the process of reviewing its ToR, the GACC should also undertake a similar exercise. In addition, it is recommended that the membership of GACC should be expanded to include the DfT and, if deemed necessary, other CAA Groups such as ERG.

Context - Industry and CAA agree that, for regulatory matters, NATMAC and the GACC should be the principal focal points for GA debate.

10. GENERAL AVIATION REGULATION UNDERTAKEN BY THE CAA ON BEHALF OF THE GOVERNMENT

10.1 INTRODUCTION

The DfT has required the CAA to carry out two aspects of GA regulation that would otherwise be beyond the CAA's remit (detailed in paragraphs 10.2 and 10.3). The CAA is reimbursed by the DfT for those activities in relation to foreign-registered aircraft.

10.2 INSURANCE

The provisions of Regulation (EC) 785/2004 and the Civil Aviation (Insurance) Regulations 2005 apply to both UK and foreign-registered GA and CAT aircraft. Compliance with the requirements is checked when UK owners apply to register and re-register their aircraft and when foreign CAT operators apply for operating permits. In addition, CAA Inspectors carry out random inspections of insurance documentation on behalf of the DfT, coincident with inspections for other purposes.

10.3 SAFETY ASSESSMENT OF FOREIGN AIRCRAFT (SAFA)

In order to discharge the UK's responsibilities under the SAFA Directive (2204/36/CE(b)), the DfT requires the CAA to carry out a number of ramp inspections of foreign-registered aircraft per year. For 2006/07 the total required is 250, of which 15 - 25 are to be inspections of foreign-registered GA aircraft.

11. IMPACT OF REGULATORY REVIEW RECOMMENDATIONS

11.1 IMPACT OF THE REGULATORY REVIEW RECOMMENDATIONS ON THE CAA

11.1.1 Resource Implications

All recommendations addressed to the CAA will entail the use of existing resources to permit their consideration and, where appropriate, implementation. It is not expected that any reduction in CAA manpower will be evident in the short to medium-term. In the meantime, the CAA continues to review the processes and staffing levels to ensure that the regulatory oversight of the GA community is cost effective and proportionate. The only envisaged manpower reductions could be in the area of future devolution to an Assessment Body for the issue of the RPL.

11.1.2 Dialogue with the General Aviation Community

The establishment of the Regulatory Review has been fundamental in revitalising the existing dialogue between the CAA and the GA community. This strengthened dialogue, when coupled to the progressive implementation of the recommendations, can only serve to ensure that the relationship is maintained at the highest level.

11.2 IMPACT OF THE REGULATORY REVIEW RECOMMENDATIONS ON STATUTORY REQUIREMENTS

Until EASA Working Group MDM.032 has completed its task it is difficult to estimate the changes required to UK legislation. There will, inevitably, be changes required as a consequence of the proposed amendment to Regulation (EC) 1592/2002 when enacted and any further changes stemming from consideration of the adoption of MDM.032 should be implemented at the same time.

11.3 IMPACT OF THE REGULATORY REVIEW RECOMMENDATIONS ON GENERAL AVIATION

There are many questions to be answered as to EASA's (and CAA's) role in the future regulation of GA. Until Working Groups MDM.032 and M.017 have completed their tasks it is difficult to estimate the impact on the GA Industry.

There will be, in all probability, opportunities for non-regulatory bodies to act as either Qualified Entities or Assessment Bodies in a wide range of oversight activities. It could be argued that the BMAA and NPLG already act as Qualified Entities in their role as NPPL application assessors. It would be a relatively short step for these organisations to become assessment bodies, issuing the proposed EASA RPL in their own right.

The improved communication links, through the Issues Log and revised GACC, will ensure that the GA community has a robust and significant platform on which to debate issues with the CAA.

Acceptance of the recommendations can only have a positive impact upon the future development of the GA in the UK.

12. GLOSSARY

Aeroplane	Power driven heavier-than-air aircraft with wings (see also 'Conventional Aeroplane')
ANO	Air Navigation Order 2005
ANSP	Air Navigation Service Providers
AOPA	Aircraft Owners and Pilots Association
Assessment Body	An approved body which may assess conformity of legal or natural persons with the Implementing Rules established to ensure compliance with the Essential Requirements laid down in Regulation (EC) 1592/2002 (the basic EASA Regulation) and issue the related certificate
ATPL	Airline Transport Pilot's Licence
ATM	Air Traffic Management
ASSI	Air Safety Support International
BBAC	British Balloon and Airship Club
BBGA	British Business & General Aviation Association
BCAR	British Civil Airworthiness Requirements
BCPL	Basic Commercial Pilot's Licence
BGA	British Gliding Association
BHAB	British Helicopter Advisory Board
BHPA	British Hang Gliding and Paragliding Association
BMAA	British Microlight Aircraft Association
BPA	British Parachute Association
BRC	Better Regulation Commission
BRE	Better Regulation Executive
BRTF	Better Regulation Task Force
CAA	Civil Aviation Authority
CAT	Commercial Air Transport
CNS	Communication, Navigation and Surveillance
C of A	Certificate of Airworthiness
C of V	Certificate of Validity
CPL	Commercial Pilot's Licence
Conventional Aeroplane	In this report means aeroplanes, not including microlight aeroplanes
DAP	Directorate of Airspace Policy
DfT	Department for Transport
DOA	Design Organisation Approvals
EAS	Europe Air Sports

EASA	European Aviation Safety Agency
ERG	Economic Regulation Group
EU	European Union
FAA	Federal Aviation Administration
FAI	Fédération Aéronautique Internationale
FAR	Fatal Accident Rate
FIR	Flight Information Region
Forms of Regulation	Unregulated - No legally enforceable regulation. Voluntary bodies may seek to encourage best practice but have no legal powers. Devolved - There are legally binding rules and a statutory regulator with legal powers and duties. The CAA, as regulator, may authorise some other body, such as a voluntary body representative of a particular segment of the aviation community, to carry out specific tasks in support of the CAA's function. The CAA approves the bodies to submit reports and recommendations, on the basis of which, the CAA issues the relevant licence or certificate. The CAA remains responsible for the process. Delegated - There are legally binding rules and a statutory regulator with legal powers and duties. The CAA delegates the entire function to another organisation. The CAA has no involvement in the process and the licence or certificate is issued in the name of the CAA but by the delegate. The CAA remains liable as the named body in the legislation. The CAA has not delegated any functions in this way. Full Regulation - There are legally binding rules and a statutory regulator with legal powers and duties. The CAA undertakes the oversight of this activity in-house and is fully responsible for its actions.
GA	General Aviation
GAACC	General Aviation Airworthiness Consultative Committee
GACC	General Aviation Consultative Committee
GAPAN	Guild of Air Pilots and Air Navigators
GASCo	General Aviation Safety Council
GASRWG	General Aviation Safety Review Working Group
GAWG	General Aviation Working Group

Glider	a) A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight; b) A self-sustaining glider; and c) A self-propelled hang glider
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
Gyroplane	Aircraft that is supported in flight by unpowered rotor with forward propulsion provided by a conventional propeller
Helicopter	Aircraft lifted and propelled by power driven blades or rotors revolving horizontally
ICAO	International Civil Aviation Organization
IGA-CARA	International General Aviation and Corporate Aviation Risk Assessment
IMC	Instrument Meteorological Conditions
IRs	Implementing Rules
JAA	Joint Aviation Authorities
JARs	Joint Aviation Requirements
LAASG	Light Aviation Airports Study Group
LAE	Licensed Aircraft Engineer
Microlight Aeroplane	In the UK legislation, means an aeroplane designed to carry not more than two persons which has: a) A maximum total weight authorised not exceeding: i) 300 kg for a single seat landplane, (or 390 kg for a single seat landplane in respect of which a permit to fly or certificate of airworthiness issued by the CAA was in force prior to 1st January 2003); ii) 450 kg for a two seat landplane; iii) 330 kg for a single seat amphibian or floatplane; or iv) 495 kg for a two seat amphibian or floatplane; and b) A stalling speed at the maximum total weight authorised not exceeding 35 knots calibrated airspeed. (Note: This definition may not be consistent in all States.)

MoD	Ministry of Defence
MTWA	Maximum Total Weight Authorised
MTOW	Maximum Take-Off Weight
NAA	National Aviation Authority
NATMAC	National Air Traffic Management Advisory Committee
NDB	Non-Directional Beacon
NPLG	National Pilot Licensing Group
NPPL	National Private Pilot's Licence
PFA	Popular Flying Association
PtF	Permit to Fly
PPL	Private Pilot Licence
Qualified Entity	An accredited body which may conduct certification tasks under the control and the responsibility of EASA or of a national aviation authority
RAeC	Royal Aero Club of the United Kingdom
RAeS	Royal Aeronautical Society
RFFS	Rescue and Fire Fighting Service
RIA	Regulatory Impact Assessment
RNAV	Area Navigation
RPL	Recreational Pilot's Licence
Self-Launching Motor Glider (SLMG)	An aircraft with the characteristics of a non-power-driven glider, which is fitted with one or more power units and which is designed or intended to take off under its own power
Self-Propelled Hang Glider (SPHG)	An aircraft comprising an aerofoil wing and a mechanical propulsion device which is foot launched, including a powered paraglider
Self-Sustaining Glider (SSG)	An aircraft with the characteristics of a non-power-driven glider which is fitted with one or more power units capable of sustaining the aircraft in flight but which is not designed or intended to take off under its own power
SHWG	Small Helicopter Working Group
Simple Single Engine Aeroplane	For the purposes of the National Private Pilot' s Licence means a single engine piston aeroplane with a maximum take-off weight authorised not exceeding 2,000 kgs and which is not a microlight aeroplane or a self-launching motor glider
SRG	Safety Regulation Group
ToR	Terms of Reference

Touring Motor Glider (TMG)	Has the meaning specified in paragraph 1.001 of Section 1 of JAR-FCL 1
UAV	Unmanned Aerial Vehicle
VLJ	Very Light Jets
VMC	Visual Meteorological Conditions
VOR	VHF Omnidirectional Range

13. ANNEXES

A CAA Chairman's Letter Initiating GA Strategic and Regulatory Reviews

B Terms of Reference of GA Regulatory Review

C Details of Workstreams and Membership

D Definitions of General Aviation

E CAA Regulation of General Aviation - Some Significant Dates

- E1 History of Certification Requirements
- E2 General Aviation - Regulatory Reduction Initiatives - Certification
- E3 General Aviation - Regulatory Reduction Initiatives - Operations
- E4 General Aviation - Regulatory Reduction Initiatives - Licensing
- E5 General Aviation - Regulatory Reduction Initiatives - Continued Airworthiness & Maintenance Controls

F Details of Current UK Regulation for All Aircraft

G GA Regulatory Review Questionnaire 2005

H Other Regulatory Models Used Within Europe and Elsewhere

I Summary of Possible Effects of EASA on Future Regulation and CAA/Industry Views

J EASA MDM.032 Working Group Terms of Reference

K EASA M.017 Working Group Terms of Reference

L Analysis of Fatal UK General Aviation Accidents

- L1 Analysis Criteria and Caveats, Data Sources and Methodology for Estimating Aircraft Utilisation
- L2 List of Fatal Accidents to UK-Registered Aircraft Below 5,700 KG MTWA
- L3 General Aviation Safety Council (GASCo) Accident Type Description & General Aviation Safety Review Working Group (GASRWG) Factors
- L4 Methodology for Deriving Current Safety Forecasts for UK General Aviation

M CAA/GA Community Consultation Fora

N The National Air Traffic Management Advisory Committee (NATMAC) - Terms of Reference and Constitution

O General Aviation Consultative Committee (GACC) - Terms of Reference

P Issues Log

Annex A

CAA CHAIRMAN'S LETTER INITIATING GA STRATEGIC & REGULATORY REVIEW

To: Circulation List Below

15 June 2005

STRATEGIC REVIEW OF GENERAL AVIATION IN THE UNITED KINGDOM

The purpose of this letter is to seek your views on CAA proposals, as set out below, for carrying out a Strategic Review of General Aviation in the UK.

You will be aware that the CAA initiated last week a consultation on the CAA's proposals for revisions to the Safety Regulation Group's Charging Schemes. That consultation will, no doubt, provide us with the views of the UK aviation Industry about the proposed Charging Schemes, and we will give careful consideration to those views in framing our eventual conclusions. However, the CAA considers that there is also now a need for review of a number of broader issues related to General Aviation in particular.

It is many years since a review of this kind was carried out for the General Aviation sector, and there are currently many developments in progress or planned which have important implications for the sector, for example:

- the Single European Sky initiative
- the European Aviation Safety Agency
- changes in airspace classification
- changes in technology e.g., Mode S
- continued rapid growth in commercial air transport
- possible introduction of unmanned air vehicles

Against the above background, the CAA Board believes that a strategic review of the GA sector would be timely, and we are aware that recent discussions with DfT Ministers have shown that there is an appetite in the sector for a review of this nature.

Accordingly, the CAA proposes that a Strategic Review is carried out over the next year to address issues affecting General Aviation (GA), on the basis set out below.

(a) The Milestones of the Review would be:

- to have the Review Team in place by end August 2005;
- to agree Terms of Reference and a Work Programme by end September; and
- to present Conclusions and Recommendations to the CAA Board by June 2006.

(b) We propose that membership of the Team to carry out this Review would include:

(i) CAA representatives with knowledge of the GA sector – perhaps 6 or 7 people

(ii) Representatives of organisations involved in General Aviation – perhaps 6 or 7 people

(iii) A representative from the Ministry of Defence

(iv) A representative from the Department for Transport

We envisage that the Team Leader would be Alex Plant, who heads the policy and analysis area in the CAA's Economic Regulation Group.

We believe that a Team of 14-16 members is, for reasons of efficiency, as large a group as we should contemplate. We recognise the difficulty of limiting the GA representation to 6 or 7 people. We plan to consult with the General Aviation Consultative Committee to determine who these representatives should be, and on arrangements for liaison with organisations not directly represented on the Review Team.

(c) The Review Team's terms of reference and modus operandi would be for the Team itself to determine. However, for purposes of consideration at this stage, the CAA envisages the Team identifying and recording :

- a description and definition of general aviation in the UK;
- the existing UK policy context for general aviation;
- GA sectoral trends in the UK during the past 10 years;
- UK versus international trends;
- benefits (quantified so far as possible) to UK or European aviation industries from general aviation;
- implications of general aviation activities for other users, and for the community generally (including, so far as practible, environmental impacts);
- major current developments which are likely to affect UK general aviation: airspace, infrastructure, technology, regulatory, costs, etc;

- issues concerning access to airports;

- future trends affecting GA;

- methods and effectiveness of consultation and dialogue between GA interests and CAA/Government;

- key strategic issues for UK general aviation;

- Conclusions and Recommendations for consideration in policy making for the future i.e. policy making by Government, by the CAA, by GA organisations and by Industry.

(d) The Principles under which the Review Team will operate will include :

- The workings of the Review Team shall be based upon available factual information;

- The individual members of the Review Team are responsible for collecting and expressing the view of the sectors they represent and providing feedback from the Review Team;

- Where general consensus has been reached by the Review Team, all members shall be committed to taking the consensus forward; minority positions will be acknowledged, recorded and the sponsor of the position identified;

- Wherever possible, nominated representatives will attend all meetings. Where alternates are used, they must be aware of, and be committed to, understandings already reached;

- Ensuring that adequate liaison is maintained with all general aviation associations represented on the General Aviation Consultative Committee; and

- Trade association members will be expected to fund their own participation in this activity. (Selected members of the team, if involved in overseas benchmarking activities, may recover appropriate travel and subsistence costs from the CAA).

In addition to this review of strategic issues affecting the GA sector, the CAA also plans to carry out within the next 12 months or so a comprehensive review of its regulatory approach to the GA sector, smaller AOC holders, and small aerodromes. This regulatory review will be initiated as soon as the CAA has a clear view of EASA's intended approach to the GA sector in Europe, which we expect to have later this year. We will write to you separately concerning this second review and industry involvement in it, and we intend that the eventual outcomes from the two reviews will be co-ordinated as appropriate.

The purpose of this letter is to seek your views as to:

- the advisability of carrying out a Strategic Review as outlined above;

- the Scope of the Review as outlined above;

- the Milestones for the Review as outlined above;
- Membership of the Review Team and, in particular, representation from the GA sector;
- the proposed Work Streams; and
- the Principles under which the Joint Review Team will operate.

We would appreciate your response not later than 10th July 2005 and, subject to the responses we receive, we envisage seeking to put the Team in place between then and end August.

We look forward to hearing from you.

Yours sincerely,

Sir Roy McNulty CBE
Chairman

Annex B

REGULATORY REVIEW OF GENERAL AVIATION IN THE UNITED KINGDOM TERMS OF REFERENCE

1. Objectives and Scope

1.1 A CAA-initiated and -chaired regulatory review of General Aviation is to be carried out jointly by representatives from the General Aviation community, UK Government and the CAA.

1.2 For the purposes of this review, General Aviation is defined as “a civil aircraft operation other than a commercial air transport operation” where “commercial air transport” is defined as “an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire”.

1.3 The objectives of the review are to agree and record:

1. A description and definition of general aviation in the UK.

2. The history of regulation within the UK, the existing UK policy on general aviation regulation and best practise guidelines.

3. Sectoral trends and major and future developments which are likely to affect UK general aviation

4. The accident rate for UK general aviation over the past 10 years compared with selected other European National Aviation Authorities and the Federal Aviation Administration. Consider appropriate safety targets for general aviation.

5. Other regulatory models used within Europe and elsewhere.

6. The effects of EASA (through Regulation EC 1592/2002) upon future UK regulation of general aviation.

7. Methods and effectiveness of consultation and dialogue between General Aviation interests and CAA/Government/regional bodies.

8. Proposed options for future UK regulation of general aviation including details of:

   - Possible legal changes.
   - Costs of administration.
   - Costs to industry.
   - Advantages and disadvantages of each proposal.
   - Cost effectiveness and risk analysis.

- The scope of the review will exclude the following items:

  a. Fractional ownership.

  b. Unmanned Aerial Vehicles (UAVs).

c. Foreign registered aircraft resident in the UK.

2. Principles

2.1 In developing recommendations the review must take into account that:

- All recommendations must take into account CAA statutory responsibilities, that risks to civil aviation are properly controlled and that safety standards currently achieved in the UK are maintained. These recommendations must also take account of ICAO, EC and EASA regulations.

- The responsibility for setting UK regulatory charges is a statutory responsibility of the CAA, taking into account any relevant EASA fees and charging regulations.

- The final decision on the method and level of regulation of UK general aviation is the prerogative of the CAA Board having regard to UK legislation, ICAO obligations and EC/EASA regulations and procedures.

and the following underlying principles:

- The workings of the Review Team shall be based upon available factual information.

- The individual members of the Review Team are responsible for collecting and expressing the views of the sectors they represent and providing feedback from the Review Team.

- Where general consensus has been reached by the Review Team, all members shall be committed to taking the consensus forward; minority positions will be acknowledged, recorded and the sponsor of the position identified in the final report or annex thereto.

- Wherever possible, nominated representatives will attend all meetings. Where alternates are used, they must be aware of, and be committed to, agreements already reached.

3. Membership

3.1 The following will comprise the Review Team:

Chairman - David Chapman, Head of Operating Standards (HOSD), Safety Regulation Group.

CAA

John Hills	-	Safety Regulation Group, General Aviation Department.
David Beaven	-	Safety Regulation Group, General Aviation Department.
Carl Thomas	-	Safety Regulation Group, Certification and Approvals Department.
Jim McKenna	-	Safety Regulation Group, Aircraft Maintenance Standards Department.
Graham Forbes	-	Safety Regulation Group Personnel Licensing Department.
Simon Baker	-	Safety Regulation Group, Finance Department.
Joji Waites	-	Safety Regulation Group, Research and Strategic Analysis.

Robin Allan - Corporate Centre, Legal Department.

General Aviation

Martin Robinson - Aircraft Owners and Pilots Association (AOPA)
David Roberts - British Gliding Association (BGA), Royal Aero Club of the UK (RAeC), Europe Air Sports (EAS)
Tom Hardie - British Hang Gliding and Paragliding Association (BHPA)
Peter Norton - British Helicopter Advisory Board (BHAB)
Chris Finnigan - British Microlight Aircraft Association (BMAA)
Alan Robinson - Guild of Air Pilots and Air Navigators (GAPAN)
Lee Balthazor - Royal Aeronautical Society (RAeS)

Secretariat

Sonya Dench - Safety Regulation Group – PA to HOSD Corporate Affairs

General Aviation members feedback to, and communication with, the following organisations would be achieved through the channels indicated below:

Organisation	Representation on Review Team via
General Aviation (GA) Alliance	BHPA
Helicopter Club of Great Britain/ BBGA	BHAB
Royal Aero Club	BGA
Airport Operators Association (AOA)	AOPA
British Business and General Aircraft Association (BBGA)	(BHAB)
General Aviation Safety Council (GASCo)	RAeS
Private Pilot Licence / Instrument Rating (PPL/IR)	BHPA
Popular Flying Association (PFA)	BGA (RAeC)

4. Assumptions

4.1 The Review Team will make all reasonable endeavours to:

- Review information on current SRG regulatory activities at a sufficient level of detail to inform the Review.
- Ensure that adequate liaison will be maintained with all General Aviation associations represented on the General Aviation Consultative Committee.
- Ensure that adequate liaison will be maintained with the CAA's Strategic Review of General Aviation which is being undertaken in a similar timeframe.

5. Protocols

5.1 The team's work will be transparent to any interested party. A website will be created allowing any individual to view the results of meetings and the draft report as it develops.

There will be brief minutes recorded at each meeting and an action list.

6. Deliverables/Output/Tasks

Prepare and present to the CAA Board by 30 June 2006 a report, including an executive summary, which details report which details how general aviation should be regulated once EASA has legal competence to oversee Operations and Licensing, together with recommendations covering, inter alia:

- Proposals in respect of CAA's regulatory activities including, where applicable, comparisons with other relevant organisations for both EASA and non-EASA activities.

- Information required by the objectives.

- Activities undertaken by the CAA on behalf of Government.

- Options for improvement and/or comment in the following areas:

  - Impact of recommendations on CAA.
  - Impact of recommendations on statutory requirements.
  - Impact of recommendations on general aviation.

- Any significant investment required, related to the above.

7. Budgetary Control

7.1 Members will be expected to fund their own participation in this activity. The Chairman and selected members of the team, if involved in overseas benchmarking activities, may recover appropriate travel and subsistence costs form the CAA. The CAA would consider additional funding only in an exceptional case.

DETAILS OF WORKSTREAMS AND MEMBERSHIP

** Topics Common with Strategic Review*				
TofR - Objectives	**Members**	**Terms**	**Deliverable**	**Due date**
1*. Description and definition of general aviation in the UK.	Lead: David Beaven	Provide ICAO, EASA, UK and other definitions for consideration.	• Provision of a definition as reference point for consideration and agreement of the Regulatory and Strategic Reviews. • Formatted report.	
2. The history of regulation within the UK, the existing UK policy on general aviation regulation and best practice guidelines.	Lead: David Beaven Chris Finnigan David Roberts		a. Presentation to the group. b. Industry to provide further input. c. Formatted report. d. Final acceptance of report.	a. 5 October 05 b. 5 December 05 c. 20 January 06 (for 9 February 06 meeting) d. 2 March 06
3*. Sectoral trends and major and future developments which are likely to affect UK general aviation.	Lead: Alex Plant Simon Wragg David Roberts Tom Hardie Martin Robinson.	From the Strategic Review as leader.		
3.1 Sectoral trends	Martin Robinson David Roberts	Joint tasks with Strategic Review Group	a. Presentation to the Regulatory Review Group. b. Formatted report - to be provided.	a. 20 December 05 b. 20 March 06
3.2 Major and future developments	Tom Hardie Chris Finnigan Alan Robinson	Joint tasks with Strategic Review Group	a. Presentation to the Regulatory Review Group. b. Formatted report - to be provided.	a. 2 March 06 No presentation. b. 20 March 06

** Topics Common with Strategic Review*				
TofR - Objectives	**Members**	**Terms**	**Deliverable**	**Due date**
4. The fatal accident rate for UK general aviation over the 10-year period 1995-2004 compared with selected other foreign national aviation authorities. Also, to consider appropriate safety targets for UK general aviation.	Lead: Joji Waites David Roberts John Thorpe Robert Ferris	1. To gather relevant fatal accident information for the 10-year period 1995-2004 for UK general aviation in order to calculate fatal accident rates and, where possible, determine causes. 2. To compare UK general aviation fatal accident rates with other selected European Union member states (and possibly USA, Australia and New Zealand). 3. To investigate the possibility of breaking down the UK general aviation fatal accident rate by type of regulatory regime (ie full regulation, devolved regulation or no regulation). 4. Consider appropriate future safety targets for UK general aviation.	a. Presentation to the Regulatory Review Group. b. Formatted draft report. c. Present correlation of findings to the group. d. Final report.	a. 16 November 05 b. 14 February 06 c. 2 March 06 d. 30 March 06
4.1 CAA to establish a list of other countries for accident data on microlights and gliders and advise industry.	Lead: Carl Thomas Chris Finnigan David Roberts		a. Presentation to the Regulatory Review Group. b. Formatted report. c. Final report with Workstream 4.	a. 12 January 06 b. 14 February 06

** Topics Common with Strategic Review*				
TofR - Objectives	**Members**	**Terms**	**Deliverable**	**Due date**
5. Other regulatory models used within Europe and elsewhere.	Lead (to 20 Dec): John Hills Lead (post 20 Dec): Lee Balthazor Martin Robinson Alan Robinson	Establish a questionnaire for distribution to EASA and other NAAs and GA organisations to ascertain their mode of regulation.	a. Questionnaire compilation and despatch. b. Robin Allan to present on UK regulatory model. c. Update Group. d. Present correlation of findings to the Group. e. Formatted report.	a. 16 November 05 b. 20 December 05 c. 12 January 06 & 9 February 06 d. 2 March 06 e. 20 March 06
6. The effects of EASA (through amendment to Regulation EC 1592/2002) upon future UK regulation of general aviation.	Lead: David Beaven Jim McKenna Graham Forbes David Roberts Martin Robinson	Identify the effects of proposed EASA regulation of GA. Base facts upon EC Reg 1592/2002.	a. Briefing on EASA regulation. b. Briefing – on how the amendment to Regulation 1592 will affect regulation of GA activities. c. All Industry Members to present their ideas for a future regulatory regime. d. Visit to EASA e. CAA Members to respond at Meeting 6. f. Presentation – correlated findings. g. Formatted report.	a. 16 November 05 b. 20 December 05 c. 12 January 06 d. 31 January 2006. e. 9 February 06 f. 2 March 06 g. 20 March 06

** Topics Common with Strategic Review*				
TofR - Objectives	**Members**	**Terms**	**Deliverable**	**Due date**
7*. Methods and effectiveness of consultation and dialogue between General Aviation interests and CAA/Government/ regional bodies.	Group discussion Lead: Strategic Review	Consider value of current committees and publications. Consider options for the future.	a. Discussion of "straw man" paper. b. Recommendations to be included in the report. c. Presentation of report. d. Formatted report.	a. 12 January 06 b. TBD from Strategic Review rapporteur. d. 2 March 06 e. 20 March 06
8. Proposed options for future UK regulation of general aviation including details of. ▪ Possible legal changes. ▪ Costs of administration. ▪ Costs to industry. ▪ Advantages and disadvantages of each proposal. ▪ Cost effectiveness and risk analysis.	Lead: David Chapman All Members		a. RA to provide definitions of deregulation, devolvement and delegation b. Proposed options to be presented. c. Formatted report.	a. 16 November 05 b. 20 December 05 c. 20 March 06
8.1 Devolvement of Approvals for Non-EASA Aircraft Types	Lead: John Marshall		a. Formatted report.	a. 20 March 06

DEFINITIONS OF GENERAL AVIATION

ICAO definitions -

General aviation operation*. An aircraft operation other than a commercial air transport operation or an aerial work operation.*

Commercial air transport operation*. An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.*

Aerial work. *An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.*

EASA proposed definitions for inclusion in Article 3 of the Basic Regulation -

'commercial operation' means a remunerated aeronautical activity covered by a contract between an operator and a customer, where the customer is not, directly or indirectly, an owner of the aircraft used for the purpose of this contract and the operator is not, directly or indirectly, an employee of the customer;

'recreational operation' means any non commercial operation with a non complex-motor-powered aircraft;

For the purpose of this review, we propose that ***'General Aviation'*** should mean:

An aircraft operation other than a commercial air transport operation.

Annex E

CAA REGULATION OF GENERAL AVIATION - SOME SIGNIFICANT DATES

1972 CAA came into being

1973 British Gliding Association approved by CAA
CAA published guidance on conduct of flying displays, races and rallies - CAP 403

1974 British Balloon and Airship Club approved by CAA

1977 CAA General Aviation Safety Information Leaflet (GASIL) commenced publication

1979 Lower Airspace Radar Service (LARS) formally established

1984 British Microlight Aircraft Association approved by CAA
Parachuting became a permitted activity under the Air Navigation Order and parachuting operations manuals required.

1985 First of a series of White Papers setting out the Government's objectives for deregulation

1986 CAA Safety Evenings began, held at flying clubs and venues throughout the country.

1987 Distress and Diversion Cell set up at London Area and Terminal Control Centre (LATCC), staffed by military personnel and equipped to enable location and assistance for lost aircraft.

1987 General Aviation Accident Review published - CAP 542

1989 CAA regulation of flying displays commenced with permission required under the Air Navigation Order.
Air Operator's Certificate (Balloons) commenced, for regulation of balloon rides operators.

1992 Following the general election in April, the Government deregulation initiative was given fresh impetus. Subsequent guidance stressed 'proportionality' -
i.e. Regulations should be in proportion to the risk and the likely benefits.

1994 CAA launched General Aviation Safety Awards
Operation of ex-military Permit to Fly aircraft required to be conducted under CAP 632 arrangements and organisational control manuals required.

1996 British Parachute Association approved by CAA

1996 National Air Traffic Services Ltd became a subsidiary company of CAA

1997 Review of General Aviation Fatal Accidents 1985-94 - CAP 667
CAA Review of Air Display Safety 1990-96

1997 Following change of Government, emphasis changed to "better regulation", establishing the 'Principles of Good Regulation'. Cabinet Office guidance included consideration of alternatives to legislation, such as self-regulation, co-regulation, provision of information and education, codes of practice, mandatory audits, quality assurance schemes etc.

1999 Small Helicopter Action Group set up in collaboration with industry, to devise a strategy for reducing helicopter accident rates.

2001 National Air Traffic Services Ltd ceased to be a subsidiary of the CAA following the Government's decision to establish a Public Private Partnership with the Airline Group. CAA restructured to become the UK's specialist aviation regulator. Directorate of Airspace Policy became part of the CAA.

2002 European Heads of State called for work on the creation of the Single European Sky to be actively pursued with a view towards implementation by December 2004.

2002 National Private Pilot's Licence (NPPL) launched

2005 Hampton Review published final report on 16 March. Recommendations included: regulatory effort should be directed according to risk; and regulators should direct more resources to providing advice.

2005 Recreational Aviation Activities manual published - CAP 755. Developed with industry to provide a template to enable providers to produce an appropriate manual for the control of their aerial activities, with the aim of ensuring a satisfactory standard of operational safety and compliance with aviation regulations.

Annex E1

HISTORY OF CERTIFICATION REQUIREMENTS

Introduction

On 5 October 1967 the first issue of Airworthiness Requirements Board Notice 15 was issued. This described the process for approval of light aircraft of conventional design below 12,500 lbs. For aircraft certified in the private and aerial work categories investigation was limited to flight testing. For aircraft above 6,000 lbs and below 12,500 lbs investigation of powerplant installation, structural aspects, especially for pressurised cabins, and the consequences of electrical failures was also required.

On 1 April 1971 the notice was re-issued to be more specific about what would be investigated for aircraft above 6,000 lbs and to qualify the applicability of the notice to piston-engined aircraft built to standards 'broadly equivalent to British Civil Airworthiness Requirements (BCARs)' and with a known history of satisfactory operation.

On 15 January 1981 the notice was raised to issue 3 to extend the applicability to conventional piston-engined helicopters below 2,730 kgs and to include Airworthiness Notices in the areas to be investigated for all aircraft. The level of investigation for turbine-engined aircraft was defined.

On 1 July 1989 the contents of the notice were incorporated into BCAR B2-2. A note was added to say that the USA standards for such aircraft were considered to be broadly equivalent to UK standards.

BCAR S Certification History

BCAR S (Advance Issue) was first introduced in 1983 when the CAA became responsible for the regulation of microlight aeroplanes following a significant number of complaints to the UK Government about the safety record and noise levels of microlight aircraft. BCAR Section S (Advance Issue) was developed from JAR 22, the airworthiness code for sailplanes and powered sailplanes, and was used for the approval of a number of different microlight aircraft types until the code was formally published at Issue 1 in April 1995.

Issue 2 was issued in August 1999 and included a number of developments to the code, the most significant of which were: change in Maximum Take-Off Weight (MTOW) to 450 kgs (2 seat) or 300 kgs (1 seat), and additional requirements for powered parachute aircraft and aerotowing of hang gliders.

Issue 3 was issued in August 2003 and was a formatting change only. The code was split into Book 1 for the requirements and Book 2 for the advisory material, to mirror the format used by the EASA Certification Specifications.

Issue 4 of BCAR S is due for publication in 2006 and has been developed by the BCAR S Working Group. The BCAR S Working Group is made up of representatives from the CAA, the BMAA, the PFA and industry and is responsible for developing proposals for changes to the requirements and advisory material within BCAR S.

GENERAL AVIATION - REGULATORY REDUCTION INITIATIVES - CERTIFICATION

	Date / reference	*Subject*	*Summary*	*Comments*
1	*date of approval* Since 1948 Since 13/5/2005	CAA Approval of the Popular Flying Association (PFA)	PFA certifies that the design, construction, including modifications, and flying characteristics of an amateur built aeroplane, microlight or gyroplane comply with standards agreed with CAA. PFA recommends issue of CAA permit-to-fly for homebuilt aeroplanes, microlights and gyroplanes. PFA recommends the renewal of the CAA permit-to-fly for homebuilt aeroplanes, microlights and gyroplanes. PFA validates non-expiring CAA permits-to-fly for aeroplanes and gyroplanes on their capability list. PFA conducts flight testing for PFA aircraft. PFA recommends the issue and renewal of EASA permits-to-fly for orphaned aircraft types being transferred from a CAA CofA. PFA recommends to the CAA the issue and renewal of a CAA permit-to-fly for a factory built microlight.	Possibility of Design Organisation Approval (DOA) under EASA.
2	*date of approval* Since 1974	CAA Approval of the British Balloon and Airship Club (BBAC)	BBAC certifies that the design, construction, including modifications, and flying characteristics of a balloon comply with standards agreed with CAA. BBAC recommends issue and renewal of EASA CofA BBAC oversees the flight testing of balloons.	Note that this is the current scope of the approval. In future, BBAC certification involvement will be restricted to homebuilt, orphaned or vintage balloons covered by EASA Annex II.

	Date / reference	*Subject*	*Summary*	*Comments*
3	*date of approval* Since 1984	CAA Approval of the British Microlight Aircraft Association (BMAA)	BMAA certifies that the design, construction, including modifications, and flying characteristics of an amateur built microlight comply with standards agreed with CAA. BMAA certifies that the design, including modifications, of a factory built microlight comply with standards agreed with CAA. BMAA conducts flight testing for BMAA aircraft BMAA recommends issue of CAA Permit to Fly for homebuilt and type approved microlight aircraft. BMAA recommends the renewal of the CAA permit-to-fly for microlight aircraft.	
4	Since Dec 1995 9/99/23/03/04 CAP 658	Issue of exemptions for large model aircraft >20 kg	CAA relies on recommendations from the Large Model Association regarding the design and build standards.	
5	28 May 2004 UK CAA Policy for Light UAV Systems	Issue of exemptions for UAVS >20 kg to 149 kg	CAP 722 has set the general policy since May 2002. Until an accredited body can be formed, CAA will accept assurance on design and build standards, from a learned body with aeronautical engineering expertise.	150 kg and more are EASA aircraft, unless for research/ experiment/science and made in small numbers.

	Date / reference	*Subject*	*Summary*	*Comments*
6	Since 1973	CAA Approval of the British Gliding Association (BGA)	BGA current approval allows for the recommendation to CAA for the renewal of CofA for SLMG, SLPS, TMG and Glider Tug Aircraft. They also have privileges under a B1 approval for maintenance and repair of this group of aircraft and the engines therein.	Currently no certification approval in place. BGA is in process of getting an approval to recommend the issue and renewal of CofA for Gliders. That is almost in place.
7	Since April 2003	Exemption to enable hire of type approved microlight aeroplanes	To be hired, aircraft normally require a CofA and maintenance to public transport standards. The ANO excepts single-seat aircraft not exceeding 910 kg MTWA from this. To allow for a variety of circumstances where a pilot may wish to hire a microlight, for solo flying in a club environment only, application may be made for exemption from the normal Permit to Fly conditions. BMAA has a code of practice in place for this activity.	Exemptions have been issued as follows - 6 in 2003 4 in 2004 3 in 2005
8	*Under consideration*	Partial deregulation of light single-seat microlight aeroplanes	CAA is currently involved in dialogue with the Department for Transport, to investigate whether light single-seat microlight aeroplanes could be removed from scope of airworthiness regulation. If deregulation were to be found possible in this area, then the deregulated class of aircraft would remain subject to the applicable insurance, pilot licensing and medical requirements (NPPL).	

GENERAL AVIATION - REGULATORY REDUCTION INITIATIVES - OPERATIONS

	Date / reference	*Subject*	*Summary*	*Comments*
1	14 Jan 1994 O.R. Series 4 No.182	Ballooning events	General exemption to enable events consisting solely of balloons, setting aside the need to apply the full regime of flying display regulation. Law change in progress, expected August 2006.	Letter of Intent issued 24 October 2005 9/99/15/01/01
2	28 March 1996 9/99/17/03/06	CAA Approval of the British Parachute Association	Oversight of sport parachuting devolved to BPA, which inspects clubs and display teams and recommends issue of CAA parachuting Permission.	Continuation of Approval subject to audit of BPA.
3	Since 1996 9/99/12/03/06	Self-propelled hang-gliders	Includes powered paragliders. General exemption enabled flight without airworthiness certification, pilot licensing or noise certification. ANO amendment means that the same rules apply when powered as when in gliding flight.	Law change implemented in ANO; came into force 20 August 2005.
4	1 April 1997 10Z/13/15	Parachuting displays	SRG/GAD ceased direct monitoring of parachuting display notifications. Sample display inspections conducted by BPA.	-
5	16 March 1999 O.R. Series 4 No.328	Helicopter hovering manoeuvres	General exemption to enable prolonged hovering closer than 500 feet to persons, vessels, vehicles and structures, in accordance with normal aviation practice.	Rules of the Air Regulations amended 1 April 2005.
6	1 April 1999 9/99/17/03/07	DZ activity information system	Notified hours of DZ operation reviewed and reduced wherever possible. Nominated ATSUs provide strategic information on parachuting DZ activity status.	BPA documentation facilitates auditing.
7	Since 2000 9/99/15/03/10 AIC 79/2005 (White 114)	Charity flight permissions	General permission obviates the need for CAA to issue individual permissions where standard conditions can be met. These are pragmatic measures aimed at significantly improving safety by avoiding the most obvious risk areas associated with private flying.	-
8	1 April 2000 9/99/13/01/02 & 9/99/15/03/19	Balloons departing congested areas	General permission to allow take-off from sites within congested areas, subject to safety parameters, obviating the need for CAA to issue individual permissions.	Valid to 31 March 2006.

	Date / reference	*Subject*	*Summary*	*Comments*
9	8 March 2001 9/99/11/08 O.R. Series 4 No.392	Upper torso restraints	General permission obviates the need for CAA action in relation to individual aircraft where upper torso restraints not reasonably practicable. Also applies to public transport aircraft.	-
10	1 April 2001 9/99/12/01/02	Self-sustaining gliders (SSG)	General exemption enabled continued operation as gliders. ANO amendment followed.	Law change came into force 22 April 2003.
11	28 Sept 2001 9/99/11/08	Terrain Awareness and Warning Systems (TAWS)	General exemption enabled continued use of non-public transport aeroplanes when not equipped with TAWS Class A. ANO amendment followed, in line with ICAO Standards, to allow the less expensive option of TAWS Class B for non-public transport aeroplanes only.	Law change came into force 1 January 2005.
12	7 October 2002 9/99/18/03/02 O.R. Series 4 No.501	Helicopter landing lights	General permission allows approved landing light modifications in place of ANO Schedule 4 requirement for parachute flares.	Law change submitted; expected to come into force late 2006.
13	23 June 2003 O.R. Series 4 No.467	Passenger balloons - transponders	General exemption to enable continued use of balloons for public transport flights without SSR Mode A and C.	Exemption came into force on 1 January 2004.
14	8 Sept 2004 O.R. Series 4 No.535	Glider tugging	To enable continued use of private aeroplanes for glider tugging in a club environment.	Reissued as OR Series 4 No 584. Expires 31 January 2007.
15	11 Nov 2004 AIC 103/2004 (Yellow 153)	'SAFETYCOM'	Introduction of a common radio frequency for use at UK aerodromes without a notified frequency.	Review report to be published March 2006.

	Date / reference	*Subject*	*Summary*	*Comments*
16	1 April 2005 9/99/11/02/01 SI 2005/1110	Landing/take-off at events	Rules of the Air Regulations amended to remove requirement for CAA to issue individual permissions for landing/take-off at organised open air assemblies of more than 1000 persons. Flights now subject to procedures notified in AIP. Notified procedures now stipulate conditions, including written permission from the organiser.	Rules of the Air Regulations amended 1 April 2005.
17	14 Feb 2005 9/99/11/06 EC Paper 16/05	Recreational Aviation Activities (RAA)	Code of Practice developed in co-operation with representative aviation organisations, aimed primarily for use by providers of activities for voucher schemes. Use of the Code is currently being trialled by a small number of BGA and BMAA clubs.	*May offer a suitable model for more general application to a broader range of activities.*

GENERAL AVIATION - REGULATORY REDUCTION INITIATIVES - LICENSING

	Date / reference	*Subject*	*Summary*	*Comments*
1	23 May 2003 AIC 70/2003 (White 85)	Flying training and tests in microlight aeroplanes	General exemption for microlight aeroplanes, continuing the longstanding arrangement setting aside the requirement to use a licensed aerodrome for instruction in flying and tests for the grant of a licence or rating.	(See also item 6 below.)
2	22 Dec 2005 O.R. Series 4 No.582	Flying training and tests in self-launching motor-gliders (SLMG) at specified sites	General exemption enabling continuation of the use of private SLMGs at specified sites for instruction in flying and tests when operated by a club under BGA arrangements.	Expires 30 June 2006. (See also item 6 below.)
3	8 Dec 2003 AIC 7/2004 (White 94)	Flying training and tests in solely owned and jointly owned private aircraft	Since 1997 exemption has provided for sole and group owners of private aircraft <2730 kg to pay examiners. Subsequently extended to allow remunerated flying instruction in group owned aircraft for licence renewal/revalidation only.	Expires 31 January 2007
4	24 July 2003 AIC 65/2003 (White 83)	Remunerated flying training in ex-military permit-to-fly aircraft	Since 1998 exemptions have been available to allow remunerated type familiarization training on ex-military aeroplanes where this is desirable in the interests of safety. Extended in 2003 to ex-military helicopters only where there is no civil equivalent.	-
5	30 July 2002 9/99/07/20/01	National PPL (NPPL)	Enables pilots to be licensed to fly simple single-engine aeroplanes, microlights and SLMG following a minimum syllabus and DVLC medical standards.	Law change came into force 30 July 2002.
6	2005 9/99/07/28	Licensed aerodromes	CAA/industry study group to make recommendations with a view to removing anomalies in the requirements for flying training facilities generally.	Report completed December 2005.

GENERAL AVIATION - REGULATORY REDUCTION INITIATIVES - CONTINUED
AIRWORTHINESS & MAINTENANCE CONTROLS

	Date / reference	*Subject*	*Summary*	*Comments*
1	1948	Setting up of PFA Approval and UK Permit to Fly system	Recognition by the Air Registration Board that homebuilt aircraft, sport aviation and ultralights could be handled by a representative organisation, PFA Ulair.	
2	1960s	General Purpose Maintenance Schedule	Introduction of a generic maintenance schedule concept to improve upon maintenance standards in the absence of manufacturer's programmes.	
3	1975	Major revision to BCARs. Establishment of BCAR Section A8 (M1 and M3 approvals)	Introduction of revised maintenance approvals to address the changes in aircraft and technology and allow different working practices to be developed.	
4	1978	Introduction of Light Aircraft Maintenance Schedule • Move to three year CofA's via recommendation <2730 • M3 approvals	Extensive update and revision of the earlier General Purpose Maintenance Schedule. Associated with a change in policy that allowed the CAA to receive recommendation every three years for CofA renewals for light aircraft. Reduced direct CAA surveyor intervention.	
5	1978	Revisions to Engineer Licensing system – Introduction of Licence Without Type Rating	Alignment of the Section licensing concept to fit the M1 approval system. Introduced a concept of basic licences that could be used to underpin type ratings and/or authorisations within approved companies.	
6	1986	Revisions to BCAR Section L and GA Licence ratings at type and group level. Consolidation of LWTR categories.	Amalgamation of licence categories reducing the number of sub-licences that were available.	
7	1991	Introduction of JAR 145 for public transport maintenance (Cancellation of M1 approvals)	Introduction of revised maintenance approval arrangements for commercial aircraft under the JAA system. First European legislation on aviation safety though EC Reg 3922/91.	
8	1994	Introduction of BCAR A8-20 and CAP 632 for ex-military permit a/c	Following several accidents this reflected the revised policy for maintenance of ex-military aircraft.	

	Date / reference	*Subject*	*Summary*	*Comments*
9	1995	CofA for aircraft above 2730 moving to 3 years (option)	Introduction of a greater period of time between CofA renewals for large aircraft.	
10	1998	Introduction of JAR 66 (a/c above 5700kg)	Introduction of engineer licensing requirements under the JAA system. Primarily aimed at the JAR-145 organisation. The lighter aircraft requirements were dropped just before rule issue pending a review.	
11	1999	Revision of LAMS	General update and revision to LAMS. Rationalisation of check cycles. Separation of time limited component management controls.	
12	2000	Introduction of CofA renewal recommendations for aircraft above 2730 kg BCAR A8-3 Supplement.	Extension of LAMS principles to aircraft above 2730kgs using company approvals and reducing direct CAA involvement in CofA renewals.	
13	2001	Revision to BCARs to introduce non-expiring Permit to Fly and revised policy PMR and PFRC	Introduction of non-expiring Permit to Fly. Validity controlled by review and issue of a Permit Maintenance Review or Permit Flight Release Certificate.	
14	2002	Introduction of EASA	Establishment of EASA under EU Regulation 1592/2002.	
15	2003	Introduction of Pt 21 / 145 / M / EASA TC	Introduction of new EASA Implementing Rules under EU Regulation 1702/2003 and 2042/2003. Phased transition using opt out clauses in EU Regulation 1592/2002.	
16	2004	Introduction of EASA CofA (expiry)	First issue of EASA format CofA in an expiring guise due to non applicability of Part M subpart I. Phased transition to 2008.	
17	2005	Introduction of EASA Permit to Fly Introduction of EASA Part M Subpart G Cessation of CAFT for EASA aircraft	Review and promulgation of CAA policy for aircraft to which EU Regulation 1592/2002 applied.	
18	2006	Part 66 Licence effective for a/c above 5700 kg	Future compliance date for conversion of National licences to Part 66 for certification on EASA aircraft above 5700 kgs.	

	Date / reference	*Subject*	*Summary*	*Comments*
19	2007	Introduction of EASA non-expiring CofA and ARC Introduction of EASA Part M Subpart F	First issue of non-expiring CofA for EASA designated aircraft with initial issue of Airworthiness Review Certificate by CAA.	
20	2008	Part 66 Licence effective for a/c below 5700 kg. Full effect of Part M in force • Non expiring CofA • Subpart G • ARC for all • Subpart F • AMS / AMP	Future compliance date for conversion of National licences to Part 66 for certification on EASA aircraft below 5700 kgs. Future compliance date for remaining implementing rules under Regulation 2042/2003.	

DETAILS OF CURRENT UK REGULATION FOR ALL AIRCRAFT

CLASS of AIRCRAFT / ACTIVITY	Legal/RoAR	Register	Airworth -iness	Pilot maint'ce	Part M approval	Devolved to	PT *note* *	AERIAL WORK ACTIVITIES Training *	& tests *	Other	Hire	Private	NPPL < 2000 kg	Operations manual	CAP / CoP
ICAO Annex 8 aircraft															
Aeroplanes >5700 kg / complex	✔	✔	C	L	A	-	C	✔	✔	✔	✔	✔	-	✔[3]	IS-BAO
Aeroplanes not exceeding 5700 kg	✔	✔	C	L	-	-	C	✔	✔	✔	✔	✔	✔	CAT/AW[3]	-
SLMG and TMG	✔	✔	C	L	-	-	C	✔	✔	✔	✔	✔	✔	CAT/AW[3]	-
Helicopters >3175 kg / complex	✔	✔	C	L	A	-	C	✔	✔	✔	✔	✔	-	✔[3]	IS-BAO
Helicopter not exceeding 3175 kg	✔	✔	C	L	-	-	C	✔	✔	✔	✔	✔	-	CAT/AW[3]	-
NonEASA conventional aeroplanes	✔	✔	C	L	-	-	C	✔	✔	✔	✔	✔	✔	PT	-
non ICAO Annex 8 aircraft															
Other conventional aeroplanes	✔	✔	P	✔	-	-	-	L	L	-	L	✔	✔	-	-
Ex-military aircraft >2730 kg	✔	✔	P	-	-	-	-	E	-	-	-	A	-	✔	CAP 632 + BCAR A8-20
PFA types	✔	✔	P[2]	✔	-	PFA	-	S	-	-	L	✔	✔	-	CAP 659
Other helicopters and gyroplanes	✔	✔	P	✔	-	-	-	S	-	-	L	✔	-	-	-
Microlight aeroplanes	✔	✔	P[2]	✔	-	BMAA	-	P	P	-	L	✔	✔	-	-
- including powered parachutes	✔	✔	P[2]	✔	-	BMAA	-	P	P	-	L	✔	✔	-	-
Gliders															
Gliders / sailplanes	✔	✔[1]	C[1 & 2]	L	-	BGA	-	L	L	-	L	✔	-	-	-
Self-sustaining gliders	✔	✔[1]	C[1 & 2]	L	-	BGA	-	L	L	-	L	✔	-	-	-
Hang/paragliders	✔	-	-	✔	-	-	-	L	L	-	L	✔	-	-	-
SPHG	✔	-	-	✔	-	-	-	L	L	-	L	✔	-	-	-
Others															
Free balloons	✔	✔[1]	C[1]	L	-	BBAC	C	✔	✔	✔	✔	✔	-	PT	CAP 611
Captive balloons	✔	✔[1]	C[1]	L	-	BBAC	E	-	-	✔	✔	✔	-	E	-
Parachuting	✔	-	-	-	-	BPA	-	-	-	P[2]	-	P	-	✔	CAP 660
Flying displays	✔	-	-	-	-	-	-	-	-	P	-	E	-	-	CAP 430
Aerial application	✔	✔	-	-	-	-	-	-	-	C	-	C	-	✔	CAP 414
Models/ UAVS >7 kg	✔	-	-	✔	-	-	-	-	-	P	P	✔	-	-	CAP 658+722
Models/ UAVS >20 kg	✔	✔	E[2]	✔	-	LMA	-	-	-	E	E	✔	-	-	CAP 658+722

Key to symbols

✔ = Yes
- = No / not allowed
C = Certificate required
A = Approval required
P = Permission / Permit
E = Exemption
L = Limitations apply
S = Sole owner and family only

* = licensed aerodrome may be required
1 = Since 28 September 2004 (except non-EASA aircraft)
2 = devolved tasks
3 = will be required under EASA

AW = Aerial work
BBAC = British Balloon & Airship Club
BGA = British Gliding Association
BMAA = British Microlight Aircraft Association
BPA = British Parachute Association
CAP = Civil Aviation Publication
CAT = Commercial air transport
CoP = Code of Practice
IS-BAO = International Standard for Business Aircraft Operations

LMA = Large Model Association
PFA = Popular Flying Association
PT = Public transport
SLMG = Self-launching motor glider
SPHG = Self-propelled hang-glider
TMG = Touring motor glider

GENERAL AVIATION REGULATORY REVIEW QUESTIONNAIRE 2005

Name of National Authority completing this survey…….

How do you define the scope of your general aviation activities?

Question	Answer	Your Comments
Q 1. What is your definition of general aviation GA? Do you use: a. The ICAO definition? b. EASA's proposed definition? c. A national definition? (if so may we have a copy?)	 a. b. c.	

What are the dimensions of your task?

Question	Answer	Your Comments
Q 2. Other than Commercial Air Transport (CAT) aeroplanes above 5700kg and CAT helicopters above 3175kg, how many aircraft do you have registered in your State? If the category is not registered please insert 'NR' 1. Aeroplanes 2. Microlights 3. Gliders 4. Hang gliders 5. Helicopters 6. Gyroplanes	 1. 2. 3. 4. 5. 6.	
Q 3. In each of the 3 years shown, how many of the following licenses did you issued, and how many of each do you believe are still active? 1. Professional pilots licence 2. Private pilots licence 3. Any national private pilots licence that is below ICAO standards	 2002 / 2003 / 2004 1. / / 2. / / 3. / /	

What staffing do you have to manage general aviation regulation?

Question	Answer	Your Comments
Q 4. a. Does your organisation have one or more departments that deal only with general aviation? b. If the answer is 'yes', please indicate how many staff are employed on general aviation regulation activities	a. YES / NO b.	
Q 5. a. If there is not a separate department that deals with general aviation issues, do you have technical staff, staff with past or current general aviation qualifications, who deal only with general aviation issues? b. If the answer is 'yes', please indicate how many staff have responsibilities for both CAT and general aviation regulation and issues	a. YES / NO b.	
Q 6. If you do not have technical staff who deal only with general aviation issues, do those who deal with general aviation issues require any general aviation background?	YES / NO	
Q 7. How is general aviation regulation funded? a. Are your total costs for general aviation regulation recovered only from the general aviation industry? **b.** Is cost recovery from general aviation only required to cover the basic costs of pilot's licence administration?	a. YES / NO b. YES / NO	

How much regulatory responsibility is delegated outside of your National authority?

Question	Answer	Your Comments
Q 8. a. Do you manage all changes to general aviation regulation within the Authority, or are some or all of these tasks delegated to one or more external agencies? b. If external, then to which agencies?	a. b.	

How does your organisation communicate with the general aviation community?

Question	Answer	Your Comments
Q 9. How do you communicate with your general aviation industry organisations? 1. Regular letters 2. Meetings and seminars, if so how often? 3. Audits of each organisation, if so how often?	 1 2 3	
Q 10. Do all the general aviation industry organisations consult directly with you, or through another representative body?		
Q 11. **In each of categories a. to f. below:** 1. Who has responsibility for GA accident investigation? 2. Who is responsible for maintaining accident records? 3. Who maintains the register of GA aircraft and their utilisation? a. Aeroplanes b. Microlights c. Gliders d. Hang gliders e. Helicopters f. Gyroplanes Please provide contact details	**1 / 2 / 3** a. / / b. / / c. / / d. / / e. / / f. / /	Please provide contact details:

How are general aviation safety issues communicated?

Question	Answer	Your Comments
Q 13. a. Do you provide aviation safety education to general aviation pilots? b. If yes, is this primarily by: 1. Correspondence? 2. Magazines or journals? 3. Seminars? 4. A dedicated education programme driven from within the authority?	a. YES / NO b. 1. 2. 3. 4.	
Q 14. If safety education is provided how many pilots and/or general aviation enthusiasts do you estimate that you reach each year?		
Q 15. If you produce general aviation focused safety materials what are these and how are they funded?		

Thank you very much for your time and assistance in compiling this information

Annex H

OTHER REGULATORY MODELS USED WITHIN EUROPE AND ELSEWHERE

A questionnaire (Annex H) was sent to 32 NAAs on 18 November 2005, requesting a response by end December 2005. 18 responses were received by mid March 2006, including 5 via IAOPA.

Some of the data provided could not be corroborated by other means, so any analysis should be treated with an element of caution.

National Authority/Industry comparisons																						
			total no of responses		CASA Australia	Czech Republic	aopa Denmark	Estonia	Finland	France	AOPA Germany	Germany	aopa Holland	Hungary	Ireland	aopa Italy	CAA Moldova	CAA Monaco	Sweden	AOPA USA	FAA USA	CAA UK
Q 1.	definition of GA				All operations below 5,700kg, sport & recreational aviation and corporate jets below 29,000kg				Includes training and parachuting	GA is considered as activities that do not fall into the category of air transport or fly test, and does include aerial work.	GA includes air taxi and aerial work	The commonly accepted position regarding GA is: "Aircraft operation other than commercial air transport operation"	up to 5.7 ton MTOW inc aerial work						Operation with aircraft which is neither aerial work nor commercial air transport		civil aviation except air carriers FAR 121,123,127,135	Private, by default almost same as ICAO
	a. The ICAO definition?		10			1	1	1					1	1	1	1	1	1				1
	b. EASA's proposed definition?		0																			
	c. national definition?		7		1				1	1	1	1							1		1	
Q2	how many aircraft registered?					Light Aircraft Association (LAA CZ) authorises Sporting Flying Equipment (MTOW 450kg, possible extension to 600 under review)	inc CAT, ?micros, h/gyro	hang gliders, powered		microlight aeroplanes, hangglider and gyroplane numbers from DGAC		Numbers approximate: microlight aeroplaness and gyroplanes responsibility of respective Associations, supervised by LBA; 3 Sailplanes (7500) + powered sailplanes (2500),4. Hang gliders unregistered, number estimated by "Deutscher Haegegleiter Verband" (DHV).	gliders=motor gliders, helicopters inc gyroplanes, microlight aeroplaness includes micro and VLA category			microlight aeroplanes/hang gliders in Aero Club special directory, aero inc gliders & hels.					estimates	72 gliders now registered, but 2,500 active gliders recorded under BGA
	1. Aeroplanes		237490	70%	335	656	976	60	4	5535	9251	7500	710	495	297	1000	nr	10	1621		200,000	9040
	2. microlight aeroplaness		33046	10%		2444	nr	8	221	11000	nr	3800	772	64	106	10000	9	0	502			4120
	3. Gliders		35783	11%	1117	752	93	28	386	200	7728	10000	728	523	33		nr	2	621		11000	2572
	4. Hang gliders		18698	6%		461	nr	15	1193	1985	nr	15000		39			5	0	nr			NR
	5. Helicopters		12126	4%	1190	43	66	3	86	602	721	730	96	48	117		nr	14	211		7000	1199
	6. Gyroplanes		1626	0%		9	nr	nr	4	314	nr	40		0	1	0	nr	0	8		1000	250
		total	338769		2642	4365	1135	114	1894	19636	17700	37070	2306	1169	554	11000	14	26	2963	0	219000	17181
Q3	how many licenses issued				Not issued by GA Group, but by Personnel, Licensing, Education & Training Group (PLET)		not public info		total in force end 2005 were Prof 2024, PPL 2329, national(GPL,MGPL, UPL,APL,BPL) 3835			Numbers include only PPL with IFR. PPL without IFR issued by Authorities of Regions	prof + PPL figs combined, Ultra/Micro issued by Dutch Aero Club			few hundred/yr microlight aeroplanes permits issd. by Aero Club?	336 active CPL			active	estimated 'active', below ICAO= recreational+sport+students	e.g. 02=02/03 Current active PPL assumed those with JAR medical plus NPPL is 30-32K
	1. Professional pilots licence	?																				
	2002		501312			76		6	197	953		13592		39	1854	25	42		205	270,600	211000	2723
	2003		502709			71		13	146	1291		14068		43	1889	25	42		287	267,500	215000	2334
	2004		500888			78		4	158	1286		14382		51	2246	25	88	68	302	264,800	215000	2400
	2.private pilots licence																					
	2002		447742			119		10	124	4481		1983		489	2274	50			235	245,200	190000	2777
	2003		453402			107		11	178	4416		1626		521	2576	50			249	241,100	200000	2568
	2004		455362	79%		121		15	132	3795		1901		629	2043	50		87	260	234,000	210000	2329
	3. national PPL below ICAO																		no			
	2002		115433			726		n/a	346	3353		plus PPL-N		0	0					318	110000	690
	2003		118902			821		n/a	319	3622		plus PPL-N		0	0						113000	1140
	2004		120325	21%		808		n/a	300	3356		plus PPL-N		0	0						115000	861
	Prof + PPL (Holland)																					
	2002		12914										12,914									
	2003		13522										13,522									
	2004		12345										12,345									
	total number of PPL (2004 all types)		575687																			
Q4	1+ departments dealing only with GA?	?				Flight Ops Divn have several departments, airworthiness 1 dept.			Small unit of 3 formed 2006 for Sport Aviation, but mostly within CAA												light sport handled by AFS-600 Regulatory Sport Div	
	yes		7			1			1	1			1				1				1	1
	no		12		1	1	1	1	1		1	1		1	1	1		1	1			
	how many on regn.?		492		230	217			3								5				37	10.5+
Q5	GA qualified technical staff?	?					1 person	2														
	Yes		8		1	1	1	1		1		1		1					1			
	No		2						1						1							
	both CAT & GA regn. Responsibility?		82			10 in HQ	1		52					13		1			15			
Q6	GA background required?																					
	Yes		6		1				1			1		1	1		1					
	No		6			1	1	1								1			1			1
Q7a	Total Cost recovery from industry?																					
	Yes		0																			
	No		16		1	1	1	1	1	1		1	1	1	1	1	1	1	1		1	1
Q7b	Cost recovery only for pilots licence?																					
	Yes		5						1				1	1			1					1
	No		11		1	1	1	1		1		1			1	1		1	1		1	
Q8a	Tasks delegated?																					
	Yes		7			1			1	1		1	1		1							1
	No		9		1		1	1			1					1	1	1	1		1	
Q8b	to whom?					LAA CZ for Sporting Flying Equipment			Finnish Aeronautical Association (SIL) supervises light sport	DGAC in charge of regulations, with Ministère de la jeunesse ... responsible for parachuting and hang gliding		LBA issues regulations. For microlight aeroplaness (DaeC, DULV), hang gliders (DHV) and gyroplanes (DULV, DAeC), LBA is assisted by air sport organizations.	legal, accountancy, maintenance, medical		Irish Parachute Association, Dublin Gliding Club							BBAC,BGA,BMAA, BPA,LMA,NPLG ltd,PFA
Q9	Communications																					
	1. letters		12			1		1	1		1	1	1		1		1	1	1		1	1
	2. Meetings & Seminars		13		1	1	1	1	1		1	1	1		1		1		1		1	1
	how often/yr?	average	7			1	10				1	occasionally	12		1		18		irregular			3
	3. audits		8		1	1	1		1					1	1				1			1
	how often/yr?	average	1		based on complexity and priorities biasing activities towards fare paying passengers	2	as prescribed		national training organisations, one per permit validity			The Air Sport Organisations DaeC, DULV, DHV are audited yearly.		1	FTO's				0.33			1

Q10	**Consultation through NAA?**																					
	yes		14		1	1	1	1	1			1	1	1	1		1	1	1		1	1
	other body?		7		1	1			1	1		1			1				1			
	who?				sport aviation	LAA CZ, MOT			SIL	DPAC with GIFAS					AOPA/IAC/NMAI				KSAK (Royal Swedish Aero Club)			
Q11	**Responsibilities**																					
	1.accident investigation				ATSB		AIB	Ministry of Economic Affairs and Communication			BFU	BFU	Research Council on Safety	Hungarian Safety Board		ANSV (Agenzia Nazionale Sicurezza Volo)	CAA	Service de l'Aviation Civile (SAC), delegated to FR BEA	SHK (Swedish Accident Investigation Board)		NTSB	AAIB
	a aeroplanes					AAII			OTK	BEA												
	b microlight aeroplaness					AAII			OTK	BEA												
	c gliders					AAII			OTK	BEA												
	d hang gliders					AAII			Polis/SIL	Ministère de la jeunesse ...												
	e helicopters					AAII			OTK	BEA												
	f gyroplanes					AAII			OTK	BEA												
	2 maintaining accident records?				ATSB		AIB	Ministry of Economic Affairs and Communication			BFU		CAA	Hungarian Safety Board		ANSV	CAA	SAC	SCAA (Swedish Civil Aviation Authority)		NTSB/FAA	CAA SRG
	a aeroplanes					AAII			OTK/CAA	BEA		BFU										
	b microlight aeroplaness					AAII			OTK/CAA	BEA		DAeC, DULV										
	c gliders					AAII			OTK/CAA	BEA		BFU										
	d hang gliders					AAII			SIL	Ministère de la jeunesse ...		DHV										
	e helicopters					AAII			OTK/CAA	BEA		BFU										
	f gyroplanes					AAII			OTK/CAA	BEA		DAeC, DULV										
	3 maintaining register?						CAA	Estonian CAA					Insp. Transport & Waterworks	HCAA			CAA	SAC				CAA SRG
	a aeroplanes				CASA	CAA CZ			CAA	Bureau des immatriculations, DGAC	LBA	LBA	Insp. Transport & Waterworks		IAA	ENAC			SCAA		FAA	
	b microlight aeroplaness				Recreational Aviation Australia	LAA CZ			CAA	7 directions de l'aviation civile	DAEC/DULV	DAeC, DULV	Owners,CAA,RDAeroclub		IAA	Aero Club			SCAA			
	c gliders				Gliding Federation of Aust.	CAA CZ			CAA	Bureau des immatriculations, DGAC	LBA	LBA	RDAeroclub		DGC	ENAC			SCAA		FAA	
	d hang gliders				Hang Gliding Federation of Aust.	LAA CZ			SIL	Fédération français de vol libre	nr	DHV	RDAeroclub			Aero Club			nr			
	e helicopters				CASA	CAA CZ			CAA	Bureau des immatriculations, DGAC	LBA	LBA	CAA		IAA	ENAC			SCAA		FAA	
	f gyroplanes				Aust. Sport Rotorcraft Association	LAA CZ			CAA	7 directions de l'aviation civile	nr	DAeC,DULV	CAA		IAA	ENAC			SCAA		FAA	
Q13	**GA Aviation safety education**																					
	yes		14		1	1	1	1	1		1	1		1	1	1	1		1		1	1
	no		3							1			1					1				
	1.correspondence		9		1	1		1	1			1				1	1				1	1
	2. magazines/journals		7		1	1			1							1	1				1	1
	3. seminars		11		1	1			1		1	1	1		1		1		1		1	1
	4 dedicated NAA programme		8		1	LAA CZ	1		1					1			1		1		1	1
Q14	**Safety education**												40%									
	number of pilots/yr?		331060		7000	10000 by Pilot magazine	400		70	320	400	several hundred		7500	Examiners/instructor	1000	20		350		300000	14,000
	number of GA enthusiasts/yr?		1200			included above										1200						
Q15	**GA safety material ?**		4				1								na	1	1					1
	what?					Pilot magazine, LAA CZ web site	seminars, fly-in, magazine		Advisory circulars and web pages of CAA	DGAC and DCS include safety topics. Aéroclub de France about to create flight safety foundation	leaflets	brochures		on web site		quarterly bulletin	Curier Aero journal		safety circulars		Handbooks,pamphlets,CD,DVD,Internet	Safety information & safety sense leaflets
	funding source?				General appropriations/advertising/sponsorship	MOT via LAA CZ and LAA CZ member fees	CAA		CAA		AOPA	LBA		HCAA			private		SCAA		Govt.	CAA & purchasers

SUMMARY OF POSSIBLE EFFECTS OF EASA ON FUTURE REGULATION AND CAA/INDUSTRY VIEWS

Reading from left to right, the table gives a brief explanation of the current regulatory arrangements. The middle column lists the future Implementing Rules that may apply, based on a draft General EASA Rules Template (GERT) that has been produced by the Agency. The penultimate column contains views provided by industry representatives regarding the modes of regulation they consider desirable in the future, and the final column gives the CAA response to each of these suggestions.

In both of the last two columns the convention has been adopted to use regular font where activities involving EASA aircraft are referred to, and *italics* where the comments refer to non-EASA aircraft or activities.

ACTIVITY		**CURRENT REGULATION**	**LIKELY EFFECT OF EASA IMPLEMENTING RULES**	**SECTOR VIEWS ON FUTURE REGULATORY MODELS** ***[Non-EASA arrangements in italics]***	**CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE** ***[Non-EASA arrangements in italics]***
Private transport / leisure	Conventional aeroplanes + helicopters	Compliance with the general provisions of the Air Navigation Order and Rules of the Air Regulations, in particular - • CofA and continued airworthiness • pilot licence (revalidated biennially) • scales of equipment • the rules for the movement of aircraft and there is generally no CAA involvement in the oversight of operations. CAA approvals are required for AWO, MEL, RVSM, MNPS and RNAV (44 operators at present).	SECTION II AIRWORTHINESS SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 2 if "complex motor-powered aircraft" SECTION VI PERSONNEL PART FCL Subpart C - PPL or Subpart D - CPL *Non-EASA aircraft remain under national arrangements*	AOPA considers it appropriate that regulations should be set at European level. BHAB suggests the possibility of extending the proposed EASA Recreational PPL (see below) to light single engine helicopters. HCGB considers that current arrangements provide a satisfactory regulatory model in this area. *BBGA feels that responsibility for Annex II aircraft post EASA might yet result in a residual CAA that was too large and therefore too costly.* *BBGA considers that post EASA, the CAA should accept EASA organisational approvals as valid for Annex II aircraft.* *AOPA agrees with the general principle that arrangements for non-EASA aircraft should be based on the EASA Implementing Rules.*	CAA agrees. This suggestion is consistent with the CAA policy to seek opportunities for regulatory devolvement where possible. CAA concurs. *CAA will reassess the situation and maintain the principle of minimum regulation, i.e. proportionality.* *The CAA considers that national arrangements should generally mirror EASA policies and procedures for approvals.* *This is consistent with the CAA view.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Private transport / leisure *(Cont'd)*	Simple single engine aeroplanes	Simple aircraft not exceeding 2000 kg, other than microlights and SLMG, can be flown within the UK by a pilot with a National PPL (revalidated biennially). Applications are scrutinised by NPLG and the licence is issued by the CAA.	Generally as above, with SECTION VI PERSONNEL Subpart B - Recreational PPL (possibility for "Assessment body") *Non-EASA aircraft remain under national arrangements*	AOPA considers it appropriate that regulations should be set at European level (i.e. RPPL). *AOPA agrees with the general principle that arrangements for non-EASA aircraft should be based on the EASA Implementing Rules.*	CAA agrees. CAA considers that RPPL could be applied to aeroplanes up to say 2730 kg. *This is consistent with the CAA view.*
	Permit to Fly aircraft	Generally for private flying only, with additional permit conditions. Certain aircraft not exceeding 1136 kg may have a Permit to Fly issued under arrangements through the Popular Flying Association. Other permits to Fly are administered by the CAA without reliance on any recommending body. PFA certifies that the design, construction, including modifications, and flying characteristics of an amateur built aeroplane, microlight or gyroplane comply with standards agreed with CAA.	SECTION II AIRWORTHINESS (possibility for "Qualified entity") SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL (possibility for "Assessment body") or Subpart C - PPL or Subpart D - CPL etc	AOPA considers it appropriate that regulations should be set at European level.	CAA agrees. EASA Permit to Fly aircraft will have to meet EASA requirements. CAA is supportive of the use of "Qualified entities" to conduct GA regulatory tasks.

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Private transport / leisure *(Cont'd)*	Permit to Fly aircraft *(Cont'd)*	PFA recommends issue of CAA permit-to-fly for homebuilt aeroplanes, microlights and gyroplanes. PFA recommends the renewal of the CAA permit-to-fly for homebuilt aeroplanes, microlights and gyroplanes. PFA validates non-expiring CAA permits-to-fly for aeroplanes and gyroplanes on their capability list. PFA conducts flight testing for PFA aircraft. PFA recommends the issue and renewal of EASA permits-to-fly for orphaned aircraft types being transferred from a CAA CofA. PFA recommends to the CAA the issue and renewal of a CAA permit-to-fly for a factory built microlight.	*Non-EASA aircraft remain under national arrangements*	*AOPA agrees with the general principle that arrangements for non-EASA aircraft should be based on the EASA Implementing Rules.* *GAPAN believes PFA model is satisfactory.*	*CAA is content to continue the existing devolved arrangements, and to seek opportunities for further regulatory devolvement where possible.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Flying training and tests, in aeroplanes and helicopters		Normally limited to aircraft with a CofA. Registered facilities (RF) and flying training organisations (FTO) must meet the requirements of JAR-FCL 1 or 2, as appropriate. A licensed aerodrome is presently required if the training or test is for a pilot's licence, an aircraft rating or a night rating/qualification. *The Light Aviation Airports Study Group report will recommend that the CAA reviews this requirement and considers alternative arrangements such as a code of practice or enhanced flying training organisation approval to supplement JAR-FCL. The report will be reviewed by the CAA Safety Regulation Group (SRG) Executive Committee early in 2006 and a regulatory impact assessment will then be released for consultation.*	SECTION II AIRWORTHINESS SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 2 if "complex motor-powered aircraft" (Unclear if Part OPS 3 Aerial Work will apply) SECTION V AERODROMES (unclear if this will make specific provision) SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL (possibility for "Assessment body") Subpart C - PPL or Subpart D - CPL Subpart F, G, H, I as appropriate *Non-EASA aircraft remain under national arrangements*	AOPA considers it appropriate that regulations should be set at European level. AOPA considers PPL Instructors should be allowed (i.e. CPL not needed) particularly in relation to the proposed Recreational PPL. *AOPA agrees with the general principle that arrangements for non-EASA aircraft should be based on the EASA Implementing Rules.*	CAA agrees. CAA accepts this proposal, and considers that further work will be needed to understand the implications, for example where training is offered on a commercial basis. *This is consistent with the CAA view.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Aerial work operations		The only circumstances under which the CAA is required to sanction aerial work operations are where exemptions from the regulations are required, and aerial application (crop spraying) for which an aerial application certificate is required. Some tasks are, under current UK legislation, conducted as public transport by helicopter operators under the terms of their Air Operator's Certificate (AOC), for example where observers are carried for pipeline and electricity powerline surveys.	SECTION II AIRWORTHINESS SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 3 Aerial Work SECTION VI PERSONNEL PART FCL Subpart D - CPL *Non-EASA aircraft remain under national arrangements*	BBGA spent considerable efforts on the development of the draft JAR-OPS 4. BBGA is content that this draft provides a reasonable way forward for aerial work applications (although it is far from the finished article). Because of the ability to freely move EU aircraft, together with the differing views of what is aerial work, BBGA think a pan European rule is essential. BHAB welcomes the clarity expected under the EASA regulations regarding the carriage of task specialists such as camera operators, firemen and underslung load handlers on aerial work flights. *Microlight aircraft are particularly suited to some aerial work applications, such as aerial photography, but are prevented by doing such work by the conditions of their permit to fly airworthiness regime and the privileges of the microlight pilot's licence.*	CAA agrees. CAA agrees. JAR-OPS 1.001 and 3.001 make clear that commercial air transport rules are not generally applicable to aerial work and associated positioning flights. This is also consistent with ICAO. *CAA has sympathy with these views, and considers that any new national arrangements in this area would need to take into account the EASA rules that will apply when such activities are conducted using conventional aircraft. Further work will be needed if this is to be enabled.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Aerial work operations *Cont'd*				*BMAA would like delegation of aerial work permissions for microlight pilots (aerial photography/filming, banner towing and other non-public transport uses) to BMAA for pilots who had received appropriate training on BMAA organised and designed courses.*	*CAA considers that that UK arrangements for aerial work using non-EASA aircraft should mirror the EASA Implementing Rules.*
Microlight flying, including training		Private flying and training only. Licence applications are scrutinised by NPLG and the licence is issued by the CAA (revalidated biennially). British Microlight Aircraft Association★ (BMAA) certifies that the design, construction, including modifications, and flying characteristics of an amateur built microlight comply with standards agreed with CAA. BMAA certifies that the design, including modifications, of a factory built microlight comply with standards agreed with CAA. BMAA conducts flight testing for BMAA aircraft BMAA recommends issue of CAA permit-to fly for homebuilt and type approved microlight aircraft. BMAA recommends the renewal of the CAA permit-to-fly for microlight aircraft.	*Non-EASA aircraft remain under national arrangements* If, for example, series built microlights are removed from Annex II then these would be regulated by EASA under similar arrangements to Permit to Fly aircraft (see above).	BMAA generally content with EASA ambitions in relation to series built microlights. *BMAA would like licence issue delegated to NPLG / BMAA with data transfer only to CAA for record keeping purposes. BMAA considers this has the potential to reduce duplication of work/CAA costs/ resources, and improve turnaround times.* *BMAA would like to carry out approval and periodic audit of microlight FIC schools on behalf of CAA who would audit BMAA processes to retain oversight if required by EASA.* *BMAA Code of Practice (based on CAP 755) for microlight clubs and schools to provide Industry Best Practice Standard.* *BMAA believes there may be possibilities for owners' airworthiness declaration in place of Permit-to-Fly.*	CAA agrees. *CAA agrees.* *CAA believes there may be scope for delegation, e.g. RPPL issued by an 'Assessment body'.* *CAA accepts this suggestion, and considers that further work will be needed to ensure that standardisation can be maintained.* *CAA welcomes this initiative.* *CAA accepts this suggestion, and will consider in light of the single-seat deregulation proposal (see left).*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Microlight flying, including training *Cont'd*		*CAA is currently involved in dialogue with the Department for Transport, to investigate whether light single-seat microlight aeroplanes could be removed from scope of airworthiness regulation. If deregulation were to be found possible in this area, then the deregulated class of aircraft would remain subject to the applicable pilot licensing and medical requirements (NPPL).*			

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Gliding	Gliders/ sailplanes and self-sustaining gliders (SSG)	All flying as private flights, or aerial work in a club environment. Near autonomous under the British Gliding Association★ (BGA) which has its own rules. Air Navigation Order provisions in Article 8, 26, 37, 126, 157(5) and the Rules of the Air Regulations apply.	SECTION II AIRWORTHINESS (possibility for "Qualified entity") SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL (possibility for "Assessment body") etc *Non-EASA aircraft remain under national arrangements*	BGA considers future regulation should be proportionate to the risks. BGA would like "Qualified entity" [and/or "Assessment body"] status to provide a similar degree of autonomy as in the past. BGA sees advantages in the RPPL for glider pilots to guarantee free movement within the EU. BGA welcomes the possibility of pilot licence issue by BGA, NPLG or a similar organisation having "Assessment body" status, subject to appropriate compliance auditing. *BGA is generally content with the current ANO provisions.* *BGA considers airworthiness of non-EASA gliders should remain unregulated, i.e. no change to the BGA oversight role in this area.*	CAA agrees, and also considers that different levels of risk may be acceptable depending on the nature of the activity. Where EASA extends the scope of regulation the CAA considers that the opportunities for devolvement [and possibly delegation] would be consistent with established CAA policy in relation to GA activities. Noted CAA agrees. CAA believes there may be scope for delegation, e.g. RPPL issued by an 'Assessment body'. *CAA agrees that UK arrangements (i.e. unregulated in most respects) have proved generally satisfactory.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Gliding *Cont'd*	Self-launching motor-gliders (SLMG) and touring motor gliders (TMG)	BGA current approval allows for the recommendation to CAA for the renewal of CofA for SLMG, SLPS, TMG and Glider Tug Aircraft. BGA also has privileges under a B1 approval for maintenance and repair of this group of aircraft and the engines therein. Currently no certification approval in place. BGA is in process of getting an approval to recommend the issue and renewal of CofA for Gliders. That is almost in place.	SECTION II AIRWORTHINESS (possibility for "Qualified entity") SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL (possibility for "Assessment body") or Subpart C - PPL or Subpart D - CPL etc *Non-EASA aircraft remain under national arrangements*	BGA considers regulation of SLMG may be somewhat disproportionate, and that there may be scope for greater delegation of responsibilities. BGA welcomes the possibility of pilot licence issue by BGA, NPLG or a similar organisation having "Assessment body" status, subject to appropriate compliance auditing Use of conventional EASA *and non-EASA* aeroplanes for aerotowing is noted.	Where EASA extends the scope of regulation the CAA considers that the possibilities for the use of "Qualified entities" and "Assessment bodies" would be consistent with established CAA policy in relation to GA activities. CAA agrees. CAA believes there may be scope for delegation, e.g. RPPL issued by an 'Assessment body'. *CAA considers that UK regulation in this area should mirror the EASA rules.*
Hang-gliding and paragliding	Including self-propelled hang-gliders (SPHG)	These are all treated as gliders, and ANO provisions apply as for gliders. There are no airworthiness or licensing requirements. Largely self-administered by the British Hang-gliding and Paragliding Association★ (BHPA). which has its own rules for airworthiness and training. BMAA arrangements provide an alternative choice used by some SPHG pilots.	*Non-EASA aircraft remain under national arrangements*	*BHPA content to remain outside the scope of EASA regulation.* *Unintended effects of EASA regulation must not be allowed to adversely affect these activities.* *Use of microlights for (non-commercial) aerotowing is noted.*	*CAA agrees.* *CAA agrees.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Ballooning	Private	British Balloon and Airship Club ★ (BBAC) examiners act on behalf of the CAA for licence tests. Pilot licences issued by the CAA (with rolling 13 month revalidation by experience). Airworthiness testing carried out by the BBAC and CofA issued by the CAA (not required for a private balloon).	SECTION II AIRWORTHINESS (possibility for "Qualified entity") SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL (possibility for "Assessment body") or Subpart C - PPL or Subpart D - CPL etc *Non-EASA aircraft remain under national arrangements*		CAA suggests that BBAC should consider "Qualified entity" status in place of the current CAA Approval. This would enable current arrangements for airworthiness testing to continue with minimal change. CAA believes there may be scope for delegation, e.g. RPPL issued by an 'Assessment body'.

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Ballooning	Commercial operations	Airworthiness testing carried out by the BBAC and CofA issued by the CAA. Air Operator's Certificate issued annually by the CAA for commercial passenger rides operations, with direct CAA oversight of the activity. No operating certificate presently required for aerial work (e.g. advertising).	SECTION II AIRWORTHINESS (possibility for "Qualified entity") SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 1 Air Transport or Part OPS 3 Aerial Work SECTION VI PERSONNEL PART FCL Subpart D - CPL *Non-EASA aircraft remain under national arrangements*		CAA believes that the UK AOC (B) regime should translate with minimal change under EASA Implementing Rules. Accepting that balloon passenger rides are conducted on a commercial basis, CAA considers this has more in common with other relatively adventurous flying activities than conventional public transport. CAA would not be averse to further devolvement in relation to operational oversight.

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Parachuting		British Parachute Association★ (BPA) affiliated clubs and registered display teams operate with the written permission of the CAA, issued annually. Parachuting manuals are required, with all instructions needed by parachutists and all other persons involved in the operation. Under the terms of CAA Approval the BPA audits each parachute club to a schedule agreed with the CAA, and spot checks display teams. In order to be satisfied regarding the continuation of the Approval, the CAA audits the work of the BPA that is conducted under approval. Three operators currently hold parachuting permissions with direct oversight from the CAA (and no BPA involvement): MoD HQ 2 Group, Quinetiq, and Irvin-GQ Ltd.	SECTION II AIRWORTHINESS SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 2 if "complex" Part OPS 3 Aerial Work will apply to commercial operations SECTION VI PERSONNEL PART FCL Subpart C - PPL or Subpart D - CPL *Non-EASA aircraft remain under national arrangements*		CAA believes that the UK CAA Parachuting Permission regime will readily translate to an Aerial Work Certificate if required under EASA Implementing Rules. CAA suggests that BPA should consider "Qualified entity" status in place of the current CAA Approval. This would enable current arrangements for oversight of BPA clubs and display teams to continue with minimal change.

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Public flying displays		CAA Permission required for each event. In addition all pilots must have a pilot Display Authorisation (DA). CAA appoints Display Authorisation Evaluators (DAE) to oversee role training and testing of pilots. Events inspected (sample) by CAA staff. Annual DAE and DA seminars for standardisation, and CAA sends a newsletter to all DA holders.	SECTION II AIRWORTHINESS SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules Part OPS 2 if "complex motor-powered aircraft" SECTION VI PERSONNEL PART FCL Subpart B - Recreational PPL Subpart C - PPL or Subpart D - CPL *Non-EASA aircraft remain under national arrangements* *All events will remain subject to any national arrangements for flying displays*	ADAE satisfied with current level and quality of oversight. Suggests 10% sample of flying displays is appropriate. ADAE queries value added by requirement for CAA Permission. Suggest instead that appropriately authorised Flying Display Directors should be required to notify each event, and ANO amended accordingly. ADAE believes that CAA should continue to administer pilot Display Authorisations (DA) and Display Authorisation Evaluators (DAE) unless devolvement were possible. HAA is interested in the scope for some element of devolution, particularly inspections. HAA believes there is scope for block exemptions particularly for display practice sites.	Noted CAA is interested to explore possibilities for improving and streamlining the regulatory provisions. There must remain a high degree of confidence that established standards will continue to be applied, in order that aircraft do not endanger the public. Noted The suggestion to devolve tasks is consistent with established CAA policy in relation to GA activities. CAA agrees. Long term exemptions are currently in place for 19 display practice sites.

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Ex-military aircraft		Operation of ex-military Permit to Fly aircraft exceeding 2730 kg is required to be conducted under CAP 632 arrangements and Organisational Control Manuals (OCM) are required. Maintenance arrangements for these aircraft as per BCAR A8-20. Direct oversight by CAA. For simple ex-military aeroplanes not exceeding 2730 kg the recommendation for initial issue of the Permit to Fly and Certificate of Validity (CofV) and re-issue of the CofV does not need to be supported by an A8-20 organisation. Some use an M5 to support the recommendation for re-issue of the CofV.	*Non-EASA aircraft remain under national arrangements*		The CAA is considering extension of the BCAR A8-20 arrangements to cover all ex-military aircraft Permit-to Fly aircraft irrespective of weight. This would allow a reduction in direct CAA involvement in individual aircraft types. CAA considers there may be scope for further devolvement.
Exemptions / permissions	Rules of the Air (low flying etc)	Around 500 requests per annum. Private events, aerial surveys etc.	*All events will remain subject to any national arrangements for low flying*	*GAPAN suggests that notification (with clear guidelines) would suffice in place of CAA permissions and exemptions.* *ADAE believes CAA permission/exemption should still be required.*	*The civil aviation legislation forms part of the criminal law. It would not be possible to allow pilots to have discretion to set the law aside in the manner suggested.* *CAA agrees.*
	Flights in/over built up areas	For example requests for helicopters to land and taking off at sites within congested areas.	*All events will remain subject to any national arrangements for low flying*	*ADAE believes CAA permission/exemption should still be required.*	*CAA does not envisage changing these arrangements.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Exemptions / permissions *Cont'd*	Dropping articles	Requests for flour bombing competitions, ashes etc.	*All events will remain subject to any national arrangements for low flying*	*GAPAN suggests that notification (with clear guidelines) would suffice in place of CAA permissions and exemptions.* *ADAE believes CAA permission/exemption should still be required.*	*CAA accepts this suggestion, and will consider the possibility of a general exemption, e.g. for events at aerodromes.* *CAA agrees.*
	Charity flights	A general permission is in place, which obviates the need for CAA to issue individual permissions where standard conditions can be met. These are pragmatic measures aimed at significantly improving safety by avoiding the most obvious risk areas associated with private flying.	Unlikely to be regulated as Commercial Air Transport *Non-EASA aircraft remain under national arrangements*	*GAPAN queries the need for CAA permission for charity flights.* *GAPAN suggests removal of the restriction against charity passenger flights in Permit-to-Fly aircraft including microlight aeroplanes.*	If not Commercial Air Transport, then published guidelines may suffice in future. If not Commercial Air Transport, then there may be no impediment to use of EASA Permit-to-Fly aircraft. *CAA considers national arrangements in this area should reflect any EASA rules that apply when such activities are conducted using EASA aircraft.*

ACTIVITY		CURRENT REGULATION	LIKELY EFFECT OF EASA IMPLEMENTING RULES	SECTOR VIEWS ON FUTURE REGULATORY MODELS *[Non-EASA arrangements in italics]*	CAA MEMBERS OF THE REGULATORY REVIEW RESPONSE *[Non-EASA arrangements in italics]*
Exemptions / permissions *Cont'd*	UAVS and model aircraft	Around 60 requests per annum for permission to conduct aerial work or exemptions to enable flight by unmanned aircraft >20 kg. The CAA issues exemptions for model aircraft >20 kg supported by documentation provided by the Large Model Association (LMA). CAA publishes guidance in CAP 658 (Model aircraft: a guide to safe flying) and CAP 722 (Unmanned Aerial Vehicle operations in UK airspace).	UAV of 150 kg or more will be EASA aircraft SECTION II AIRWORTHINESS (Unclear if this will apply) SECTION III AIR OPERATIONS Part OPS 0 General Operating and Flight Rules (Unclear if this will apply) Part OPS 3 Aerial Work SECTION VI PERSONNEL PART FCL Subpart K - UAV Operating Personnel *UAV <150 kg remain under national arrangements*	[Outside the scope of this review.] *LMA is content with the current arrangements to enable flight by model aircraft >20 kg.* *BMFA does not believe any change to the current arrangements is necessary. CAP 658 should continue as the primary source of regulatory information for model flyers.* *[Outside the scope of this review.]*	*CAA does not envisage changing these arrangements.* *Noted*

★ *Note The starred associations are affiliated to the FAI through the Royal Aero Club of the United Kingdom*

ADAE = Air Display Association Europe
AOPA = Aircraft Owners and Pilots Association
BBGA = British Business & General Aviation Association
BHAB = The British Helicopter Advisory Board
BMAA = The British Microlight Aircraft Association
GAPAN = The Guild of Air Pilots and Air Navigators
HAA = Historic Aircraft Association
HCGB = The Helicopter Club of Great Britain
LMA = Large Model Association
NPLG = National Pilot Licensing Group Ltd
PFA = Popular Flying Association
RPPL = Recreational Private Pilot Licence

Annex J

EASA
TERMS OF REFERENCE

TOR Nr: MDM.032

Issue: Issue 1 **Date:** 13 February 2006

Regulatory reference:

- REGULATION (EC) No 1592/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, as amended.
- COMMISSION REGULATION (EC) No 1702/2003 of 24 September 2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations, as amended.
- COMMISSION REGULATION (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks.

Reference documents:

- OPINION No 3/2004 OF THE EUROPEAN AVIATION SAFETY AGENCY for amending Regulation (EC) No 1592/2002 of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, to extend its scope to the regulation, 15 December 2004.
- Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, “Extending the tasks of the European Aviation Safety Agency – An Agenda for 2010”, COM(2005)578 final, 15 November 2005.
- Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (presented by the Commission), COM(2005)579 final, 16 November 2005.

1.Subject:

Regulation of aircraft other than complex motor powered aircraft, used in non-commercial activities

2.Problem / Statement of issue and justification; reason for regulatory evolution (regulatory tasks):

In Opinion No 3/2004 the Agency recognised that the current JAR-FCL PPL may be too demanding for flying only simple aircraft in a simple air traffic environment and considered it appropriate to create an additional level of licence for these types of activities. As a consequence the Agency has proposed the creation of a new category of private pilot licence, a Recreational PPL, as an alternative to the existing JAR-FCL PPL that may be issued by assessment bodies. The holders of such a licence will not be authorised to fly complex motor-powered aircraft or to engage in commercial aviation. The related implementing rule, need to be developed.

In addition, in Opinion No 3/2004 the Agency reached the view that the operation of general aviation aircraft shall be regulated through implementing rules adapted to the complexity of the aircraft rather than to the type of activity. In the case of non-complex aircraft not engaged in commercial activities these implementing rules would most probably be limited to the use of airspace or of requirements related to certain types of technical areas, such as emergency and radio equipments.
These implementing rules should therefore cover interoperability issues (use of airspace) to ensure the safety of aircraft sharing a same airspace. As such they are applicable to all aircraft, including third country aircraft when they are in Member States' territory.
In addition, by design, these implementing rules may also include elements that are common to the implementing rules dedicated to other types of operations. The right balance will have to found between consistency of requirements favouring a single text and ease of use by regulated persons that may prefer a single text covering all what they need to do.
These implementing rules will be directly applicable and compliance verified by Member States without the need for neither certification nor declaration. Here again this implementing rule, need to be developed.

Furthermore, during the consultation that took place for the preparation of this Opinion, the views expressed by stakeholders showed that there appeared to be several issues that also needed to be addressed. Above all, the majority of stakeholders feel that they are already over regulated and do not want to be faced with the same situation when the OPS and FCL regulatory framework is transferred to EASA. They consider that this is one of the reasons for the poor development of European general aviation. This has led many associations, sports aircraft, glider and Microlight aircraft, to express the will to be or to remain excluded from the scope of EASA. This clearly poses the problem of aircraft that are almost identical in design and performance being regulated by different bodies which may create inequalities that would be unacceptable. In contrast, including more aircraft under EASA's scope of competence can only be envisaged if the regulations are re-thought and adapted to the complexity of the aircraft.

The Agency is concerned about the situation highlighted during the consultation and ensuing meetings with this segment of aviation and therefore wishes to address this issue as a whole to ensure a coherent system adapted to the needs of this segment of civil aviation.

In the recitals of its legislative proposal COM (2005) 579 final, the Commission expressed the view that:
(5) Consideration should notably be given to aeroplanes and helicopters with a low

maximum take-off mass and whose performance is increasing, can circulate all over the Community and are produced in an industrial manner, which therefore might be better regulated at Community level to provide for the necessary uniform level of safety and environmental protection.

Taking into account the above, the Agency has decided to address all the issues raised above in a single activity that will focus mainly on this community as a whole. This will avoid, as is often the case that the solutions that are initially found for commercial air transport of large aircraft are then later generalised to the rest of the aviation community. The Agency feels that this is one of the reasons for what could be over burdensome rules. The proposed activity will be similar to the one that led to the US Light Sport Aircraft rule (applicable to aircraft of less then 560kg) and will address all aspects of non-complex aircraft when not engaged in commercial operations (design, maintenance, operations and licensing). This may lead to appropriate adaptation of existing JAA material, such as draft JAR OPS 0 and 2, as well as to revised implementing rules for airworthiness and continuing airworthiness.

3.Objective:

Propose new concept for regulation of aircraft other than complex motor powered aircraft, used in non-commercial activities and draft the associated NPAs

4. Specific tasks and interface issues (Deliverables):

- Develop a concept for the regulation of aircraft other than complex motor powered aircraft when used in non-commercial activities after a review of:
  - Current regulatory system and implementation measures applied to that segment of aviation today
  - Other approaches to that segment of aviation that have been put in place in other countries
  - In service experience.

  In developing this concept the group may wish to consider;
  - the possibility of creating sub-categories of aircraft in this segment of aviation
  - the possibility of using industry standards
- Develop implementing rules for the issue of recreational private pilot licence
- Develop general implementing rules for the operations of the concerned aircraft
- Rethink the implementation means today applied to these aircraft in airworthiness. This may lead to modifications to the Basic Regulation, slight adjustments to the essential requirements and the development of different implementing rules for airworthiness and continuing airworthiness.
- Finally, based on the new implementing measures proposed, the content of Annex II could be reviewed in order to better adapt it to the actual needs of the concerned segment of civil aviation.

The group shall maintain adequate interfaces with other groups working on operations and licensing and with the group developing the follow-up of NPA 7/2005 on Part-M

The group shall remain informed of the discussions relative to the definition of complex aircraft that will occur during the legislative process relative to the extension of scope of the Basic regulation.

5. Working Methods (in addition to the applicable EASA procedures)**:**

The work shall be carried out by a rulemaking group.

The initial meeting should be held early enough so as to allow meeting the task within the required timescale. Meetings shall be held at the Agency in Cologne. The group will be chaired by the Agency
6. Time scale, milestones: Start of work in March 2006. Publish interim report on the concept for regulatory system and implementation measures July 2006. The interim report will be circulated as an A-NPA in accordance with article 14 of the Rulemaking procedures Opinion to modify regulation (EC) 1592/2002 to introduce the new concept for airworthiness shall be issued by March 2007 following accelerated consultation process. Opinion to modify airworthiness implementing rules not linked to the change to regulation (EC) 1592/2002 shall be issued by March 2007 following accelerated consultation process. Elements for NPA for recreational private pilot licence rules shall be ready by September 2007. Elements for NPA for general operational rules shall be ready by September 2007. NPA to change airworthiness implementing rules and associated AMC linked to the change to regulation (EC) 1592/2002shall be ready by September 2007.

EASA DRAFTING GROUP
GROUP COMPOSITION

TOR Nr: MDM.032

Issue: Issue 1 **Date:** 13 February 2006

Subject:

Regulation of aircraft other than complex motor powered aircraft, used in non-commercial activities

Composition:

Chairman:

- Leroy, Alain – EASA Certification

Secretary:

- Altman, Jürgen – EASA

Members:

- Akerstedt, Hans - EAS
- Fridrich, Jan - EAS
- Newby, Graham - EAS
- Roberts, David - EAS
- Stuck, Roland - EAS
- Schuegraf, Rudi - EAS
- Taddei, Bertrand - EAS
- Konrad, Jo - IAOPA
- Pedersen, Jacob - IAOPA
- Wilson, Mark - ECOGAS
- Daney, Claude Alain - ECOGAS
- Barratt, Reinert Christie - CAA Norway
- Le Cardinal, Hugues - DGAC France
- Forbes, Graham - CAA UK
- Morier, Yves - EASA Rulemaking
- Sivel, Eric - EASA Rulemaking

Annex K

EASA

TERMS OF REFERENCE

TOR Nr: M.017

Issue: 1 **Date:** 25 November 2005

Regulatory reference: Part-M Subparts E, F, G, H, I and associated AMC/GM material

Reference documents: Final Report Regulatory Impact Assessment on Part-M

1. Subject: Comment review of NPA 7/2005 and implementation of further changes to Part-M, AMC/GM amendment following regulatory impact assessment

2. Problem / Statement of issue and justification; reason for regulatory evolution (regulatory tasks):

When adopting Regulation (EC) No 2042/2003 of 20 November 2003 the European Commission acknowledged that it was necessary to evaluate the implication of the provisions of Annex I Part-M. Preparatory work carried out has identified the issues of concern for stakeholders and limited the RIA to non-commercial air transport.
The Agency transposed the RIA final report into NPA 7/2005 that was open for comments for 5 months. In there the Agency proposed changes to Part-M and explained why certain proposals of the RIA final report were not transposed. In view of the number of comments received and in view this task the Agency came to the conclusion that the group working on the development of extra AMC material to Part M would also review the comments to NPA 7/2005 as many of them relate to AMC material and as the final report of the RIA provided some provisions to change AMC/GM material. Furthermore, the review of the comments to NPA 07/2005 may involve additional issues to be addressed either through additional NPAs and/or within AMC/GM material

The workshop on Part-M held on November 4/5, 2005 concluded as follows to address concerns expressed

- To continue working, in close co-operation with the air sport community, on improving Part M on the basis of the comments it will receive under the NPA process. This will include changes in Part M and the development of the related AMCs and GMs. As there is no significant urgency (Part M for non-commercial non-complex aircraft enters into force in September 2008), the process of revision of part M will be frozen until the whole package is available and understood.
- To organise training and workshops to explain the above mentioned package and ensure its proper understanding and implementation[1].
- To review Part 66 to better adapt qualification requirements to the aircraft complexity.
- To review Part 21 rules and certification processes to adapt them to the aircraft complexity[2].

3.Objective:

Prepare a package of amendments to Part-M and to AMC/GM to Part-M according to EASA rulemaking procedure. Prepare possible changes as necessary to other maintenance Parts (e.g. Part-66).

[1] This task is not part of the rulemaking programme
[2] This activity has been added to the task of the group that was to develop implementing rules for operations and flight crew licensing for non complex aircraft not engaged in commercial air transport. (MDM.032)

4. Specific tasks and interface issues (Deliverables):

1. Review of the comments of NPA 7/2005, prepare a Comment Response Document and identify issues where additional NPAs may be needed.
2. Transposition of final report RIA concerning AMC/GM into an EASA NPA.
3. Prepare other NPA as directed by the Agency from the outcome of task 1

5. Working Methods (in addition to the applicable EASA procedures):

Group

Analysis and as appropriate transposition of the consultants final report RIA carried out by the Agency.

Maintain appropriate contacts with the group in charge of task MDM.032

6. Time scale, milestones:

NPA 7/2005

- CRD to be published by December 2006
- Opinion to be published February 2007

AMC to Part-M

- NPA to be published by February 2007.
- Decision to be issued by February 2008.

Possible Changes to other parts and related AMCs

- NPA to be published by February 2007.
- Decision to be issued by February 2008.

EASA DRAFTING GROUP

GROUP COMPOSITION

TOR Nr: M.017

Issue: 1 **Date:** 25 November 2005

Subject: Comment review of NPA 7/2005 and implementation of further changes to Part-M, AMC/GM amendment following regulatory impact assessment
Group Composition: **Members:** **Secretary:**

Annex L

ANALYSIS OF FATAL UK GENERAL AVIATION ACCIDENTS

Assumptions

For the purposes of this analysis study, GA was taken to be non-public transport operations involving UK registered aircraft with a maximum authorised take-off weight below 5,700 kgs. In cases where the aircraft was not formally state registered (for example, gliders, hang gliders and paragliders), the criterion for inclusion was that a UK pilot was involved.

The following classes of aircraft were included: airships, balloons, conventional aeroplanes, gliders, gyroplanes, hang gliders, helicopters, microlight aeroplanes (referred to as microlights for the purposes of this report), paragliders and self-propelled hang gliders (including powered paragliders)[1]. Gyrogliders were excluded, although it was acknowledged that a fatal accident had occurred at Kemble in 1997.

Only those accidents that involved at least one fatality to an aircraft occupant were included. This criterion resulted in the exclusion of just one fatal accident involving external third-party only fatalities.[2] **None of the other accidents in the study resulted in any fatalities to people on the ground**.

Accidents involving violent acts or suicide (as determined by a Coroner's Inquiry) were excluded.

Further details of the criteria used for the analysis process and the data sources used are listed in **Annex L1**.

UK General Aviation Safety – Overview Statistics

In the 10 years from 1995 to 2004, there were 235 fatal accidents involving UK registered and unregistered GA aircraft resulting in 340 fatalities. Table 1 shows a breakdown of the number of fatal accidents by aircraft class with fatalities in brackets. Figure 1 shows a graphical representation. Details of each fatal accident that featured in the dataset can be found in **Annex L2**. For completeness, **Annex L2** also contains a list of fatal accidents to UK registered aircraft below 5,700 kgs MTWA on public transport flights.

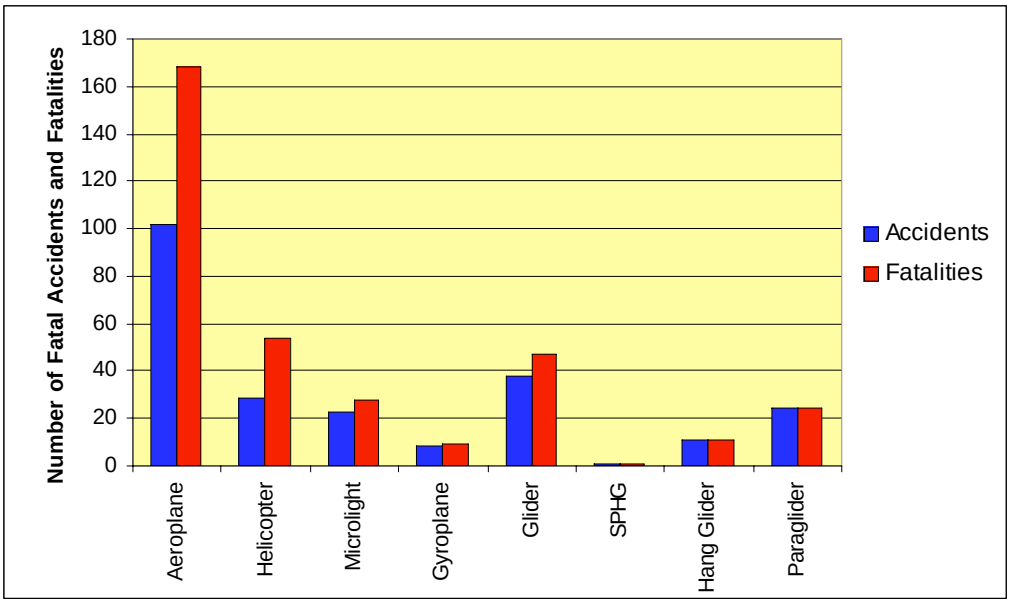
[1] The study only included self-propelled hang glider accidents where the pilot was a BHPA member. Data was not available for accidents involving BMAA members or members of neither organisation.
[2] A glider that struck and killed a pedestrian on the airfield during landing at Long Mynd in 1998.

Table 1 Breakdown of the Number of Fatal Accidents and Fatalities by Aircraft Class 1995 to 2004

	1995-99	2000-04	Total
Aeroplane	60 (99)	42 (69)	**102 (168)**
Helicopter	13 (22)	16 (32)	**29 (54)**
Microlight	13 (14)	10 (14)	**23 (28)**
Gyroplane	2 (2)	6 (7)	**8 (9)**
Glider	17 (22)	21 (25)	**38 (47)**
Self-Propelled Hang Glider	0 (0)	1 (1)	**1 (1)**
Hang Glider	7 (7)	4 (4)	**11 (11)**
Paraglider	9 (9)	15 (15)	**24 (24)**
Airship and Balloon	0 (0)	0 (0)	**0 (0)**
			235 (340)

Note: The mid-air collision between a Piper PA-25 and a glider in 2001, which resulted in one fatality on each aircraft, was counted against each class of aircraft (both for the number of accidents and fatalities). Adding the numbers in the Total column will result in double counting.

Figure 1 Breakdown of the Number of Fatal Accidents and Fatalities by Aircraft Class for the 10-Year Period 1995 to 2004



Note: SPHG is the acronym for Self-Propelled Hang Glider

The overall percentage of aircraft occupants killed was 88%.

The only fatal airship or balloon accident involved a public transport flight.[3]

The microlight fatal accidents were fairly evenly split between three-axis (10) and flex-wing (13) aircraft.

Figures 2a and 2b show the three-year moving average number of fatal accidents broken down by aircraft class. Fatal aeroplane accidents have shown a continuous decreasing trend from the period 1999-2001 on.

[3] A Cameron A-210 balloon that struck power cables during landing in 1997, resulting in one fatality.

Figure 2a Three-Year Moving Average Number of Fatal Accidents for Aeroplanes, Helicopters, Microlights and Gyroplanes 1995 to 2004

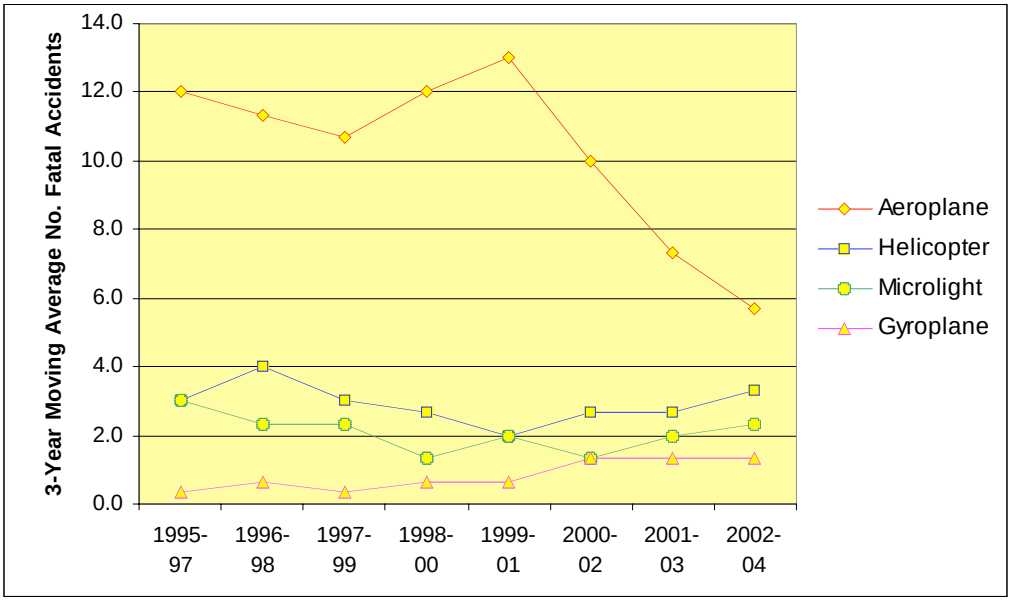


Figure 2b Three-Year Moving Average Number of Fatal Accidents for SPHG, Gliders, Hang Gliders and Paragliders 1995 to 2004

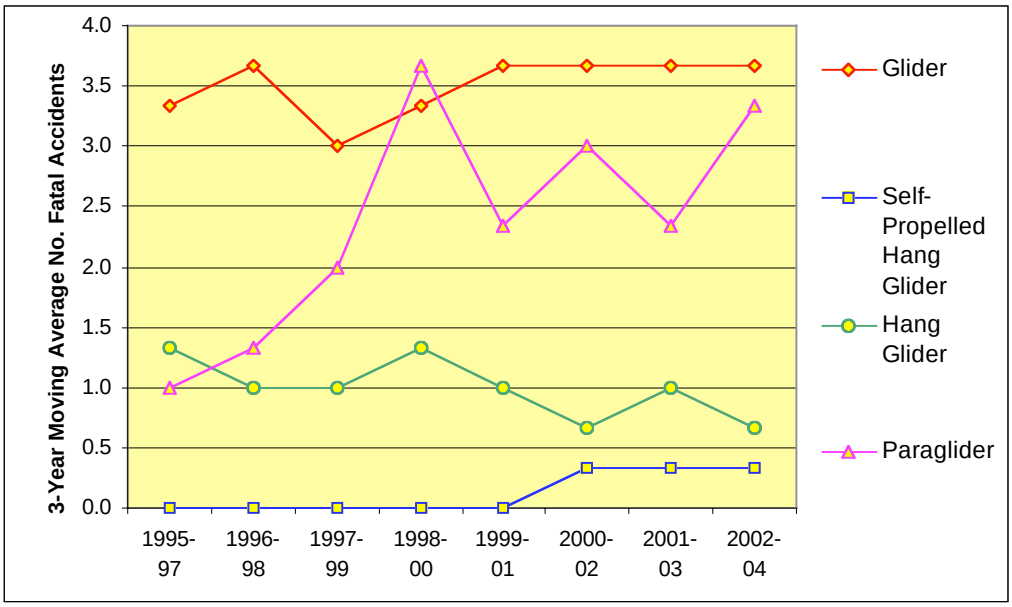


Table 2 shows a breakdown of the fatal accident rate per 100,000 hours flown by aircraft class. Figure 3 shows a graphical representation. Accurate values for non-public transport aircraft utilisation were not available. In order to generate fatal accident rates, utilisation had to be estimated and, as such, the fatal accident rate values should be treated with an element of caution. An explanation of how aircraft utilisation was estimated can be found in **Annex L1**. Table 2 also shows the equivalent fatal accident rates based on a 95% level of confidence.[4]

Table 2 Breakdown of the Fatal Accident Rate per 100,000 hours Flown by Aircraft Class Together with the 95% Confidence Value (in Brackets) 1995 to 2004

	1995-99	2000-04	Total
Aeroplane	1.5 (1.9)	1.1 (1.4)	**1.3 (1.5)**
Helicopter	2.6 (4.1)	2.4 (3.6)	**2.4 (3.3)**
Microlight	3.4 (5.4)	2.0 (3.3)	**2.6 (3.6)**
Gyroplane	26.1 (82.3)	61.1 (120.6)	**45.8 (82.6)**
Glider	2.1 (3.1)	3.0 (4.3)	**2.5 (3.3)**
Self-Propelled Hang Glider	0.0 (44.4)	5.3 (25.4)	**3.9 (18.6)**
Hang Glider	3.5 (6.7)	2.6 (5.9)	**3.1 (5.2)**
Paraglider	1.9 (3.5)	3.3 (5.2)	**2.6 (3.8)**

Notes:

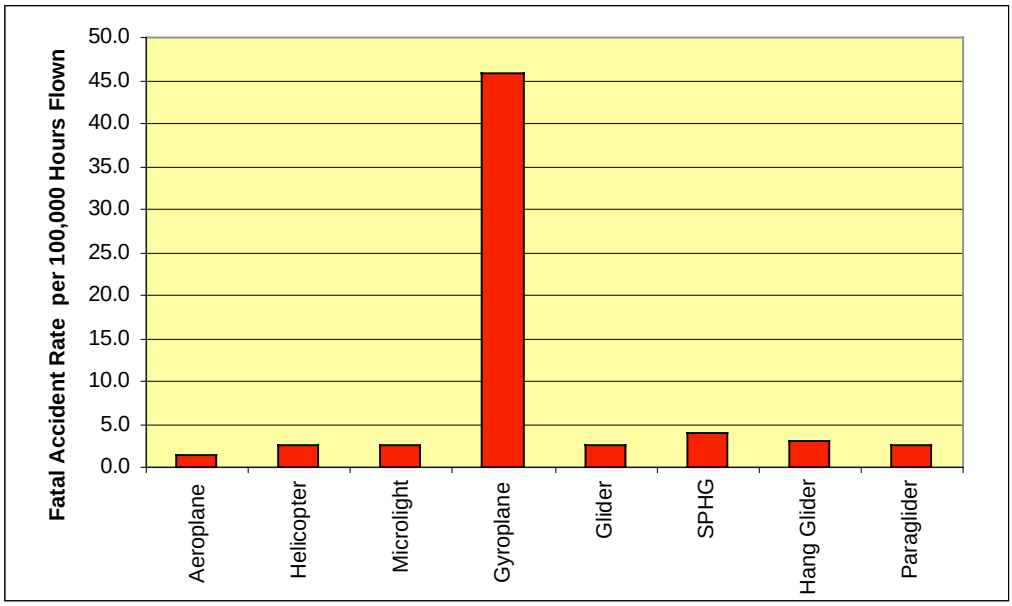
1. *The rates for self-propelled hang gliders, hang gliders and paragliders were based on fatal accidents involving UK BHPA members only, as utilisation was only available for this group. However, statistics on the number of fatal accidents were for all UK pilots.*

2. *The equivalent fatal accident rates for UK registered and/or operated public transport aircraft over the period 1995 to 2004 were:*

   - *Large (above 5,700 kg) aeroplanes: 0.02 fatal accidents per 100,000 hours flown.*
   - *Small (below 5,700 kg) aeroplanes: 1.19 fatal accidents per 100,000 hours flown.*
   - *Helicopters (all): 0.31 fatal accidents per 100,000 hours flown [offshore operations: 0.13 and police support operations: 0.26].*

[4] There is a 95% level of confidence (using the Poisson Distribution) that the rate will not exceed the given value.

Figure 3 Breakdown of the Fatal Accident Rate per 100,000 Hours Flown by Aircraft Class for the 10-Year Period 1995 to 2004



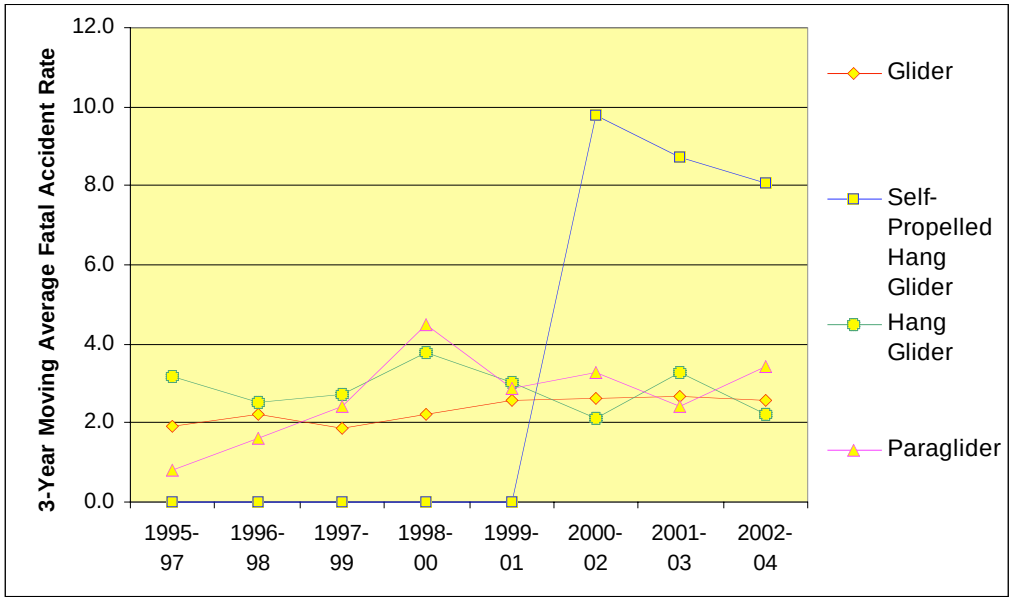
Gyroplanes have a significantly higher fatal accident rate than other classes of recreational aircraft. The CAA has been investigating the reasons behind this and has identified some specific actions in the 2006/2007 Safety Plan to help improve the safety record of these machines. These actions are:

- An assessment of the handling qualities of a two-seat gyroplane type.
- The validation of the gyroplane computer model in the light of the results of the work on teeter behaviour, modify the model and revise the earlier studies as appropriate, and consider any necessary changes to British Civil Airworthiness Requirements (BCAR) Section T (Light Gyroplanes).
- A review of gyroplane pilot licensing, in consultation with Industry, with a view to revising gyroplane pilot licensing to meet the needs of the wider gyroplane community, and to meet potential future licensing requirements.
- A review of the training arrangements for gyroplane pilots, instructors and examiners, in consultation with Industry, with a view to revising training syllabus and materials.

Figures 4a and 4b show the three-year moving average fatal accident rate per 100,000 hours flown analysed by aircraft class. A logarithmic scale had to be used in Figure 4a to accommodate the high gyroplane rate. Figure 4a shows a continuous decreasing trend in the fatal accident rate for aeroplanes from the period 1999-2001 on. The rates for helicopters and microlights showed a general decreasing trend over the whole study period. However, there were signs of an increasing trend in the last few years. The fatal accident rates for gyroplanes, gliders and paragliders tended to increase over the 10 years, whilst the hang glider rate fluctuated around a constant value.

Figure 4a Three-Year Moving Average Fatal Accident Rate per 100,000 Hours Flown for Aeroplanes, Helicopters, Microlights and Gyroplanes 1995 to 2004

Figure 4b Three-Year Moving Average Fatal Accident Rate per 100,000 Hours Flown for SPHG, Gliders, Hang Gliders and Paragliders 1995 to 2004



Note: The self-propelled hang glider rate is based on one fatal accident only.

UK General Aviation Safety – Background Information

A brief analysis of background information was carried out in order to add some context to the bare statistics.

When and Where

The most common months for fatal accidents were July and August. The combined total for these two months (69 fatal accidents) accounted for 30% of the total. November had the lowest frequency with 9 fatal accidents.

Approximately 83% of all fatal accidents occurred in the United Kingdom. Half of the fatal accidents involving paragliders occurred abroad.

Nature and Phase of Flight

Three-quarters of all fatal accidents occurred during private flights and 11% during training flights. Ten fatal accidents occurred during competition or air display flights and five during airworthiness flight tests.

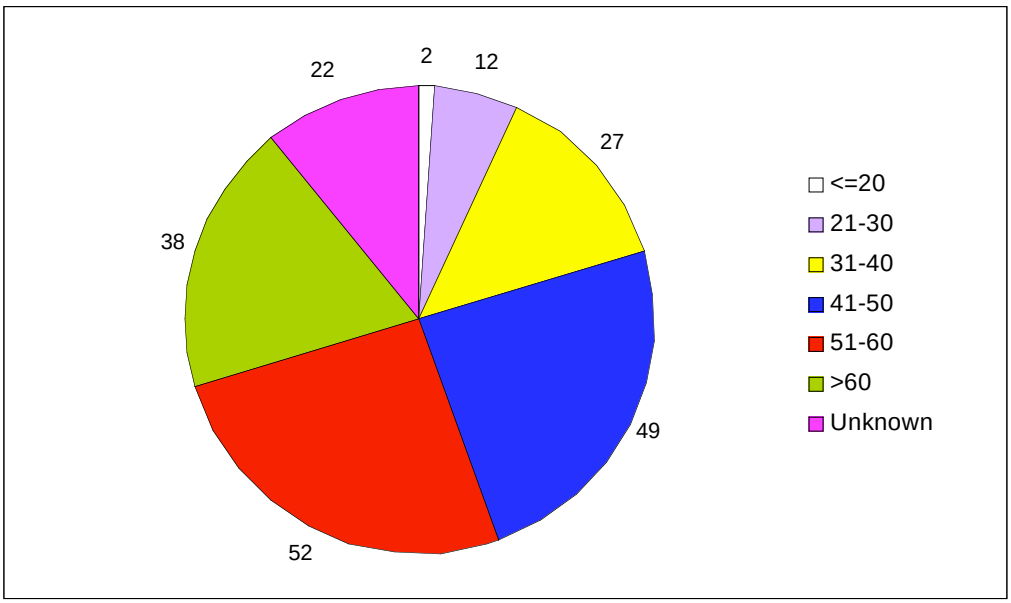
The majority of fatal accidents occurred either during take-off and initial climb, en-route cruise or during manoeuvring flight (each accounting for approximately a quarter of the total). Descent, approach and landing accounted for 12% of the total. 12 fatal accidents occurred whilst performing aerobatics.

Pilot Age and Experience

Figure 5 shows the distribution of pilot-in-command age for fatal accidents involving aeroplanes, helicopters, microlights, gyroplanes and gliders. Half of these fatal accidents involved pilots aged between 41 and 60. However, it should be noted that CAA licensing statistics revealed that approximately 50% of all PPL holders with a current medical (as of 1 April 2004) were pilots in the same age bracket.[5] Pilots in the 21-40 age bracket appeared to have fewer fatal accidents than their proportion of licence holders would suggest. Pilots over the age of 60 were involved in nearly 40% of the glider accidents (note that this does not imply medical causes).

[5] Including conventional aeroplanes, helicopters, gyroplanes and balloons, where the PPL was the highest licence type held. Licences that only required a declaration of medical health were not included.

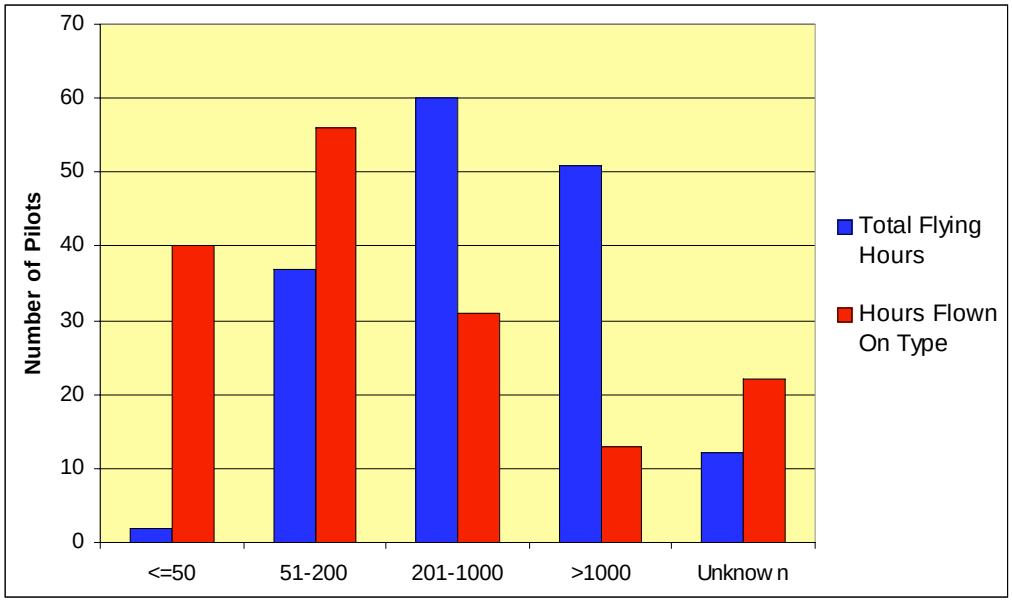
Figure 5 Breakdown of Fatal Accidents Involving Aeroplanes, Helicopters, Microlights, Gyroplanes and Gliders by Pilot-in-Command Age 1995 to 2004



Nearly a quarter of the pilots involved in aeroplane, helicopter, microlight and gyroplane fatal accidents held a commercial licence. The proportion for helicopter accidents alone was nearly 35%.

Figure 6 shows the total flying experience and experience on type, in terms of hours flown, for pilots-in-command of the same group of aircraft described above. The chart suggests that fatal accidents tended to involve experienced pilots, overall, who were lacking in experience on type.

Figure 6 Breakdown of Fatal Accidents Involving Aeroplanes, Helicopters, Microlights and Gyroplanes by Pilot-in-Command Experience 1995 to 2004



Nearly 40% of the pilots involved in aeroplane, helicopter, microlight and gyroplane fatal accidents had flown less than or equal to 12 hours in the 90 days preceding the fatal flight.

UK General Aviation Safety – Accident Types and Factors

Each fatal accident was analysed in depth and allocated with a broad accident category using a methodology derived by Thorpe (GASCo). A description of this methodology can be found in **Annex L3**. More detailed causal and contributory factors were also allocated to accidents where sufficient information was available. These factors were taken from the methodology used by the SRG General Aviation Safety Review Working Group (GASRWG). A list of GASRWG factors can be found in **Annex L3**. Note that only one accident category was allocated per fatal accident but multiple factors could be allocated, if appropriate.

Accident Types

Table 3 shows a breakdown of fatal accident category by aircraft class. Figure 7 shows a graphical representation. Loss of control in visual flight conditions was the most common accident category for all classes of aircraft (apart from helicopters) and was allocated in 95 fatal accidents overall (40%). Most of the fatal accidents allocated with the forced landing category involved aircraft that had suffered loss of engine power. These were fairly evenly distributed between technical engine failures and loss of power due to fuel mismanagement or carburettor icing.

Table 3 Breakdown of Fatal Accident Category (One Allocated per Fatal Accident) by Aircraft Class 1995 to 2004

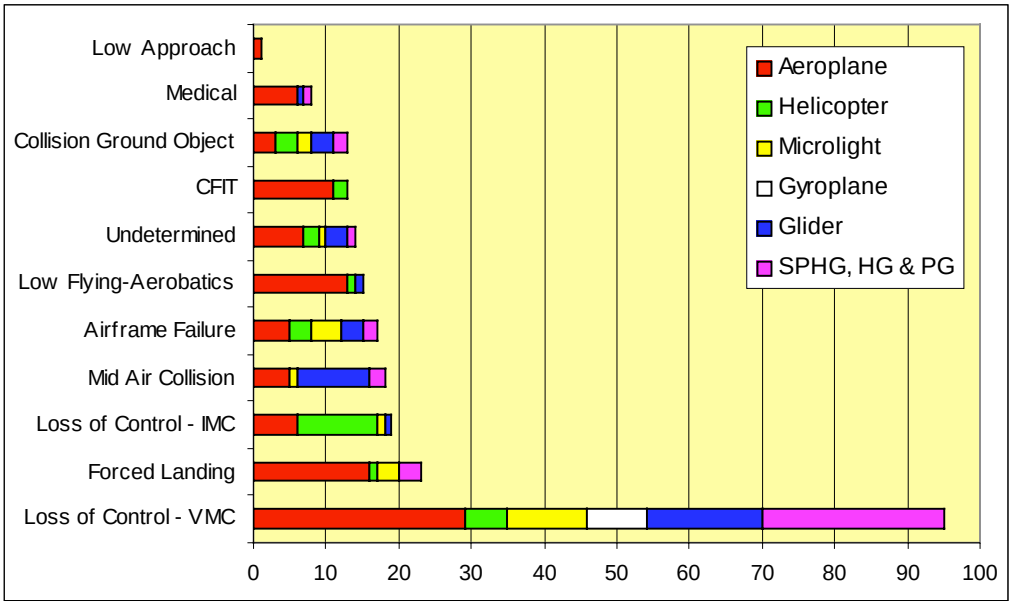
	Aeroplane	Helicopter	Microlight	Gyroplane	Glider	SPHG, HG & PG	Total
Loss of Control-VMC	29	6	11	8	16	25	**95**
Forced Landing	16	1	3	0	0	3	**23**
Loss of Control-IMC	6	11	1	0	1	0	**19**
Mid Air Collision	5	0	1	0	10	2	**17**
Airframe Failure	5	3	4	0	3	2	**17**
Low Flying-Aerobatics	13	1	0	0	1	0	**15**
Undetermined	7	2	1	0	3	1	**14**
CFIT	11	2	0	0	0	0	**13**
Collision Ground Object	3	3	2	0	3	2	**13**
Medical	6	0	0	0	1	1	**8**
Low Approach	1	0	0	0	0	0	**1**
							235

Notes:

1. *SPHG is the acronym for Self-Propelled Hang Gliders, HG for Hang Gliders and PG for Paragliders.*

2. *The mid-air collision between a Piper PA-25 and a glider in 2001, which resulted in one fatality on each aircraft, was counted against each class of aircraft (same also for Figure 7), but counted as one accident in the Total column.*

Figure 7 Breakdown of Fatal Accident Category by Aircraft Class 1995 to 2004



The most common fatal accident category for helicopters was loss of control in poor visibility and/or night conditions, which was allocated in 38% of cases and occurred as a result of the pilot becoming spatially disorientated.

Half of the loss of control in visual flight condition fatal accidents involving gliders occurred following problems during winch launches. Six mid-air collisions involving gliders took place during cruise phase of flight whilst flying straight and level or thermalling. Two of the six were during competition flights.

Factors

The top-six GASRWG factors (causal and contributory combined) allocated for fatal accidents involving loss of control in visual flight conditions (the number one accident type) were:

- Lack of flight handling skills ..... 69 accidents (73%)
- Lack of training, currency or experience 42 (44%)
- Pilot induced stall 33 (35%)
- Turbulence[6] 22 (23%)
- Poor judgement or airmanship 10 (11%)
- Inadequate pre-flight preparation 10 (11%)

Note: More than one factor could be allocated to each accident.

[6] Paragliders were involved in the majority of fatal accidents allocated with the turbulence factor.

The top-five GASRWG factors allocated for fatal accidents involving aeroplanes were:

- Lack of flight handling skills ..... 38 accidents (37%)
- Pilot induced stall 28 (27%)
- Lack of training, currency or experience 27 (26%)
- Inadequate pre-flight preparation 23 (23%)
- Poor judgement or airmanship 21 (21%)

The top-five GASRWG factors allocated for fatal accidents involving helicopters were:

- Poor visibility or lack of external visual reference ..... 16 accidents (55%)
- Poor weather 13 (45%)
- Lack of flight handling skills 13 (45%)
- Lack of training, currency or experience 12 (41%)
- Disorientation 10 (34%)

The top-five GASRWG factors allocated for fatal accidents involving microlights were:

- Lack of flight handling skills ..... 9 accidents (39%)
- Lack of training, currency or experience 8 (35%)
- Aircraft becomes uncontrollable 8 (35%)
- Pilot induced stall 6 (26%)
- Design shortcomings 5 (22%)

The top-six GASRWG factors allocated for fatal accidents involving gyroplanes were:

- Lack of flight handling skills ..... 8 accidents (100%)
- Lack of training, currency or experience 7 (88%)
- Aircraft handling characteristics 4 (50%)
- Poor judgement or airmanship 2 (25%)
- Turbulence 2 (25%)
- Distraction 2 (25%)

The top-five GASRWG factors allocated for fatal accidents involving gliders were:

- Lack of flight handling skills ..... 12 accidents (32%)
- Pilot induced stall 12 (32%)
- Failure in lookout 10 (26%)
- Aircraft becomes uncontrollable 9 (24%)
- Any other factor[7] 7 (18%)

The top-three GASRWG factors allocated for fatal accidents involving self-propelled hang gliders, hang gliders and paragliders were:

- Lack of flight handling skills ..... 24 accidents (67%)
- Turbulence 16 (44%)
- Lack of training, currency or experience 15 (42%)

[7] A winch launch problem was the reason behind five of the seven glider fatal accidents allocated with this factor.

UK General Aviation Safety – Type of Regulation

The fatal accident dataset was analysed based on broad type of regulatory oversight. This was assumed to be:

- Full-regulation for conventional aeroplanes, helicopters and gyroplanes (including ex-military aircraft).
- Devolved regulation for airships and balloons (devolved to BBAC), microlights (devolved to BMAA) and PFA type aeroplanes (devolved to PFA).
- Self-regulation for gliders (self-regulated by BGA), and self-propelled hang gliders, hang gliders and paragliders (self-regulated by BHPA).

Table 4 shows a breakdown of the number of fatal accidents and fatal accident rate per 100,000 hours flown by broad type of regulatory oversight and aircraft class.

Table 4 Breakdown of the Number of Fatal Accidents and Fatal Accident Rate by Broad Type of Regulatory Oversight and Aircraft Class 1995 to 2004

		No. of Fatal Accidents	Fatal Accident Rate
Full-regulation	Aeroplane (including SLMG)	87	**1.2**
	Gyroplane	8	**45.8**
	Helicopter	29	**2.4**
Devolved to BBAC	Airship and Balloon	0	**0.0**
Devolved to BMAA	Microlight	23	**2.6**
Devolved to PFA	Aeroplane	15	**2.7**
Self-regulation	Glider	38	**2.5**
	Self-Propelled Hang Glider	1	**3.9**
	Hang Glider	11	**3.1**
	Paraglider	24	**2.6**
	Full-regulation	**124**	**1.4**
	Devolved regulation	**38**	**2.3**
	Self-regulation	**74**	**2.6**

The fatal accident rates for the three categories of regulation were compared using a chi-square statistical test with a 95% level of confidence. The results, which were verified by an independent professional statistician, showed that the fatal accident rate for the group of aircraft in the full-regulation category was statistically better than that for both devolved and self-regulation. However, it would not necessarily be correct to attribute this difference solely to the amount of regulation in place. For example, comparison of the fatal accident rate for helicopters (which fall in the full-regulation category) with gliders (which fall under self-regulation) revealed no evidence of statistical difference.

There was no difference, at a 95% level of statistical confidence, between the fatal accident rates for the group of aircraft in the devolved and self-regulation categories.

Intuitively, it was felt that there had to be some correlation between regulatory regime and fatal accident rates. The significant improvement in the fatal accident rate for microlights following the introduction of training requirements and BCAR Section S (Small Light Aeroplanes) was a good example. It was concluded that this area of work would benefit from further study.

Data from the CAA Aircraft Register was used to calculate fatal accident rates based on the organisation recommending issue/renewal of an aircraft's Certificate of Airworthiness (C of A) or Permit-to-Fly.

Table 5 shows a breakdown of the number of fatal accidents and fatal accident rate per 100,000 hours flown by recommending organisation and aircraft class. Data for gliders, self-propelled hang gliders, hang gliders and paragliders was added to show comparative information for aircraft that were not required to have a C of A or a Permit-to-Fly *(assumes that the EASA regulation for gliders had not come into effect)*.

Table 5 Breakdown of the Number of Fatal Accidents and Fatal Accident Rate by Recommending Organisation and Aircraft Class 1995 to 2004

		No. of Fatal Accidents	Fatal Accident Rate
CAA	Aeroplane	83	**1.2**
	Airship and Balloon	0	**0.0**
	Gyroplane	0	**0.0**
	Helicopter	29	**2.4**
	Microlight	0	**0.0**
	Overall	**112**	**1.3**
BBAC	Airship and Balloon	0	**0.0**
	Overall	**0**	**0.0**
BGA	Aeroplane (including SLMG)	4	**2.0**
	Overall	**4**	**2.0**
BMAA	Microlight	18	**2.3**
	Overall	**18**	**2.3**
PFA	Aeroplane	15	**2.6**
	Gyroplane	8	**48.6**
	Microlight	5	**4.1**
	Overall	**28**	**4.0**
No C of A or Permit-to-Fly required	Glider	38	**2.5**
	Self-Propelled Hang Glider	1	**3.9**
	Hang Glider	11	**3.1**
	Paraglider	24	**2.6**
	Overall	**74**	**2.6**

Note: The gyroplane rate (against PFA) is slightly higher in Table 5 than the value shown in Table 4. The reason for the difference is that in Table 5, the gyroplane hours were split between CAA and PFA depending on which organisation recommended issue/renewal of the Permit for the individual aircraft. In Table 4 all gyroplane hours were recorded against CAA.

Comparison of UK General Aviation Safety with Foreign States

A request for information on fatal GA accidents involving foreign registered aircraft, to compare with UK, was sent to Australia, France, Germany, Ireland, Italy, Netherlands, New Zealand, Spain, Sweden and USA.

At the time of writing this report, data had only been supplied by Australia, France, New Zealand, Spain and USA. Some of the other states responded and suggested use of European Civil Aviation Conference (ECAC) statistics on GA.

The most recent published ECAC GA statistics included annual data on aeroplane, helicopter and glider fatal accidents for aircraft with a maximum take-off mass of 2,250 kg and covered the three-year period from 2002 to 2004. Utilisation information was available from some states but was not sufficient to allow calculation of fatal accident rates in terms of flights or hours flown. However, more states provided numbers of aircraft on their register, which allowed calculation of a fatal accident rate based on registered aircraft. It should be noted that the number of registered aircraft could be quite different to the number in actual operation.

It should be noted that there were many differences between states in how general aviation was classified. For example, some states included motor-gliders with gliders, whilst others included them with aeroplanes. This meant that it was virtually impossible to make a like-with-like comparison between states. Also, it is important to remember that an achieved number of fatal accidents or fatal accident rate in a given state is not necessarily directly related to the regulatory regime in place.

There now follows a description of the GA fatal accident records for Australia, New Zealand and USA, and a summary of ECAC aeroplane and helicopter statistics for a selection of European states. Separate sections cover microlights and gliders.

Comparison with Australia

Table 6 shows fatal GA accident information submitted by the Australian Transport Safety Bureau (ATSB). Fatal accident rates were measured per 100,000 hours flown.

Table 6 Australian Fatal GA Accident Information 1995 to 2004

	No. of Fatal Accidents	No. of Fatalities	Reported Hours	Average No. Aircraft	Fatal Accident Rate
Aeroplane	105	192	10,661,629	8,918	**1.0**
Helicopter	42	65	2,073,068	907	**2.0**
Microlight	39	48	761,900	1,981	**5.1**
Gyroplane	14	16	281,479	393	**5.0**
Glider	*9*	*10*	*343,300*	1,063	***3.1***
Hang Glider and Paraglider	7	7	1,089,600	3,286	**0.6**
Airship and Balloon	0	0	105,317	307	**0.0**

Notes:

1. *Data included air ambulance, police and search and rescue operations, which were excluded from the UK dataset.*

2. *Average number of microlights on the register was based on data from 2004 only.*

3. *Average number of gyroplanes on the register was based on data from 1995 to 2000.*

4. *Glider accidents and fatalities were for 1995 to 2000 only and reported hours flown was for 1994 to 2000 only. The fatal accident rate for the 10-year period 1995 to 2004 was estimated by extrapolating the values given for the shorter time periods.*

5. *The number of hang glider and paraglider accidents could be an underestimate.*

The fatal accident rates for Australian GA were broadly similar to those for UK. However, the rate for gyroplanes was significantly lower.

Comparison with New Zealand

Table 7 shows fatal GA accident information submitted by the New Zealand CAA. Fatal accident rates were measured per 100,000 hours flown unless otherwise stated (for example, rate per registered aircraft).

Table 7 New Zealand Fatal GA Accident Information 1995 to 2004

	No. of Fatal Accidents	No. of Fatalities	Reported Hours	Average No. Aircraft	Fatal Accident Rate
Aeroplane	23	61	501,212	1,803	**4.6**
Helicopter	7	12	71,350	462	**9.8**
Microlight	12	13	N/A	662	**0.018 per a/c**
Gyroplane	0	0	N/A	2	**0.0**
Glider	5	4	N/A	286	**0.018 per a/c**
Hang Glider and Parachute	6	7	N/A	N/A	**N/A**
Airship and Balloon	0	0	740	51	**0.0**

Note: Data only included accidents, and associated utilisation, that occurred during private or solo training flights.

The fatal accident rates for New Zealand GA aeroplanes and helicopters were notably higher than those for UK. However, it should be noted that the New Zealand data only included private and solo training flights and the operational environment is quite different, particularly in the South Island.

Comparison with USA

Table 8 shows fatal GA accident information submitted by the USA National Transportation Safety Board (NTSB). Fatal accident rates were measured per 100,000 hours flown.

Table 8 US Fatal GA Accident Information 1995 to 2004

	No. of Fatal Accidents	No. of Fatalities	Reported Hours	Average No. Aircraft	Fatal Accident Rate
Aeroplane	3,122	5,653	N/A	N/A	**N/A**
Helicopter	270	442	N/A	N/A	**N/A**
Microlight	4	5	N/A	N/A	**N/A**
Gyroplane	28	32	N/A	N/A	**N/A**
Glider	51	60	N/A	N/A	**N/A**
Hang Glider and Paraglider	N/A	N/A	N/A	N/A	**N/A**
Airship and Balloon	14	17	N/A	N/A	**N/A**
Unknown	8	12	N/A	N/A	**N/A**
Overall	**3,492**	**6,210**	**260,561,000**	**N/A**	**1.3**

Notes:

1. *Data included 'public aircraft' flights (governmental related operations including law enforcement, fire-fighting and aeronautical research), some of which were excluded from the UK dataset, and also accidents involving third-party only fatal injuries, which were excluded from the UK dataset.*

2. *No aircraft weight cut-off was used.*

3. *Utilisation was supplied and estimated by FAA based on a survey of GA operators. The response to this survey represented only 5.5% of the US GA population.*

4. *The numbers of fatal accidents and fatalities for aeroplanes and gliders included five mid-air collisions resulting in 11 fatalities. The overall values only counted these collisions once.*

It was not possible to produce a UK fatal accident rate that matched the NTSB criteria exactly. However, the best estimate for UK was 1.6 fatal accidents per 100,000 hours flown.

Comparison with Selection of ECAC Member States

Tables 9a and 9b show a breakdown of fatal GA aeroplane and helicopter accidents, respectively, that occurred between 2000 and 2004 for a selection of ECAC member states. The data was sourced from ECAC and included aeroplanes and helicopters with a maximum take-of mass of 2,250 kg.

Table 9a ECAC Member State Fatal Aeroplane Accident Information 2000 to 2004

	No. of Fatal Accidents	No. On-Board Fatalities	Average No. of Aircraft	Fatal Accident Rate (per 100 aircraft)
Italy	31	56	1,214	**2.6**
Switzerland	27	51	1,548	**1.7**
France	109	204	7,430	**1.5**
Finland	7	11	470	**1.5**
Germany	75	143	7,010	**1.1**
Spain	16	32	1,446	**1.1**
Netherlands	9	14	1,004	**0.9**
Denmark	4	4	783	**0.5**
UK	**31**	**53**	**8,034**	**0.4**
Sweden	5	11	1,139	**0.4**
Ireland	1	1	342	**0.3**

Table 9b ECAC Member State Fatal Helicopter Accident Information 2000 to 2004

	No. of Fatal Accidents	No. On-Board Fatalities	Average No. of Aircraft	Fatal Accident Rate (per 100 aircraft)
Denmark	3	6	34	**8.9**
France	25	49	592	**4.2**
Switzerland	10	18	268	**3.7**
Italy	11	21	359	**3.1**
Ireland	1	1	48	**2.1**
Spain	4	9	194	**2.1**
UK	**13**	**26**	**842**	**1.5**
Sweden	1	3	155	**0.6**
Germany	4	7	735	**0.5**
Finland	0	0	65	**0.0**
Netherlands	0	0	46	**0.0**

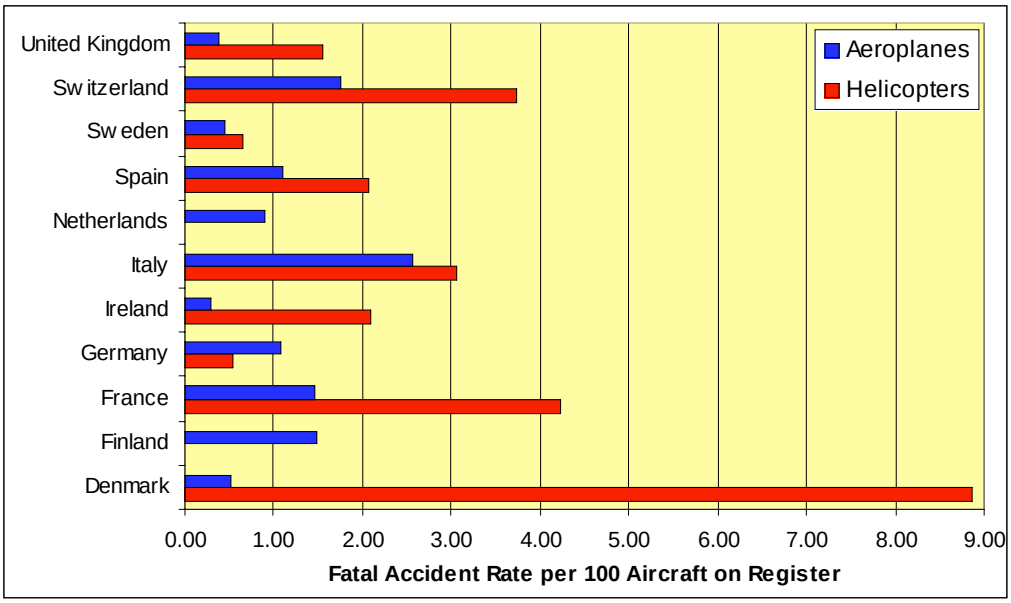
Notes:

1. *Italian data was missing the number of fatal accidents and fatalities in 2001.*

2. *Ireland included motor-gliders with aeroplanes and UK included SLMGs with aeroplanes.*

Figure 8 shows a graphical representation for aeroplanes and helicopters.

Figure 8 ECAC Member State Aeroplane and Helicopter Fatal Accident Rates per 100 Aircraft on the Register 2000 to 2004



Note: Netherlands reported no fatal accidents involving helicopters.

UK had the second lowest rate for aeroplanes and the fifth lowest rate for helicopters.

Comparison for Microlights

Information from CIMA, International Microlight Commission of the Fédération Aéronautique Internationale (FAI), allowed a comparison to be made between UK and a selection of foreign states for microlight accidents that occurred in 2004. As with the ECAC information, there were inconsistencies in reporting between different states so the data should be treated with caution. Also, the data was from just one year, which might not be representative of the underlying level of safety.

Table 10 shows a breakdown of fatal microlight accidents that occurred in 2004 for FAI member states that reported their data and for which there were more than 100 legally airworthy microlights (three-axis and flex-wing) on their register.

Table10 Fatal Microlight Accident Information for FAI Members 2004

	No. of Fatal Accidents			No. of Aircraft on Register			Fatal Accident Rate (per 100 aircraft)		
	3-Axis	Flex-wing	Total	3-Axis	Flex-wing	Total	3-Axis	Flex-wing	Total
Belgium	1	0	**1**	450	350	**800**	0.2	0.0	**0.1**
Brazil	12	2	**14**	4,000	500	**4,500**	0.3	0.4	**0.3**
Czech Republic	4	0	**4**	1,763	630	**2,393**	0.2	0.0	**0.2**
France	7	2	**9**	5,952	3,391	**9,343**	0.1	0.1	**0.1**
Germany	4	3	**7**	2,880	828	**3,708**	0.1	0.4	**0.2**
Hungary	0	3	**3**	32	393	**425**	0.0	0.8	**0.7**
Italy	0	0	**0**	4,500	2,500	**7,000**	0.0	0.0	**0.0**
Norway	0	0	**0**	135	34	**169**	0.0	0.0	**0.0**
Portugal	2	0	**2**	435	10	**445**	0.5	0.0	**0.4**
South Africa	1	4	**5**	N/A	N/A	**2,284**	N/A	N/A	**0.2**
Spain	7	0	**7**	N/A	N/A	**1,968**	N/A	N/A	**0.4**
Sweden	0	0	**0**	132	137	**269**	0.0	0.0	**0.0**
UK	2	2	**4**	1,391	1,839	**3,230**	0.1	0.1	**0.1**

Notes:

1. *Data was from one year only (2004).*
2. *Italy, Norway and Sweden reported no fatal accidents involving three-axis or flex-wing microlights in 2004.*

A presentation by the Fédération Française de Planeur Ultra-Léger Motorisé (FFPLUM) gave a fatality rate for French microlights involving FFPLUM members of 1.075 x 10^{-4} per flight hour (or 10.75 fatalities per 100,000 hours flown). The time period measured was not specified. It should also be noted that FFPLUM data appeared to include gyroplanes, para-motors and ultra-light airships as well as three-axis and flex-wing microlights. The equivalent fatality rate for UK was 4.052 x 10^{-5} per flight hour (or 4.05 fatalities per 100,000 hours flown), and included microlights, gyroplanes and self-propelled hang gliders (BHPA members only) for the 10-year period 1995 to 2004.

Comparison for Gliders

Information on fatal gliding accidents from the European Gliding Union (EGU) allowed a comparison to be made between UK and a selection of foreign states.

Table 11 shows a breakdown of fatal glider accidents that occurred between 1995 and 2004 for a selection of EGU members, together with a comparison with USA.

Table 11 Fatal Glider Accident Information for EGU Members 1995 to 2004

	No. of Fatal Accidents	No. of Launches	Rate per 100,000 Launches
Switzerland	44	913,612	**4.82**
France	56	2,111,814	**2.65**
Belgium	5	212,455	**2.35**
Denmark	9	657,511	**1.37**
USA	59	4,400,000	**1.34**
Germany	127	10,078,542	**1.26**
UK	**38**	**3,785,329**	**1.00**
Norway	1	126,584	**0.79**
Sweden	4	632,974	**0.63**
Slovakia	1	170,978	**0.58**
Czech Republic	4	840,443	**0.48**
Netherlands	6	1,437,000	**0.42**

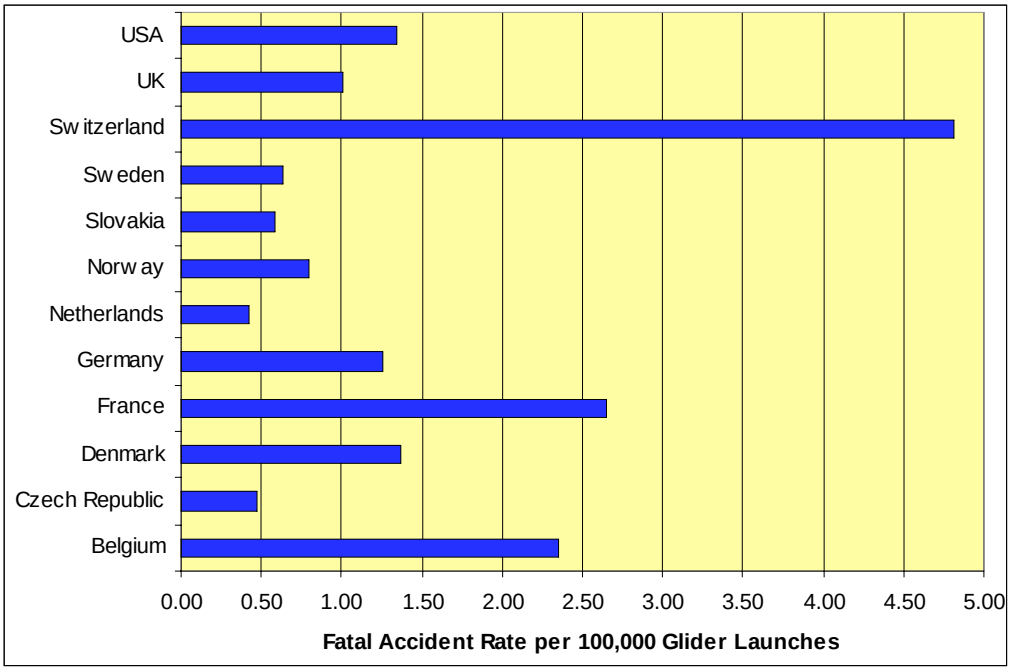
Notes:

1. The number of launches for Germany, Norway and USA were estimated.

2. The statistics for Belgium do not cover the whole country.

Figure 9 shows a graphical representation.

Figure 9 Breakdown of the Fatal Glider Accident Rate per 100,000 Launches for a Selection of EGU Member States 1995 to 2004



The majority of glider flights in Switzerland, and to a lesser extent France, take place in the vicinity of mountainous terrain. This could explain the relatively high fatal accident rates for these states.

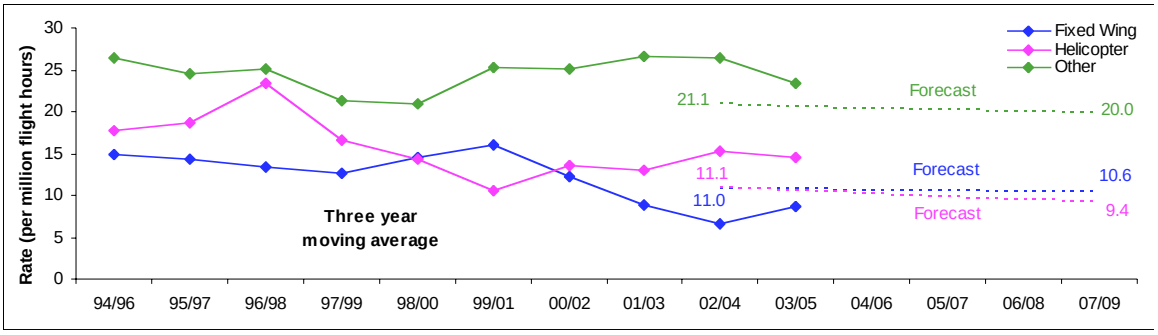
Safety Forecasts for UK General Aviation

Current Situation

The current safety forecasts for UK registered GA, as found in the CAA Corporate Plan 2006/07, are shown in Figure 10 for aeroplanes, helicopters and 'other' aircraft (all below 5,700 kg MTWA), where 'other' includes: microlights, gyroplanes, gliders, airships and balloons. The measure of safety is fatal accidents per million flight hours based on a three-year moving average.

Figure 10 Presentation of Safety Forecasts for UK Registered GA Aircraft in 2006/07 CAA Corporate Plan

UK GENERAL AVIATION BELOW 5,700 KG MTWA FATAL ACCIDENT RATE



The methodology for deriving the current forecasts is described in Annex D.

Discussion on Future Safety Forecasts/Targets for UK General Aviation

The current methodology for producing GA safety forecasts was considered to be appropriate. Lack of time precluded further investigation into other, possibly better, methods of deriving forecasts and subsequent targets, and it has been recommended that this be accomplished outside of the GA Regulatory Review.

Any future discussion on the most appropriate form of GA safety forecast/target would need to address, inter alia, the following questions:

- Should there be an overall GA forecast/target or should GA be divided into separate classes of aircraft or types of activity?
- What measure should be used (fatal accident rate, fatality rate, etc)?
- If a European GA forecast/target was to be introduced that was less strict than that currently observed in the UK, should an increase in the fatal accident rate be tolerated even if it was still below the acceptable European value?

The New Zealand CAA has recently developed safety outcome targets to be achieved by the year 2010. These targets apply to public air transport, other commercial operations and non-commercial operations (with further sub-divisions within each of the three main categories) and are based on the social cost to the nation, rather than accident rates. A report on the subject quoted that 3.5 percent of New Zealand's aviation activity, measured in seat hours and involving aircraft below 5,670 kg, was responsible for 97 percent of the social cost. It was felt that this innovative use of safety information warranted further investigation. More information can be found at http://www.caa.govt.nz/fulltext/caa_news/caa_news_05_5_sept_oct.pdf.

Conclusions

There were 235 fatal accidents involving UK state registered and non-state registered GA aircraft resulting in 340 fatalities in the 10 years from 1995 to 2004.

The estimated fatal accident rate per 100,000 hours flown ranged from 1.3 for aeroplanes to 45.8 for gyroplanes. The rates for all other classes of aircraft were below 4 fatal accidents per 100,000 hours flown.

The number and rate of aeroplane accidents showed a decreasing trend during the second half of the study period.

Loss of control in visual flight conditions was the most common accident category for all classes of aircraft, apart from helicopters, and was allocated in 40% of fatal accidents. Many of these fatal accidents involved stall/spin scenarios. The most common accident category for helicopters was loss of control in poor visibility and/or night conditions, which tended to involve pilot disorientation.

Lack of flight handling skills and lack of training, currency and/or experience were the most frequently allocated factors; both overall and for fatal accidents involving loss of control in VMC.

The estimated fatal accident rate per 100,000 hours for the group of aircraft in the full-regulation category was statistically better than that for aircraft in the devolved and self-regulation groups. However, it would not necessarily be correct to attribute this difference solely to the amount of regulation in place. Further study would be required to establish any such relationship.

Meaningful comparison of UK with other foreign states was not possible due to differences in the definition of GA and a lack of available information, particularly utilisation. However, the estimated fatal accident rates for the various classes of UK GA were found to be similar to that for Australia and USA, and favourable in comparison to most European States.

There was no statistical evidence, based on fatal accident rates, to suggest that a fundamental change in the UK GA regulatory model was required. However, statistics should continue to be collected in order to monitor the effect of EASA-related issues and other regulatory changes on UK GA safety. For example, the possible devolvement of approvals for non-EASA aircraft types, which has been investigated in Workstream 8.1, could result in faster approval of new equipment and contribute to a reduction in the accident rate.

The current methodology for producing GA safety forecasts was considered to be appropriate. However, further work was recommended to determine whether a different approach was required, both in terms of the type of forecast chosen and the need to establish safety targets with possible further subdivision by class of aircraft.

Annex L1

ANALYSIS CRITERIA AND CAVEATS, DATA SOURCES AND METHODOLOGY FOR ESTIMATING AIRCRAFT UTILISATION

1. Analysis Criteria and Caveats

1.1 For the purposes of this analysis study, GA was taken to be non-public transport operations involving UK state registered and non-state registered aircraft with a maximum authorised take-off weight below 5,700 kg. Non-public transport covered all operations other than the transport of passengers and/or cargo, or other revenue services including police, ambulance and Search and Rescue (SAR) flights. Military and State flights were also excluded.

1.2 Aircraft included in the review were: airships, balloons, conventional aeroplanes, gliders, gyroplanes, hang gliders, helicopters, microlight aeroplanes (referred to as microlights for the purposes of this report), paragliders and self-propelled hang gliders (including powered paragliders).. Gyrogliders were excluded, although it was acknowledged that a fatal accident had occurred at Kemble on 17 May 1997 (resulting in two fatalities).

1.3 Fatal accidents to UK registered aircraft worldwide were reviewed. In cases where the aircraft was not formally registered (for example, gliders and hang gliders), the criterion for inclusion was that a UK pilot was involved.

1.4 The ICAO Annex 13 definition of a fatal accident was used, which meant that an injury sustained by a person in an accident resulted in their death within 30 days of the date of the accident. Also, accidents that resulted from deliberate acts (including suicide and terrorism) were excluded.

1.5 For the purposes of this analysis study, only those accidents that involved at least one fatality to an aircraft occupant were included. This criterion resulted in the exclusion of just one fatal accident involving external third-party only fatalities (glider that struck a walker on the airfield during landing at Long Mynd in 1998). None of the other accidents in the study period resulted in fatalities to people on the ground.

1.6 A mid-air collision involving fatalities on each aircraft was counted as one accident. However, if the collision involved different classes of aircraft (for example, an aeroplane and a glider), then the collision would be counted against each type for those statistics where the class of aircraft was broken-out.

1.7 The chosen safety metric was fatal accidents per 100,000 hours flown and the study period was the 10 years from 1995 to 2004.

1.8 Accurate information on GA aircraft utilisation was not available and the values used in this review were based on crude estimations (see 3 for more details). As such, any statistics involving aircraft utilisation should be treated with an element of caution.

2. Data Sources

2.1 The data for this review was derived from various sources that are hereby acknowledged.

2.2 UK Data:

- Air Accidents Investigation Branch (AAIB);
- British Gliding Association (BGA);
- British Hang Gliding and Paragliding Association (BHPA);
- British Microlight Aircraft Association (BMAA);
- CAA Air Transport Statistics Department;
- CAA Aircraft Registration Department;
- CAA General Aviation Safety Review Working Group (GASRWG);
- CAA Mandatory Occurrence Reporting Scheme (MORS) database; and
- John Thorpe, Chief Executive of the General Aviation Safety Council (GASCo).

2.3 Foreign Data:

- Australian Transport Safety Bureau (ATSB);
- CIMA, International Microlight Commission of the Fédération Aéronautique Internationale (FAI);
- European Civil Aviation Conference (ECAC);
- European Gliding Union (EGU);
- Fédération Française de Planeur Ultra-Léger Motorisé (FFPLUM);
- French Bureau d'Enquêtes et d'Analyses (BEA);
- New Zealand Civil Aviation Authority;
- Spanish Comisión de Investigación de Accidentes e Incidentes de Aviación Civil (CIAIAC); and
- US National Transportation Safety Board (NTSB).

3. Methodology for Estimating Aircraft Utilisation

3.1 Accurate information on GA aircraft utilisation was not readily available. For the purposes of this analysis study, aircraft utilisation was estimated using the following methods.

Aeroplanes, Helicopter, Microlights and Gyroplanes

3.2 The CAA Aircraft Register database provided reported hours flown for all UK registered aircraft with a maximum authorised take-off weight below 5,700 kg as at 31 December of each year from 1995 to 2004. Hours are reported for individual aircraft at the time of renewal of their Certificate of Airworthiness or Permit-to-Fly, and, as such, it was possible that some aircraft did not have any hours recorded for the last three years. This shortfall was estimated by calculating a recent average number of hours flown per aircraft and multiplying this by the number of aircraft registered and an average percentage of returns (this took into account those aircraft on the register that were not flown).

3.3 Data from CAA Air Transport Statistics Department was used to identify public transport operations involving aircraft with a maximum authorised take-off weight below 5,700 kg.[1] This was then subtracted from the utilisation described in 3.2 to give an estimate of GA-only utilisation. It should be noted that this estimation is crude and caution needs to be exercised in the data generated. However, there is currently no better way of estimating GA-only utilisation.

[1] Public transport covers passenger, cargo, air ambulance, police support and search and rescue operations.

Gliders

3.4 The British Gliding Association (BGA) provided glider utilisation in terms of number of launches and hours flown, as supplied by BGA member clubs. It should be noted that BGA annual data is based on a year that runs from 1 October to 30 September. As a result, the glider data used in the study ran from 1 October 1994 to 30 September 2004. However, for the purposes of this study it was assumed that the data was based on the calendar year. The number of launches is considered to be accurate to within +/- 2% but the number of hours may be subject to +/- 5% variation.

Self-Propelled Hang Gliders, Hang Gliders and Paragliders

3.5 The British Hang Gliding and Paragliding Association (BHPA) provided data on the number of member pilots per annum for 1995 to 2004 and an estimated average number of hours flown per pilot per year. This average was 15 hours for self-propelled hang gliders (which include powered paragliders) pilots and 20 for hang glider and paraglider pilots. The average hours flown per pilot per year was multiplied by the number of member pilots to give an estimated overall number of hours flown. It should be noted that the self-propelled hang glider accident and utilisation data was for BHPA members only. Data was not available for self-propelled hang gliders involving BMAA members or members of neither organisation.

3.6 Table 1 shows the estimated number of hours flown for the 10-year period 1995 to 2004 broken down by aircraft class.

Table 1 Breakdown of the Estimated Number of Hours Flown for the 10-Year Period 1995 to 2004 by Aircraft Class (UK State Registered and Non-State Registered GA Aircraft Below 5,700 kg MTWA)

	Estimated No. of Hours Flown
Aeroplane	7,958,763
Helicopter	1,185,103
Microlight	894,867
Gyroplane	17,476
Glider	1,525,154
Self-Propelled Hang Glider	25,455
Hang Glider	351,740
Paraglider	834,100

Annex L2

LIST OF FATAL ACCIDENTS TO UK-REGISTERED AIRCRAFT BELOW 5,700 KG MTWA

1. List of Fatal Accidents to UK Registered General Aviation Aircraft Below 5,700 kg MTWA Between 1995 and 2004

Fatal accidents are listed by aircraft class and in ascending date order.

1.1 Conventional Aeroplanes

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
04/03/95	Harvard	Private	Nr Maldon, Essex	A/c crashed in field. 1 fatal, 1 serious injury. A/c destroyed.	1
13/03/95	Harvard	Private	Nr Andover, Hants.	Touched down short & inverted. 2 POB, 1 fatality.	1
21/03/95	Cessna 150	Training	Sherburn in Elmet, W Yorks.	A/c crashed into disused building & caught fire. 1 fatality. A/c destroyed.	1
29/04/95	Piper PA-28 Cherokee	Private	North Sea	Ditched in North Sea 25nm E of Clacton following engine failure. Mayday call, 1 POB fatal.	1
05/05/95	Denny Kitfox	Private	Nr Dolphinton, Scotland	A/c nose-dived into ground. 1 fatality. A/c destroyed.	1
16/06/95	Morane Saulnier Rallye	Private	Dunkeswell, Devon	A/c crashed on initial climb. 2 Fatalities, 1 serious injury.	2
09/07/95	Pulsar	Private	Nr Corby, Northants.	A/c crashed. 2 fatalities. Substantial damage.	2
20/07/95	Replica Fokker DR1	Display	Stourhead, Wilts.	A/c entered steep dive, struck trees & spun into ground. A/c destroyed by fire. 1 fatality.	1
11/08/95	Beech Baron	Private	Thruxton, Hants.	A/c crashed into cornfield. A/c destroyed. 4 fatalities.	4
13/10/95	Cessna 336	Private	Nr Douglas, Isle of Man	Crashed on high ground in bad weather (500ft cloud base). Pilot killed, a/c destroyed.	1
21/10/95	Cessna 207	Parachuting	Brunton, Northumb.	During RH circuit at 300ft, jumpmaster fell from a/c & was fatally injured. Insufficient height for parachute to deploy.	1
23/11/95	Cessna 150	Private	English Channel	A/c disappeared from radar & radio contact lost. Wreckage & body found in sea. 1 POB fatal.	1
02/03/96	Jodel D9	Private	Shoreham, Sussex	Engine failed during go-around due suspected carburettor icing. A/c entered stall/spin & crashed in field. 1 fatality.	1
11/03/96	Piper PA-23 Aztec	Private	Nr Granada, Spain	Wreckage found in mountainous area 25 days after a/c went missing. Both occupants killed.	2
04/05/96	Slingsby T67 Firefly	Display	Old Warden, Beds.	A/c struck trees during recovery from an intentional spin during display. A/c destroyed. Sole	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
				occupant killed.	
05/05/96	Grumman AA-5	Private	Nr Westcott, Bucks.	Mid-air collision between AA5 & Glider. AA5 destroyed, 1 POB-fatal. Glider landed safely with damaged wing-no injuries to 2 POB.	1
31/05/96	Cessna 152	Private	Lydd, Kent	A/c crashed on approach to R/W22 following low orbit. Both occupants killed. A/c destroyed.	2
06/06/96	Cessna 152	Private	Nr Evesham, Hereford & Worcester	A/c crashed into field. Sole occupant killed.	1
15/06/96	Robin R1180	Private	Nr Buxton, Derbys.	A/c crashed on waste ground adjacent to industrial estate. A/c destroyed. All 4 occupants killed.	4
22/07/96	Robin DR400	Private	Nr Bristol	Pilot reported control difficulties - unable to turn left. A/c apparently entered spin from 2000ft & failed to recover. 1 fatality.	1
29/07/96	Tri Kis	Private	Nr Calais, France	A/c crashed into sea 1nm off Calais while returning from RSA rally. 2 fatalities.	2
31/07/96	Piper PA-28 Cherokee	Private	Canterbury, Kent	On take off, a/c hit tree, crashed into scrub & caught fire. 2 POB, 1 fatal, 1 minor injury.	1
26/08/96	Morane Saulnier Rallye	Private	Manchester Barton	A/c stalled shortly after take off & entered spin with insufficient height for recovery. Both occupants killed.	2
01/09/96	Replica War Seafury	Private	Crosland, W Yorks.	A/c crashed shortly after take off. Sole occupant killed.	1
25/09/96	Piper PA-28 Cherokee	Training	Irish Sea	A/c failed to recover from practice spin, crashed into sea & sank. Both occupants drowned.	2
16/10/96	Piper PA-28 Cherokee	Private	Nr Perth, Scotland	A/c failed to arrive at destination within expected time frame. Search instigated & wreckage found on steep hillside. 2 fatalities.	2
26/10/96	Robin DR400	Training	Nr Dover, Kent	Mid-air collision. Subject a/c crashed killing both on board. 2nd a/c (Robin 1180) made forced landing with damaged tail/elevators.	2
21/11/96	Cessna 172	Private	Compton Abbas, Dorset	A/c stalled & crashed during go around. Sole occupant killed.	1
09/03/97	Piper PA-28 Cherokee	Private	Nr Biggin Hill, Kent	A/c struck trees on approach in fog. Both occupants killed.	2
06/05/97	Cessna 150	Photography	Nr Cumbernauld, Scotland	A/c observed to be manoeuvring abnormally, then dived onto road from low level & caught fire. Sole occupant killed.	1
25/07/97	Pitts Special	Private	Meppershall, Beds.	A/c spun in after take off. 1 fatality.	1
03/08/97	Cessna 421	Private	Nr Shobdon, Hereford & Worcester	A/c crashed on approach & caught fire. A/c destroyed. 4 POB - 3 fatalities, 1 serious injury.	3

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
26/09/97	Fournier RF5	Private	North Weald, Essex	Shortly after take off, right wing extension folded at joint. A/c rolled inverted, crashed & caught fire. Sole occupant killed.	1
29/10/97	Robin HR200	Training	Cromarty Firth, Scotland	During nighttime navex, pilot reported rough running engine. A/c subsequently ditched in sea. Instructor rescued, student drowned.	1
27/11/97	Grumman AA-5	Private	Shobdon, Hereford & Worcester	A/c clipped tree & crashed inverted. Sole occupant killed.	1
21/12/97	Cessna 152	Private	Nr Creetown, Wales	Pilot reported suspected suction pump failure & requested radar service. Contact subsequently lost & a/c crashed, killing pilot.	1
19/04/98	DH82A Tiger Moth	Private	English Channel	A/c missing with 1 POB, believed to have ditched in mid English Channel.	1
17/05/98	Taylor Monoplane	Private	Andrewsfield, Essex	A/c crashed shortly after take off. Sole occupant killed.	1
23/05/98	Cessna 152	Private	Snowdonia, Wales	A/c crashed on mountainside. 2 fatalities.	2
29/05/98	Rockwell Commander 114	Private	Nr Dijon, France	A/c overran R/W, crossed a road, struck a wall & overturned during landing. 4 POB, 2 fatalities & 2 serious injuries.	2
26/07/98	Jodel D112	Private	Bentworth, Hants.	A/c ran out of fuel. Engine stopped, a/c stalled, spun into field & was destroyed. 2 POB killed.	2
09/08/98	Druine Turbulent	Display	Swanton Morley, Norfolk	A/c crashed during display at air show. A/c destroyed. 1 fatality.	1
15/08/98	Fairchild M62	Private	Woburn Abbey, Beds.	Engine failure shortly after take off. A/c crashed approx 1 mile from airstrip. 1 fatal & 1 serious injury.	1
28/08/98	Cessna 150	Private	Nr Ardglass, N Ireland	Loss of control in flight. A/c stalled, dived into the ground & was destroyed. Sole occupant killed.	1
20/10/98	Slingsby T67 Firefly	Training	Mow Cop, Staffs.	A/c crashed on rising ground & caught fire. A/c destroyed. 2 fatalities.	2
24/12/98	Jet Provost	Private	North Sea	A/c seen to enter flat spin from steep climb & crash into sea. Pilot ejected. Pilot subsequently died from drowning.	1
21/01/99	Cessna 152	Photography	Mattersey, Notts.	Mid-air collision with RAF Tornado. Both a/c destroyed. 4 fatalities.	4
04/02/99	Cessna 150	Training	Turweston, Bucks.	During simulated engine failure after take off, a/c entered spin due low airspeed & crashed nose down. 1 fatal & 1 serious injury.	1
12/02/99	Cessna 172	Private	Berwyn Mount, Wales	A/c crashed in mountainous area. 3 fatalities.	3

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
29/04/99	Mooney M20	Private	Selby, W Yorks.	Engine lost power. A/c stalled, spun in & was destroyed by severe post impact fire. 4 POB fatal.	4
09/05/99	Jodel DR1050	Private	Black Isle, Scotland	A/c crashed on rising ground in poor weather. A/c destroyed. 2 POB fatal.	2
06/06/99	Cuby	Private	Giants Causeway, N Ireland	A/c crashed 70 metres from edge of cliffs after wings reportedly folded as a result of turbulence. A/c destroyed. Two fatalities.	2
03/07/99	Cassutt Racer	Competition	Bembridge, Isle of Wight	Engine stopped during low-level roll. Pilot probably incapacitated. A/c entered spiral dive & was destroyed. Pilot killed.	1
15/07/99	Piper PA-31 Navajo	Positioning	Nr Rome, Italy	Aircraft disappeared from radar. Wreckage located in mountainous terrain. 2 fatalities.	2
26/07/99	Beech Baron	Ferry	Nr Kulusuk, Greenland	Crashed on ferry flight to USA. Local weather reported as: visibility less than 500 metres in fog, cloud base 100ft. 2 POB fatal.	2
01/08/99	Jet Provost	Private	Woolaston, Glos.	A/c collided with terrain during steep, low level turn. 2 fatalities.	2
02/08/99	Piper PA-23 Apache	Private	Nr Beddgelert, Wales	A/c crashed on mountainside. 1 POB fatal.	1
18/09/99	Grumman AA-5	Private	Luton, Beds.	A/c swung left during landing & collided with an unattended SD330. 3 POB the AA5 - fatal.	3
25/09/99	ME109	Private	Sabadell, Spain	A/c crashed on landing & caught fire. Pilot was badly burned & died from his injuries on the following day. A/c destroyed.	1
18/12/99	Piper PA-28 Cherokee	Training	Bournemouth, Dorset	After take off, a/c turned left & climbed slowly to about 350ft. It then entered a tight left turn, stalled & spun in. 3 POB fatal.	3
04/03/00	DHC-1 Chipmunk	Towing	Cosford, Midlands	Pilot became incapacitated during take off run. Aircraft struck telegraph pole during initial climb and crashed inverted. Substantial damage. 1 POB fatal.	1
24/03/00	Europa	Test	Upwood, Cambs.	Loss of control following unintentional take off. 1 POB fatal.	1
08/04/00	Spitfire	Training	Goodwood, Sussex	During low-level turn onto final approach left wing struck embankment and separated. Aircraft crashed short of runway and was destroyed. 2 POB fatal.	2
19/04/00	Cessna 150	Private	North Weald, Essex	Mid-air collision between Cessna 150 and Yak 50. 3 fatalities.	3
27/05/00	Mooney M20	Private	Moniseny Mtns, Spain	Aircraft crashed in mountainous region and was destroyed. 1 POB fatal.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
01/06/00	Piper PA-34 Seneca	Private	Newmarket, Cambs.	Aircraft crashed on take off and was destroyed by fire. 3 POB - pilot killed, 2 pax suffered serious injuries.	1
16/07/00	Tipsy Nipper	Private	Cumberworth, Lincs.	Engine failure. Aircraft crashed during forced landing and was destroyed. 1 POB fatal.	1
18/08/00	Aero Vodochody L-29	Display	Eastbourne, Sussex	The aircraft was taking part in an air display when it spun into the sea following a vertical climb and roll. Aircraft destroyed. 1 POB fatal.	1
11/09/00	Jodel D112	Private	Swansea, Wales	Aircraft crashed in a mountainous area. 1 POB fatal.	1
03/12/00	Piper PA-28 Cherokee	Private	Lambourn Downs, Berks.	In-flight structural failure of left wing. Aircraft crashed and was destroyed. 4 POB fatal.	4
09/12/00	Jet Provost	Test	Welton le Wold, Lincs.	Aircraft entered uncontrollable spin. Pilot and passenger ejected. 1 fatal and 1 serious injury.	1
13/12/00	Cessna 152	Private	Torridon, Scotland	Aircraft crashed in mountainous area. 2 POB fatal.	2
24/02/01	Rockwell Commander 114	Private	Sharpthorne, Sussex	Aircraft entered steep descent during sharp right turn. Right wing detached and aircraft struck ground at high speed. 4 POB fatal.	4
27/03/01	Piper PA-28 Cherokee	Private	Verdun, France	Aircraft crashed shortly after take off. 1 POB fatal.	1
27/04/01	Socata TB10	Private	Sherburn in Elmet, W Yorks.	Aircraft took off with baggage door open. Crashed while returning to airfield and was destroyed. 1 POB fatal.	1
12/05/01	Piper PA-24 Comanche	Private	Osea Island, Essex	Aircraft spun into ground approx 12 minutes after take off. 2 POB fatal. Both occupants showed signs of carbon monoxide poisoning.	2
12/05/01	Hawker Sea Fury	Private	Sywell, Northants.	Aircraft overturned on landing. 1 POB fatal.	1
12/05/01	Cessna 182	Private	Leicester, Leics.	Aircraft crashed shortly after take off killing both occupants.	2
03/06/01	Jodel DR250	Private	Monte Tobbio, Italy	A/c crashed in mountainous area. 2 fatalities.	2
03/06/01	Bell King Cobra	Display	Biggin Hill, Kent	A Bell P63A Kingcobra aircraft crashed during an air display. 1 POB fatal.	1
04/06/01	Spitfire	Display	Rouen, France	Engine failure during air display. Aircraft crashed during approach and caught fire. 1 fatality.	1
23/06/01	Cessna 182	Private	St Mawgan, Cornwall	Aircraft departed runway on landing, struck light, crashed and caught fire. 4 POB - 1 fatality and 1 serious injury.	1
15/08/01	Piper PA-28 Cherokee	Private	Halesworth, Suffolk	Engine failure. PAN call. Aircraft crashed during forced landing. 1 POB fatal.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
14/09/01	Piper PA-25 Pawnee (see also glider)	Towing[1]	Aston Down, Glos.	Mid-air collision between PA25 and Cirrus glider. Both aircraft destroyed. 2 fatalities.	2
28/12/01	Robin R2160	Private	Goodwood, Sussex	Aircraft failed to pull out of a low level barrel roll. 1 POB fatal.	1
07/02/02	Cessna 150	Private	Hannington, Hants.	Aircraft struck power cables in poor weather and was destroyed. 1 POB fatal.	1
01/04/02	Piper PA-38 Tomahawk	Private	Cwmbran, Wales	The aircraft struck an electricity pylon on high ground in poor visibility. 2 fatalities.	2
02/06/02	Aero Vodochody L-39	Training	Duxford, Cambs.	Aircraft overran on landing, passing through a fence and coming to rest on M11 motorway. 2 POB, 1 of whom ejected and was fatally injured.	1
03/07/02	Piper PA-32 Cherokee	Private	Sintra Mountains, Portugal	Aircraft crashed into mountain range during in-flight return in poor weather conditions. Aircraft destroyed. 4 POB fatal.	4
03/11/02	Slingsby T67 Firefly	Training	Banbury, Oxon.	Aircraft failed to recover from a spinning exercise and crashed. Aircraft destroyed. 2 fatalities.	2
05/01/03	Yak 52	Private	Towcester, Northants.	Aircraft dived vertically into the ground during aerobatics. 2 POB fatal.	2
15/02/03	Scheibe Falke	Private	Chipping, Lancs.	On take off the tailwheel became entangled with a launch cable. The aircraft crashed and was destroyed. 2 POB fatal.	2
29/03/03	Cessna 421	Training	Humberside, N Lincs.	Aircraft crashed following touch and go landing and was destroyed by severe fire. 3 POB - 1 fatal, 1 serious and 1 minor injury.	1
18/05/03	Piper PA-31 Navajo	Private	Caribbean	MAYDAY declared due to failure of one engine and loss of fuel. Aircraft ditched in sea. Wreckage not recovered, 2 POB missing presumed drowned.	2
01/02/04	Piper PA-25 Pawnee	Towing	Crowland, Lincs.	Tug aircraft failed to pull out of dive from approx 300ft following glider release. Aircraft destroyed. 1 POB fatal.	1
29/02/04	Piper PA-25 Pawnee	Towing	West Chiltington, Sussex	Tug aircraft crashed after pilot became incapacitated. Aircraft destroyed. 1 POB fatal.	1
13/03/04	Cessna 310	Training	Hotham, E Yorks.	The aircraft crashed in a field on the bank of the river Humber and was destroyed. 2 POB fatal.	2

[1] Aircraft was returning to the airfield having just cast-off a glider.

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
27/06/04	Cessna 206	Parachuting	Beacon Village, Devon	Engine lost power in climb. During attempted forced landing aircraft struck trees and crashed. Aircraft destroyed. 6 POB - 4 fatalities, 2 serious injuries.	4
04/07/04	Piper PA-28 Cherokee	Private	Liverpool Bay	MAYDAY declared due to an engine problem. Aircraft ditched in the sea and sank. Two POB fatal.	2
28/08/04	Socata TB10	Private	Bournemouth, Dorset	While attempting to return to airfield, aircraft struck fence, crashed and caught fire. 3 POB, 1 fatality, 2 serious injuries.	1
16/10/04	Mooney M20	Private	Jersey, Channel Islands	Pilot issued MAYDAY due to engine problems. Aircraft stalled and nose-dived from 300ft. Aircraft written off. 1 POB, fatal injuries.	1
22/10/04	Cessna 406	Commercial	Inverness, Scotland	Aircraft crashed in bad weather and was destroyed. 1 POB fatal.	1

1.2 Helicopters

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
05/05/95	Aerospatiale Ecureuil	Commercial	Loch Gilphead, Scotland	A/c crashed during underslung load operation. 1 fatal injury. A/c destroyed.	1
19/10/96	Hughes 369	Private	Nr Cheadle, Staffs.	Pilot reported loss of control. A/c crashed in field & caught fire. Sole occupant killed.	1
12/12/96	Sikorsky S76	Training	Omeath, Ireland	A/c crashed on high ground in bad weather. All 3 on board killed.	3
16/12/96	Bell Jet Ranger	Private	Nr Ledbury, Hereford & Worcester	On take off in poor visibility, a/c drifted backwards from hover, main rotor struck tree & separated. A/c destroyed. 3 fatalities.	3
16/01/97	Robinson R22	Training	Nr Redhill, Surrey	A/c crashed during nighttime circuit training exercise following loss of engine power. Sole occupant killed.	1
16/03/97	Bell Jet Ranger	Private	Nr Albury, Herts.	After taking off in poor weather, a/c was observed to manoeuvre erratically before crashing in a ploughed field. 1 POB fatal.	1
13/07/97	Bell Jet Ranger	Private	Nr Forfar, Scotland	During precautionary landing, due reduced visibility, a/c contacted wire fence & rolled onto its side. 6 POB - 1 fatality.	1
11/08/97	Bell Jet Ranger	Survey	Nr Lancaster, Lancs.	A/c crashed whilst engaged in pipeline survey. 2 POB fatal. A/c destroyed.	2
14/11/97	Bell Jet Ranger	Private	Nr Midhurst, Sussex	A/c crashed on hillside in poor weather at night. A/c destroyed. Sole occupant killed.	1
28/01/98	Aerospatiale Ecureuil II	Private	Nr Bicester, Oxon.	A/c crashed on rising ground & caught fire. 1 POB fatal.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
09/03/98	Robinson R22	Private	Amport, Hants.	A/c crashed near Amport, approx 1nm SE of airfield. 1 fatality.	1
19/04/98	Robinson R44	Private	Gumley, Leics.	A/c crashed in copse in poor weather. Fire after impact. 4 fatalities.	4
01/08/98	Rotorway Executive	Test	Nr Cambridge, Cambs.	A/c crashed in a field during a test flight. 2 fatalities.	2
01/02/00	Robinson R44	Private	Chorley, Lancs.	A/c crashed on open moorland in poor weather (low cloud & mist). A/c destroyed. 3 POB fatal.	3
08/03/00	Hughes 269	Private	Hare Hatch, Berks.	Aircraft crashed following in-flight break up. 3 POB fatal.	3
28/05/00	Robinson R44	Private	Alps, France	Aircraft collided with 42kv power cable in poor weather and was destroyed. 2 POB fatal.	2
02/12/00	Robinson R22	Private	Sherburn in Elmet, W Yorks.	Main rotor blades struck canopy following apparent loss of engine power. Aircraft fell to the ground and was destroyed. Both occupants killed.	2
21/01/01	Aerospatiale Ecureuil	Private	Enniskilen, N Ireland	Aircraft crashed and was destroyed following a loss of control in flight. 5 POB - 3 fatal and 2 serious injuries.	3
05/05/01	Robinson R22	Private	Beaune, France	Aircraft crashed in bad weather. 2 fatalities.	2
24/05/02	Bolkow 105	Commercial	Brough of Birsay, Orkney	Underslung load became unstable and struck the tail rotor. The aircraft crashed into the sea and sank. 1 POB fatal.	1
13/07/02	Robinson R22	Private	Warwick, War.	The aircraft broke up in-flight and crashed in a field adjacent to the A46 near Warwick racecourse. 2 POB fatal.	2
17/01/03	Bell Jet Ranger	Private	Cudham, Kent	Aircraft crashed shortly after take off and was destroyed in post impact fire. 2 POB fatal.	2
19/07/03	Hughes 369	Private	Knockholt, Kent	The helicopter entered a descending left turn from which it did not recover before striking the ground. 3 POB fatal.	3
30/07/03	Robinson R44	Private	Teviothead, Scotland	After encountering low cloud, the aircraft entered a rapid descent and the main rotor struck the tailboom. The aircraft crashed and was destroyed by fire. 1 POB fatal.	1
02/12/03	Aerospatiale Ecureuil II	Test	Hurstbourne Tarrant, Hants.	Aircraft crashed during air test. 3 POB fatal. Aircraft destroyed.	3
03/03/04	Agusta A109	Private	Bournemouth, Dorset	Aircraft entered left turn and crashed into woodland on approach. Aircraft caught fire on impact and was destroyed. 2 POB fatal.	2
19/09/04	Robinson R44	Private	Kentallen, Scotland	Passenger collapsed across flight controls. Aircraft struck hillside and was destroyed. 2 POB - 1 fatal and 1 serious injury.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
24/10/04	Enstrom 280	Private	North Sea	Helicopter ditched in sea. Minor seawater damage to airframe, substantial damage to rotor blades. 3 POB - 1 fatality.	1
11/11/04	Robinson R22	Training	Stratford upon Avon, War.	Helicopter crashed in deteriorating weather. 1 POB fatal.	1

1.3 Microlight Aeroplanes

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
28/04/95	Sirocco 377	Private	Nr Bromyard, Hereford & Worcester	A/c crashed following structural failure of tailplane. 1 fatality.	1
01/07/95	Chaser S	Private	Nr Conway, Wales	A/c crashed onto beach. 1 fatality. Cause undetermined.	1
31/08/95	Mainair Mercury	Training	Nr Sandtoft, N Lincs.	Loss of control led to airframe failure in flight. Student pilot killed.	1
17/07/96	Gemini Flash	Test	Nr Rhyl, Wales	Wings folded on test flight & a/c fell from approx 400ft. 1 fatality.	1
04/08/96	MW5	Private	Bruton, Somerset	Engine stopped. A/c struck power cables during attempted forced landing & burned out. Sole occupant killed.	1
07/08/96	Chaser S	Competition	Nr Durban, South Africa	A/c encountered severe turbulence & broke-up in flight. 1 fatality.	1
15/04/97	Gemini Flash	Private	Walsall, W Midlands	A/c struck tree during go around. 2 POB - 1 fatal, 1 serious injury.	1
12/08/97	Spectrum	Private	Netherthorpe, S Yorks.	A/c crashed on take off. 1 POB - fatal.	1
27/10/97	Gemini Flash	Training	Roydon, Essex	A/c spiralled into field after wings folded in flight. 1 POB fatal. A/c destroyed.	1
26/07/98	Kolb Twinstar	Private	Louth, Lincs.	A/c crashed in a cornfield. 2 fatalities.	2
28/03/99	Merlin MW6	Private	Newnham, Herts.	A/c drifted right on approach due to crosswind. Go-around initiated at low speed & a/c spun in from low height. Pilot killed.	1
21/08/99	Pegasus XL	Private	Radwell, Herts.	Loss of control in flight. A/c crashed & was destroyed. 2 POB - 1 fatal & 1 serious injury.	1
06/10/99	Rans S6	Private	Monewden, Suffolk	A/c crashed into field following engine failure shortly after take off. 1 POB fatal.	1
13/01/01	Mainair Blade	Private	Enson, Staffs.	Engine failure due to fuel exhaustion. Aircraft overturned during forced landing. 2 POB - 1 fatality and 1 serious injury.	1
14/02/01	Rans S4	Private	Davidstow Moor, Cornwall	Loss of lateral control during climb out. Aircraft entered spin and crashed, killing the sole occupant.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
23/06/01	Aviasud Mistral	Private	Nash, Shrops.	Aircraft spun into ground from low level following suspected engine failure. 2 POB fatal.	2
02/01/02	Mainair Blade	Training	Alby, Norfolk	Mainair Blade microlight failed to climb due to ice accretion. Wing tip struck ground and aircraft overturned. 2 POB - 1 fatal and 1 serious injury.	1
13/04/03	Chaser S	Private	Clitheroe, Lancs.	Chaser S microlight crashed following an apparent loss of control in flight. Aircraft destroyed. 1 POB fatal.	1
07/05/03	Pegasus XL	Private	Stock, Essex	Pegasus XL-Q microlight crashed into a tree during go-around. Aircraft destroyed. 1 POB fatal.	1
27/01/04	Sirocco 377	Private	Ashby de la Zouch, Leics.	Sirocco 377GB microlight crashed and was destroyed following an in-flight structural failure of the tailplane. 1 POB fatal.	1
06/07/04	Hybred 44	Private	Welham Green, Herts.	Mid-air collision between Hybred 44XLR microlight and Robinson R22. Microlight destroyed with 2 POB fatal.	2
21/08/04	Pegasus Quik	Training	Eastchurch, Kent	Pegasus Quik microlight suffered structural failure in-flight, leading to loss of control and trike separation. 2 POB fatal.	2
03/09/04	Ikarus C42	Private	Pyrenees, Spain	Ikarus C42 FB UK microlight crashed in the Pyrenees Mountains. Aircraft destroyed. 2 POB fatal.	2

1.4 Gyroplanes

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
20/04/96	Air Command	Private	Long Marston, War.	A/c seen to tumble vertically to ground. Sole occupant killed. A/c destroyed.	1
13/06/98	Bensen B8MR	Private	Coll, Isle of Lewis	A/c entered steep climb, stalled & crashed inverted. Possible pilot distraction. A/c destroyed. 1 POB fatal.	1
16/04/00	Bensen B8MR	Private	Carlisle, Cumbria	Aircraft crashed during attempt to land in field adjacent to end of runway. 1 POB fatal.	1
01/06/01	Cricket	Private	Henstridge, Somerset	Aircraft crashed on approach. 1 fatality.	1
23/03/02	Bensen B8MR	Private	Kirkbride, Cumbria	Shortly after take off the aircraft began to roll from side to side at low speed, then crashed onto the runway and was destroyed. 1 POB fatal.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
17/05/02	RAF 2000	Private	Braintree, Essex	The aircraft was seen to fall vertically to the ground and was destroyed. 2 POB fatal.	2
29/06/03	Bensen B8MR	Private	Shipdham, Norfolk	Control lost after rotor blades struck rudder in flight. Aircraft crashed and was destroyed. 1 POB fatal.	1
15/12/04	Ken Brock KB-2	Private	Sutton Bank, N Yorks.	Aircraft crashed into trees after failing to gain height following take off. Substantial damage. One POB fatal. Cause unknown.	1

1.5 Gliders

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
15/04/95	Olympia	Private	Nr Buxton, Derbys.	In-flight structural failure. Sole POB killed.	1
05/05/95	SZD Puchacz	Training	Husbands Bosworth, Leics.	Failed winch launch. A/c went into spin. Substantial damage. 1 fatal, 1 serious injury.	1
07/05/95	Discus	Private	Parham, Sussex	A/c on downwind leg of circuit on return to A/D seen to partially deploy airbrakes then spun into ground. Sole POB killed.	1
12/06/95	Standard Cirrus	Private	Talgarth, Wales	Glider released at 150ft, entered steep turn & struck ground. 1 fatality.	1
09/07/95	Carman JP15	Private	Pershore, Hereford & Worcester	A/c crashed after cable break. 1 Fatality.	1
13/07/96	Olympia	Private	Seighford, Staffs.	Crashed during winch launch due structural failure of right wing. 1 fatality.	1
21/08/96	Ka-6	Private	Nr Aston Down, Glos.	Mid-air collision between two gliders. One pilot killed, other parachuted clear receiving minor injuries.	1
23/08/96	Ka-6	Private	Gap, France	Mid-air collision between two gliders. 3 fatalities.	3
15/06/97	Astir	Private	Ringmer, Sussex	Glider struck ground while carrying out 360deg turn following cable break at low level during launch. 1 POB fatal.	1
26/07/97	ASK23	Private	Long Mynd, Shrops.	Launch cable snagged wing & glider spun in. Sole occupant killed.	1
02/05/98	LS3 & ASK18	Private	Seighford, Staffs.	Mid-air collision between two gliders. Both a/c destroyed, both pilots killed.	2
09/07/98	ASK13	Private	Nr Dunstable, Beds.	Crashed on hillside. 1 fatality & 1 serious injury.	1
10/07/98	Ventus	Competition	Mildenhall, Suffolk	Mid-air collision between 2 gliders. 1 a/c landed safely, other crashed in woodland killing pilot.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
27/07/98	Kestrel 19	Competition	Bidford on Avon, War.	Mid-air collision between 2 gliders. 1 pilot killed, 1 seriously injured.	1
05/08/98	Ka-6	Private	Aston Down, Glos.	A/c entered spin & crashed into cornfield. Substantial damage. Pilot died from his injuries on following day.	1
19/08/98	Pegasus 101	Private	Great Saxham, Suffolk	Glider crashed on farmland. Sole occupant fatally injured. Circumstances unknown.	1
31/05/99	ASW20 & Grob Twin Akro	Private	Great Hucklow, Derbys.	Mid-air collision between two gliders. Both a/c destroyed. 3 fatalities.	3
18/06/00	Slingsby Swallow	Private	Ridgewell, Suffolk	Crashed on take off. A/c destroyed. 1 POB fatal.	1
31/07/00	Nimbus 4	Private	Arcania, Spain	Glider entered spiral dive following loss of control. Wing separated. 2 POB - 1 fatality and 1 minor injury.	1
04/08/00	ASW22	Private	Segovia Mountains, Spain	Glider crashed onto mountainside. 1 fatality.	1
03/02/01	Ventus	Private	Benalla, Australia	Glider pitched nose down and spiralled to ground from 1700ft. 1 POB fatal.	1
01/04/01	SZD Junior	Private	Long Stratton, Norfolk	Glider spiralled into ground and was destroyed. 1 POB fatal.	1
23/06/01	D5 Kestrel	Private	Husbands Bosworth, Leics.	Glider crashed in field. 1 POB fatal.	1
15/07/01	Standard Cirrus	Private	Usk, Wales	Glider stalled and spun in shortly after winch launch. 1 POB fatal.	1
15/07/01	ASW15	Private	Bidford on Avon, War.	Mid-air collision between glider and tug/glider combination. 1 fatality.	1
26/08/01	LS8	Private	Syerston, Notts.	Glider crashed after entering spin from low-level turn. 1 POB fatal.	1
14/09/01	Standard Cirrus	Private	Aston Down, Glos.	Mid-air collision between PA25 and Cirrus glider. Both aircraft destroyed. 2 fatalities.	2
01/06/02	Ka-8	Private	Hinton in the Hedges, Northants.	Freefall parachutist collided with glider. Glider crashed. Pilot and parachutist fatally injured.	2
21/02/03	SZD Puchacz	Training	Great Hucklow, Derbys.	While a glider was being cable launched, a second glider collided with the cable. The second aircraft 'spiralled in', suffering serious damage. 2 POB, 1 serious, 1 fatal.	1
11/06/03	ASW19	Private	Camphill, Derbys.	During winch launch, left wing hit ground and aircraft tipped onto nose. 1 POB fatal.	1
29/06/03	Discus	Private	High Ellington, N Yorks.	Loss of control during attempted field landing. Pilot died from injuries the day after the accident.	1
18/01/04	SZD Puchacz	Training	Husbands Bosworth, Leics.	Glider entered spin at 1500ft and crashed nose-down into a field. 2 POB fatal.	2

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
26/04/04	Ventus	Private	Lasham, Hants.	Mid-air collision between two gliders at 4000ft. One pilot parachuted clear and was uninjured, the second was killed.	1
16/05/04	ASK18	Private	Halesland, Somerset	Aircraft crashed on take-off following winch cable failure. Aircraft destroyed. 1 POB fatal.	1
26/05/04	Ka-7	Private	Strubby, Lincs.	Glider crashed after reported wing separation. 2 POB fatal.	2
09/07/04	ASW20	Private	La Motte Du Caire, France	Ground collision shortly after take off by winch system. Glider severely damaged. 1 POB fatal.	1
07/08/04	Standard Cirrus	Private	Nympsfield, Glos.	Glider collided with tree following early release from winch launch. 1 POB fatal.	1
07/08/04	LS7	Private	Dunstable, Beds.	Climbed too steeply during winch launch, stalled and nose-dived to ground. Glider destroyed. 1 POB fatal.	1

1.6 Self-Propelled Hang Gliders (BHPA Members Only)

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
11/07/02	Aeros Target	Private	Crianlarich, Scotland	Crashed on take off. Pilot choose field to operate from that was insufficiently large.	1

1.7 Hang Gliders

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
22/05/95	Aerial Arts Clubman	Private	Nont Sarahs	Failure to maintain airspeed due to inexperience.	1
02/09/95	Hiway Stubby	Training	East Dereham, Norfolk	Aircraft landed with pilot uninjured but unconscious. Pilot died from pre-existing, and unknown to him, medical condition.	1
08/10/95	Airwave Kiss	Private	Sandy Bay, Devon	Pilot drowned having decided to turn his glider over the sea with insufficient height.	1
23/11/96	Moyes Xtralite	Private	Devils Dyke, Sussex	Mid air collision with paraglider.	1
24/08/98	Solarwings Rumour 3	Private	Devil's Dyke, Sussex	Mid air collision resulting in structural damage and loss of flight control.	1
04/11/98	Avian Java	Private	Carlton Bank, Yorks.	Most probably resulted from a misjudged manoeuvre close to the hill face.	1
25/07/99	Aeros Target	Private	Corndon Hill, Powys	Pilot misjudged his time and distance from rocks due to inexperience.	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
29/09/00	Airwave Calypso	Private	Plaine Joux, France	Pilot suffocated in loose soil, ground conditions were unsuitable for the landing method chosen.	1
29/05/01	Moyes Xtralite	Private	Laragne, France	Failure of the lower right lateral wire whilst pilot was performing a steeply banked right turn.	1
04/04/03	Avian Amour	Private	Harting Down	Inexperienced pilot flew into an area of rota with insufficient height to clear the obstacles causing the rotor.	1
15/08/03	Skyhook Gipsy	Training	Crow Hall, Norfolk	Under-confident student pilot failed to control the glider when in an unfamiliar situation.	1

1.8 Paragliders

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
30/07/95	Advance Omega 2	Private	Campsie Fells, Scotland	Local turbulence caused a canopy collapse.	1
10/10/95	Unknown Paraglider	Private	Mullion, Cornwall	Pilot drowned following sea landing.	1
09/11/95	Firebird Navajo	Private	Catacol, Arran, Scotland	Suspension line failure through being overstressed through the pilot's decision to induce an unstable manoeuvre.	1
15/02/98	Harley 315	Training	Middle Wallop	Student pilot applied excessive wraps and maximum control line extension too soon and inadvertently stalled the glider at a critical height - too early to ensure a safe landing and too late to initiate a recovery.	1
19/03/98	Advance Omega 4	Private	Las Sabinas, Spain	Paraglider suffered a large collapse due to turbulence followed by a loss of control with insufficient height for the pilot to affect a recovery.	1
19/05/98	Comet Voyager	Private	Shining Tor, Peaks	Inexperience of pilot lead to a flight in conditions beyond pilot's training and ability.	1
20/08/98	Easy Fly Sharon 26	Private	Donovaly, Slovakia	Loss of control resulting in a rapid spin and high speed impact. Uncertified glider.	1
01/08/99	Air Command	Private	Dumyat, Scotland	Pilot, having been caught in deteriorating conditions, which caused his canopy to collapse, had insufficient height in which to either recover the paraglider or deploy his emergency parachute.	1
18/10/99	Freex Spear	Private	Jesus, Pelopponese.	Collapse of the paraglider caused by turbulence leading to loss of control.	1
08/04/00	Apco Bagheera	Private	High and Over, Sussex	Partial deflation of the paraglider, probably caused by turbulence,	1

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
				whilst low above the hill, resulting in a spiral dive.	
18/08/00	Firebird G-Sport	Private	Pena Negra, Spain	Severe multiple collapses caused by turbulence.	1
03/09/00	Freex Mission	Private	Ditchling, Sussex	Pilot elected to fly in turbulent air on a demanding glider, canopy spun with insufficient height to recover.	1
18/09/00	Unknown Paraglider	Unknown	Olu Deniz, Turkey	Pilot flew low over spine back ridge (having previously been warned of the potential danger) and suffered asymmetric collapse due to turbulence.	1
30/10/00	Firebird Ignition	Training	Mittaberg, Germany	Pilot failed to assume a safe airspeed immediately after take off, and the failure to take the appropriate corrective action thereafter.	1
24/02/02	Swing Astral	Private	Morro de Toix, Spain	Pilot failed to head for the landing area with sufficient height resulting in him landing in the sea and drowning.	1
05/04/02	Gradient Saphir 2000	Private	Pena Rubia, Spain	Collapse of the paraglider was caused by turbulence leading to a high-speed impact.	1
24/05/02	Edel EQ	Private	Chawston, Beds	Untrained pilot stalled and collapsed paraglider when tethering rope broke.	1
21/07/02	Firebird Matrix	Private	Abertysswg, Wales	Inexperienced pilot failed to apply the correct recovery technique following an asymmetric collapse.	1
06/03/03	Apco Simba 2	Private	Jama, Tenerife	Inexperienced pilot failed to apply the correct recovery technique following a pilot, or turbulence, induced abnormal flying attitude.	1
27/07/03	Firebird Hornet	Private	Devils Dyke, Sussex	Pilot suffered deflation low over trees. Pilot crashed into trees, then fell to the ground.	1
08/08/03	Unknown Paraglider	Unknown	Grand Bornand, France	Pilot suffered asymmetric collapse due to turbulence on landing approach.	1
20/06/04	Independence Avalon	Private	Atherfield Bay, Isle of Wight	Pilot stalled glider at approx 10m when on landing approach and landed in a head down attitude.	1
23/06/04	Unknown Paraglider	Unknown	Ronda la Vieja, Spain	Pilot turned wrong way on forward launch causing risers to be twisted. Pilot was lifted off ground still twisted and was seen to pull one of the controls in panic. Glider turned sharply throwing pilot against a boulder with great force.	1
05/09/04	Unknown Paraglider	Unknown	Plan Praz, France	Pilot suffered asymmetric collapse due to turbulence and crashed into rocky cliffside.	1

2. List of Fatal Accidents to UK Registered Aircraft below 5,700 kg MTWA on Public Transport Flights Between 1995 and 2002

Fatal accidents are listed by aircraft class and in ascending date order.

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
24/05/1995	Embraer EMB-110 Bandeirante	Passenger	Nr Leeds Bradford	Crew reported instrumentation problem & intended return. A/c crashed whilst vectoring for priority approach. 12 POB fatal.	12
19/05/1996	BN2 Islander	Ambulance	Tingwall	A/c crashed approx 1 mile from a/d on approach following go-around. 3 POB - 1 fatality, 1 serious injury.	1
06/03/1997	Piper PA-34	Freight	Nr Southend, Essex	Shortly after take off pilot reported problem with artificial horizon. A/c crashed in field & overturned. 1 fatal, 1 serious injury.	1
03/09/1999	Cessna 404 Titan	Passenger	Glasgow, Strathclyde	LH engine failed shortly after take off. A/c crashed and was destroyed by fire. 11 POB - 8 fatalities, 3 serious injuries.	8
14/06/2000	Piper PA-31	Ambulance	River Mersey, Merseyside	Aircraft crashed into River Mersey during ILS approach to R/W09 at Liverpool. 5 fatalities.	5
20/07/1997	Cameron A-210	Passenger	North Ferriby, Humberside	Struck power cables on landing. Substantial damage. 13 POB, 1 fatality & 8 serious injuries.	1
22/10/1996	AS355 Ecureuil Twin	Passenger	Middlewich	A/c was transiting Manchester low level route when all contact was lost. Wreckage later found on farmland. 5 killed.	5
26/07/1998	AS355 Ecureuil Twin	Ambulance	Rochester, Kent	Aircraft struck overhead power cables and crashed into a field. 3 POB fatal.	3
09/10/1998	AS355 Ecureuil Twin	Police Support	Nr Welford, Northamptonshire	A/c crashed into woodland shortly after take off. A/c destroyed. 3 POB, 1 fatality & 2 serious injuries.	1
16/07/2002	Sikorsky S76	Passenger	North Sea	The aircraft crashed into the sea and was destroyed following the failure of a main rotor blade. 11 POB fatal.	11

3. List of Fatal Accidents to UK Registered Aircraft below 5,700 kg MTWA involving Third Party Only Fatalities

Fatal accidents are listed by aircraft class and in ascending date order.

Date	Aircraft Type	Nature of Flight	Location	Summary	Total Fatal
03/07/1998	ASK21	Private	Long Mynd, Shropshire	On landing, glider's left wing struck & killed a person walking along a track adjacent to landing strip.	1

Annex L3

GENERAL AVIATION SAFETY COUNCIL (GASCo) ACCIDENT TYPE DESCRIPTION AND GENERAL AVIATION SAFETY REVIEW WORKING GROUP (GASRWG) FACTORS

1. John Thorpe (GASCo) Accident Type Description

1.1 John Thorpe (GASCo) had developed a high-level list of accident scenarios appropriate to fatal GA accidents (see below). One accident type was to be allocated per fatal accident.

Accident Type	Description
Controlled Flight Into Terrain (CFIT)	Impact with high ground en-route while under control. **Excludes** low on approach.
Loss of Control-VMC	Failing to maintain control while flying in visual conditions, either at high speed or more generally at low speed. Includes loss of rotor rpm in gyros and helicopters. **Excludes** Loss of control during aerobatics and beat-ups
Low Flying-Aerobatics	Performing aerobatics too low, losing control or colliding with obstructions-ground while low flying. **Includes** low flying and aerobatics at or while practicing for air displays.
Collision Ground Object	Striking objects on take-off, over-running runway or striking obstructions such as trees or masts when attempting to remain VFR. **Excludes** forced and precautionary landings, low approaches and collisions while deliberately low flying.
Loss of Control-IMC	Losing control whilst in cloud or at night.
Mid Air Collision	**Includes** cases where the occupants survived but the other party did not.
Airframe Failure	Where structure, controls or rotorcraft blades fail catastrophically in flight. **Excludes** structural failure during attempted recovery from loss of control.
Forced Landing	Where pilot has little choice about landing site. Includes precautionary landing, abandoned take-off and ditching.
Low Approach	Striking the ground or objects whilst too low on approach to land. CFIT confined to en-route.
Medical	Pilot collapse or incapacitation for any reason.
Suicide	As determined by a Coroners Inquest.
Prop-Rotor	Where a passenger or other occupant is killed by impact with a propeller/rotor or by striking part of the aircraft. Third parties **excluded**.
Undetermined	Accident cause uncertain.

2. General Aviation Safety Review Working Group (GASRWG) Factors

2.1 A list of factors (causal or contributory) used by GASRWG is listed below.

Factor Group/Subgroup	Individual Factor	
F1 Aircraft-Systems	1.1	Failure – affecting controllability
	1.2	Failure – cockpit information
	1.3	Failure – other
	1.4	Aircraft systems fire
	1.5	Non-fitment of presently available safety equipment
	1.6	Failure or inadequacy of safety equipment

Factor Group/Subgroup	Individual Factor	
F2 Aircraft-Propulsion	2.1	Engine failure or malfunction
	2.2	Propeller failure
	2.3	Damage due to non-containment
	2.4	Engine fire
	2.5	Engine failure simulated
	2.6	Fuel contamination
	2.7	Damage due to detachment
F3 Aircraft-Structure	3.1	Corrosion or fatigue
	3.2	Overload failure
	3.3	Flutter
	3.4	Other structural factor
F4 Aircraft-Design/Production	4.1	Design shortcomings
	4.2	Unapproved modification
	4.3	Manufacturing defect
	4.4	Aircraft handling characteristics
F5 Aircraft-Performance	5.1	Unable to achieve scheduled performance
	5.2	Aircraft becomes uncontrollable
F6 Aircraft-Other	6.1	Component failure or wear
	6.2	Fire – other cause
	6.3	Other aircraft factor
F7 ATS/Ground aids	7.1	Lack of appropriate ATS
	7.2	Incorrect or inadequate instruction
	7.3	Misunderstood/missed/inappropriate communication
	7.4	Failure to provide separation – in air
	7.5	Failure to provide separation – on ground
	7.6	Lack of ground aids
	7.7	Ground aid malfunction
	7.8	Other ATS/ground aids factor
	7.9	Non-fitment of presently available ATC safety equipment
	7.10	Non-precision approach flown
F8 Pilot	8.1	Lack of situational awareness – in air
	8.2	Lack of situational awareness – on ground
	8.3	Incorrect selection on instrument or navaid
	8.4	Action on wrong control or instrument
	8.5	Omission of action or inappropriate action
	8.6	Press-on-itis
	8.7	Poor judgement or airmanship
	8.8	Inadequate pre-flight preparation
	8.9	Disorientation
	8.10	Fatigue
F8 Pilot continued	8.11	State of mind
	8.12	Interaction with automation
	8.13	Fast and/or high on approach
	8.14	Slow and/or low on approach
	8.15	Incorrect loading
	8.16	Flight handling skills
	8.17	Lack of training, currency or inexperience
	8.18	Training inadequate
	8.19	Medical factors
	8.20	Failure in look-out
	8.21	Distraction
	8.22	Deliberate non-adherence to procedures

Factor Group/Subgroup	Individual Factor	
	8.23	Pilot induced stall
	8.24	Pilot overload
	8.25	Poor cockpit resource management
	8.26	External pressure
	8.27	Inability to assimilate radio calls
	8.28	Inadequate instructor intervention
	8.29	Other pilot factor
	8.30	Lack of awareness of circumstances in flight
	8.31	Slow or delayed action
	8.32	Presented with situation beyond training
F9 Environmental	9.1	Poor weather
	9.2	Poor visibility
	9.3	Turbulence
	9.4	Wake turbulence
	9.5	Icing – induction system
	9.6	Icing – other
	9.7	Lightning
	9.8	Birds
	9.9	Runway or taxiway condition
	9.10	Wind
	9.11	Other environmental factor
	9.12	Volcanic ash, sand, precipitation, etc.
	9.13	Runway condition unknown to the crew
F10 Infrastructure	10.1	Incorrect or inadequate information to pilots
	10.2	Inadequate aerodrome support
	10.3	Inadequate aerodrome design or location
	10.4	Incorrect or inadequate procedures
	10.5	Inadequate regulation
	10.6	Inadequate regulatory oversight
	10.7	Other infrastructure factor
	10.8	Company management failure
	10.9	Commercial pressure
F11 Maintenance	11.1	Failure to carry-out required maintenance
	11.2	Maintenance error, oversight or inadequacy
	11.3	Bogus parts
	11.4	Other maintenance factor
	11.5	Fatigue in engineer
	11.6	Airworthiness management
F12 Other	12.1	Caused by other aircraft/vehicle/person
	12.2	Post crash fire
	12.3	Low fuel state
	12.4	Carriage of dangerous goods
	12.5	Non-safety related restrictions
F12 Other continued	12.6	Any other factor
	12.7	Disruptive passenger
	12.8	Non-adherence to cabin safety procedures
	12.9	Unsafe action by other personnel
F13 Ground Handling	13.1	Lack of awareness by ground staff
	13.2	Loading error
	13.3	Unsupervised passengers
	13.4	Faulty ground handling equipment
	13.5	Fatigue in ground staff
	13.6	Other ground handling factor

Annex L4

METHODOLOGY FOR DERIVING CURRENT SAFETY FORECASTS FOR UK GENERAL AVIATION

The current methodology for deriving the safety forecasts for UK registered GA aircraft is described below:

A historical annual average number of fatal accidents for a five-year period is calculated and projected forward (ie this value is taken to be the annual number of fatal accidents for the future years).

The annual average percentage increase in hours flown over a five-year period is calculated and this value is used to estimate future utilisation (ie assuming a constant annual percentage increase).

Forecast fatal accident rates, based on a three-year moving average, are calculated using these estimated values.

CAA/GENERAL AVIATION COMMUNITY CONSULTATION FORA

Note: The following list is a 1 January 2006 snapshot of the fora that involve the CAA's consultation with the GA community. The list excludes one-off consultations, in whatever format and whether formal of otherwise.

1. Title of Activity	**Adventurous Aviation Activity Working Group (AAAWG)**
Other Participants	British Parachute Association, British Balloon & Airship Club, Historic Aircraft Association, British Business & General Aviation Association, Aircraft Owners & Pilots Association, British Helicopter Advisory Board, British Gliding Association, British Hang Gliding & Paragliding Association, British Microlight Aircraft Association, Lawyers Flying Association, British Association of Balloon Operators, Royal Aeronautical Club, Red Letter Days and Acorne Sports.
Prime Purpose of Activity	Develop a Code of Practice and guidance material for the public for Adventurous Aviation Activities.

2. Title of Activity	**Airspace Infringements Working Group (AIWG)**
Other Participants	Directorate of Airspace Policy (Terminal and Off-route Airspace Sections), National Air Traffic Services Ltd (Policy and Planning and Terminal Control), one General Aviation representative (currently Bonus Aviation), Ministry of Defence and Directorate of Air Staff
Prime Purpose of Activity	To monitor infringement data, identify trends and instigate appropriate remedial action,

3. Title of Activity	**Airspace Strategy Steering Group (ASSG)**
Other Participants	DAP, MOD and Industry.
Prime Purpose of Activity	On-going review of planned restructure of UK airspace and emerging European airspace initiatives in regard to GA operations.

4. Title of Activity	**ASSG - A**
Other Participants	DAP, MOD, Industry and GA representation (including BBGA, AOPA and BGA)
Prime Purpose of Activity	Study the implications for UK airspace for each of the major ECAC Airspace Strategy milestones.

5. Title of Activity	**ASSG - B**
Other Participants	DAP, MOD, Industry and GA representation (currently BBAG, AOPA and BGA)
Prime Purpose of Activity	Develop proposals related to the harmonisation of Flexible Use of Airspace in the UK.

6. Title of Activity	British Helicopter Advisory Board (BHAB)
Other Participants	UK Industry.
Prime Purpose of Activity	To consult upon and discuss helicopter related safety items. Forum for discussion on UK helicopter industry matters. Discussion of technical/safety topics - sharing knowledge.

7. Title of Activity	Chief Ground Instructors Meeting (CGIs)
Other Participants	UK Industry.
Prime Purpose of Activity	Liaison on policy for flight training and theoretical knowledge with Flying Training Organisations.

8. Title of Activity	Civil Aviation Authority Representation at GA Public Events, Exhibitions and 'Fly-Ins'.
Other Participants	Individuals from throughout GA community.
Prime Purpose of Activity	Providing individuals from GA community opportunity for face-to-face consultation with a cross-section of CAA specialists.

9. Title of Activity	Civil Aviation Medicine Forum
Other Participants	Medical representatives from across industry, including airline, air traffic, GA, private, AAIB, authorised medical examiners and DfT.
Prime Purpose of Activity	1. Provide information to industry representatives on topical, or forthcoming, regulatory medical issues of the day. 2. Obtain feedback from Industry representatives. 3. Discussion forum for topics raised by Industry.

10. Title of Activity	Flight Examiner CPL(A) Standardisation Meeting
Other Participants	UK Industry.
Prime Purpose of Activity	Standardisation of Flight Examiners (CPL) Aeroplanes.

11. Title of Activity	Flight Examiner CPL(H) Standardisation Meeting
Other Participants	UK Industry.
Prime Purpose of Activity	Standardisation of Flight Examiners (CPL) Helicopters.

12. Title of Activity	Flight Instructor Examiner (A) (FIE(A)) Standardisation Meeting
Other Participants	UK Industry.
Prime Purpose of Activity	Standardisation of Flying Instructors (A) Examiners.

13. Title of Activity	Flight Instructor Examiner (H) (FIE(H)) Standardisation Meeting
Other Participants	UK Industry.
Prime Purpose of Activity	Standardisation of Flying Instructors (H) Examiners.

14. Title of Activity	General Aviation Consultative Committee (GACC)
Other Participants	Association of Licensed Aircraft Engineers (1981), , British Gliding Association, British Microlight Aircraft Association, British Parachute Association, , British Business and General Aviation Association, General Aviation Safety Council, Popular Flying Association, National Association of Agricultural Contractors, Royal Aero Club - Records Racing & Rally Association, Royal Aeronautical Society, Aircraft Owners & Pilots Association, British Balloon & Airship Club, British Helicopter Advisory Board, British Hang Gliding & Paragliding Association, Flying Farmers Association, Helicopter Club of Great Britain, Society of British Aerospace Companies, Historic Aircraft Association, Royal Aero Club, Popular Flying Association, Royal Aeronautical Society - Light Aviation Group, PPL/IR Network, UAV Systems Association, Guild of Air Pilots & Navigators. Lead and chaired by HOSD, AMSD, DAP, AALSD and Medical.
Prime Purpose of Activity	Internal and industry consultative body on airworthiness, general aviation and licensing matters. Improve General Aviation safety standards.

15. Title of Activity	General Aviation Safety Evenings
Other Participants	Individuals from throughout GA community.
Prime Purpose of Activity	Briefing of CAA headline flight-safety issues with GA relevance.

16. Title of Activity	General Aviation Safety Review Working Group (GASRWG)
Other Participants	Air Accidents Investigation Branch, Royal Aeronautical Society, British Microlight Aircraft Association, Association of Licensed Aircraft Engineers, Historic Aircraft Association, Guild of Air Pilots & Air Navigators, Aircraft Owners & Pilots Association, General Aviation Safety Council, Popular Flying Association
Prime Purpose of Activity	Review General Aviation fatal and serious accidents and serious incidents between 1997 and 2001. Develop safety interventions.

17. Title of Activity	National Air Traffic Management Advisory Committee (NATMAC)
Other Participants	UK Industry including, British Gliding Association, British Microlight Aircraft Association, British Parachute Association, , British Business & General Aviation Association, General Aviation Safety Council, Popular Flying Association, Aircraft Owners & Pilots Association, British Balloon & Airship Club, British Helicopter Advisory Board, British Hang Gliding & Paragliding Association, Helicopter Club of Great Britain, Society of British Aerospace Companies, Royal Aero Club, Popular Flying Association, Royal Aeronautical Society - Light Aviation Group, PPL/IR Network, UAV Systems Association, Guild of Air Pilots & Navigators. Lead and chaired by DAP
Prime Purpose of Activity	Formal interface between the Directorate of Airspace Policy, the UK Airspace Regulator, and the UK Aviation Community.

18. Title of Activity	NATMAC - General Aviation Working Group (GAWG)
Other Participants	Individuals drawn from GA NATMAC representation.
Prime Purpose of Activity	NATMAC sub-group aimed at obtaining GA perspective on UK airspace issues.

19. Title of Activity	NATMAC – Maps and Charts Working Group (MCWG)
Other Participants	NATMAC representatives from UK Industry and AOPA, BGA, BHPA, GASCo, HCGH, PFA.
Prime Purpose of Activity	NATMAC sub-group aimed at providing aviation stakeholders oversight of aeronautical charting issues.

20. Title of Activity	NATMAC – Surveillance and Spectrum Working Group (SASWG)
Other Participants	NATMAC representatives from UK Industry and AOPA, GASCo, BBAC, BHPA, BGA, PFA.
Prime Purpose of Activity	NATMAC sub-group aimed at providing aviation stakeholders oversight of Surveillance and Spectrum issues.

21. Title of Activity	National Private Pilots Licence Policy and Steering Committee
Other Participants	UK Industry; AOPA, BBGA, BGA, GAPAN, BMAA, PFA. GAD.
Prime Purpose of Activity	Development of a national private pilot licence with GAD and industry.

22. Title of Activity	Safety Regulation Finance Advisory Committee (SRFAC)
Other Participants	OAC, BBGA, BATA, AOPA, AOA, BHAB, SBAC, NATS, , RaeC, ARB, Finance and Corporate Services Director, GDSR, Head of Finance, SRG Commercial Manager, Head of SRG Corporate Affairs, Head of Policy Services.
Prime Purpose of Activity	Examine and consult with SRG on costs and associated service levels of the activities for which charges must be levied by the CAA. Advise on financial aspects of the development of strategic plans and give advice on forecasts, trends and expectations from the point of view of Industry participants. Consider the proposals for charging schemes in relation to the CAA's financial targets and to seek an equitable distribution of these costs among industry participants. The SRFAC will establish, where necessary, a suitable working group to consider any issue in more detail and contribute towards the definition and attainment of SRG's strategic goals.

23. Title of Activity	Small Helicopter Working Group
Other Participants	Helicopter Club of Great Britain, Aircraft Owners & Pilots Association, British Helicopter Advisory Board
Prime Purpose of Activity	Review causal factors of helicopter accidents and develop a safety improvement action plan.

24. Title of Activity	Society of British Aerospace Constructors (SBAC)
Other Participants	UK industry
Prime Purpose of Activity	Interface, regulation development, communication and consultation.

25. Title of Activity	Strategic Aviation Special Interest Group (SASIG)
Other Participants	UK Industry.
Prime Purpose of Activity	To consult upon and discuss aerodrome related safety items. Discussion of technical/safety topics - sharing knowledge, industry communication.

26. Title of Activity	Terminal RNAV Airspace and Procedures Team
Other Participants	UK Industry, CAA, DfT, MoD, BALPA, PPL-IR
Prime Purpose of Activity	To assist in the development of appropriate policies for application of RNAV in UK terminal airspace to align UK operations with the ECAC Navigation Strategy.

27. Title of Activity	Training Managers Meeting
Other Participants	UK Industry.
Prime Purpose of Activity	Forum for discussion on JAR 147 approval matters.

28. Title of Activity	UAV Steering Group
Other Participants	DAP, MoD, Qinetiq, UAVS Association, SRG (DPSD, GAD, ATSSD)
Prime Purpose of Activity	Addressing policy and requirements for the use of UAVs in UK airspace and their design, manufacture and maintenance

29. Title of Activity	UAV Working Group
Other Participants	DAP and Industry.
Prime Purpose of Activity	Development with Industry of CAP 722 on the regulation of UAV activity within the UK.

30. Title of Activity	UK Operators Technical Group (UKOTG) Duplicate Inspections Working Group
Other Participants	UK Industry
Prime Purpose of Activity	Regulation Development and policy/working practice review.

31. Title of Activity	UK Safety Management Systems Combined Action Group (UK SMS CAG)
Other Participants	UKOTG, CHIRP, ASA.SEMTA, IFA, RAeS, AAIB, CAA
Prime Purpose of Activity	To address key issues in SMS, by identifying and producing guidance material for industry, within a specific timescale (eg. human factors, safety management, fatigue & working times of maintenance engineers). The group originated CAP 712, and produced the document "People, Practices and Procedures in Aviation Maintenance and Engineering".

32. Title of Activity	PLD EASA FCL Working Group
Other Participants	AOPA, BATA, BALPA, BBGA, BGA, BBGA, PFA, GAPAN, RAeS, FTOs, TRTOs, Airlines
Prime Purpose of Activity	To consult the flight training industry and representative bodies on the introduction of pilot licensing under EASA.

33. Title of Activity	PLD ICAO FCLTP Working Group
Other Participants	AOPA, BATA, BALPA, BBGA, BGA, BBGA, PFA, GAPAN, RAeS, FTOs, TRTOs, Airlines
Prime Purpose of Activity	To consult the flight training industry and representative bodies on the introduction of changes to ICAO Annex 1 & 6 made through the ICAO Flight Crew Licensing & Training Panel (FCLTP) and including the Multi-crew Pilots Licence (MPL).

34. Title of Activity	General Aviation Safety Council (GASCo) (part sponsored by CAA)
Other Participants	AAIB, AOPA, AOA, AAME, ALAE, BAeA, BBAC, BBGA, BGA, BHAB, BHPA, BMPA, BMAA, BMFA, BPA, BPPA, BRA, BWPA, CAA, DASC, FFA, GAPAN, GATCO, HCGB, HAA, LFA, Meteorological Office, MAF Europe, PPL/IR Europe, RAFFCA, RAeS, RIN, Royal Meteorological Society, UK FSC
Prime Purpose of Activity	Monitor GA Safety matters, publish GA Safety Magazine, seminars, special investigations, videos and hands on training.

Annex N

THE NATIONAL AIR TRAFFIC MANAGEMENT ADVISORY COMMITTEE (NATMAC) - TERMS OF REFERENCE AND CONSTITUTION

1 The Committee

The National Air Traffic Management Advisory Committee (NATMAC) is a non-statutory advisory body sponsored by DAP. The Committee is consulted for advice and views on any major matter concerned with airspace management.

2 Terms of Reference

NATMAC is to assist DAP in the development of airspace policies, configurations and procedures in order that due attention is given to the diverse requirements of all users of United Kingdom airspace, civil and military.

3 Constitution

3.1 The Committee is chaired by the Director of Airspace Policy, with membership strictly by his invitation and remaining under constant review. The present membership, which covers the whole spectrum of the UK aviation community, is listed at Appendix 1.

3.2 Most of the business of the Committee is conducted by correspondence but the Committee meets in Plenary Session twice a year. A proposal, which may originate within the Directorate or be initiated by a member organisation, is circulated and members are invited to comment. If the proposal does not originate within the DAP then the Directorate's views are also circulated. If the matter is straightforward, a consensus emerges which DAP incorporates when framing changes to legislation, altering airspace boundaries or associated procedures. If the matter is more complex, then a sub-committee or working group will be set up by DAP on which all interested members may play a part in formulating a report. A Plenary Session of the Committee then discusses the report and offers advice to DAP. There is no formal voting procedure.

3.3 NATMAC is a sounding board which functions on the principle that those who have a voice in the formulation of policies are more likely to abide by those policies. Such a principle leans heavily on mutual trust and interest. Matters discussed are "In Confidence" in that they are not available for general release without prior approval from the Chairman.

4 Sub Groups

Four Sub-Groups report to NATMAC on specific areas. These are:

a) The General Aviation Working Group (GAWG).
b) The Maps and Charts Working Group (MCWG).
c) The Surveillance and Spectrum Working Group (SASWG).
d) The Airlines Working Group (AWG).

Annex O

GENERAL AVIATION CONSULTATIVE COMMITTEE (GACC) - TERMS OF REFERENCE

Purpose	To provide a means for representatives of General Aviation to join the CAA to further the development of technical/ operational policy that will help to improve General Aviation safety standards, whilst encouraging the development of General Aviation in the UK. This includes, *inter alia*, providing expert advice to Safety Regulation Group on research priorities and current projects.
Chairman	David Chapman, Head Operating Standards Division, Safety Regulation Group
Composition	One Representative from each of the following: Aircraft Owners and Pilots Association Association of Licensed Aircraft Engineers (1981) British Business and General Aviation Association British Balloon and Airship Club British Gliding Association British Hang Gliding and Paragliding Association British Helicopter Advisory Board British Microlight Aircraft Association British Parachute Association Flying Farmers Association General Aviation Alliance General Aviation Safety Council Guild of Air Pilots and Air Navigators Helicopter Club of Great Britain Historic Aircraft Association National Association of Agricultural Contractors Popular Flying Association PPL/IR Europe Royal Aero Club Royal Aero Club – Records, Racing and Rally Association Royal Aero Club – Technical Committee Royal Aeronautical Society Royal Aeronautical Society – Engineering Section Royal Aeronautical Society – Light Aviation Group Society of British Aerospace Companies Unmanned Aerial Vehicle Systems Association
Frequency of Meetings	Three per annum
Secretariat	Mrs G Galway, General Aviation Department, 1W, Aviation House, Gatwick. Tel 01293 573226 E-mail gill.galway@srg.caa.co.uk

ISSUES LOG

No	Raised By/Date	Subject	Passed to/Date	Response Given
BHAB/01	P Norton 17 Jan 06	Creation of NPPL(H) Extend present NPPL to include simple helicopters.	G Forbes 1 Feb 06	17 Feb 06 The proposed EASA Recreational Pilot's Licence (RPL) is likely to include simple helicopters. CAA will consult Industry about whether to await creation of the RPL, or to introduce an NPPL(H) into the ANO.
BHAB/02	P Norton 17 Jan 06	Use of PPL pilots to position aircraft for maintenance or CAT flights Clarify ANO to allow this practice.	J Benyon 1 Feb 06	17 Feb 06 CAA believes the ANO is clear. PPLs cannot fly Aerial Work (or PT) flights. If payment made has included the need for, and costs of positioning the aircraft, the positioning flight is either Aerial Work or PT depending upon the circumstances. CAA believes that PPLs should not be exposed to the commercial pressures that can apply in such situations.
BHAB/03	P Norton 17 Jan 06	Permit pilot license training at unlicensed airfields Remove requirement for training flights to be conducted from licensed aerodromes; publish Code of Practice.	G Forbes 1 Feb 06	17 Feb 06 Similar to one of three proposals by the Light Aviation Airport Study Group, and GASCo/01 below. CAA to conduct consultation.

No	Raised By/Date	Subject	Passed to/Date	Response Given
BMAA/01	C Finnigan 14 Feb 06	Review of the Microlight Airworthiness Standard Review BCAR Section S against other European equivalents with a view to simplification.	P Mulcahy 21 Feb 06	
BMAA/02	C Finnigan 14 Feb 06	Aerial Work Permissions For Microlight Pilots & Aircraft Allow microlight pilots and aircraft to engage in aerial work activities.	D Beaven 21 Feb 06	20 Mar 06 CAA has sympathy for the proposal. UK arrangements should take account of EASA rules. Further work required.
BMAA/03	C Finnigan 14 Feb 06	BMAA/NPLG Ltd to have NPPL licence issue delegated CAA to delegate issue of such licences.	G Forbes 21 Feb 06	
BMAA/04	C Finnigan 14 Feb 06	NPPL Applicants be allowed to fly solo unsupervised pending licence issue Following completion of training, passing skills tests and ground exams, NPPL applicants cannot presently fly unsupervised legally pending licence issue.	G Forbes 21 Feb 06	
BMAA/05	C Finnigan 14 Feb 06	BMAA to approve and audit microlight FIC schools Delegation of audit and approval activities from CAA to BMAA.	G Forbes 21 Feb 06	
BMAA/06	C Finnigan 14 Feb 06	Prohibition of Microlights at Some Aerodromes See GASCo/06	G Forbes 21 Feb 06	See GASCo/06

No	Raised By/Date	Subject	Passed to/Date	Response Given
BMAA/07	C Finnigan 14 Feb 06	BMAA Code of Practice (based on CAP 755) for microlight clubs and schools to provide Industry Best Practice Standard. CAA to agree BMAA Code of Practice (based on CAP 755) for microlight clubs and schools to provide Industry Best Practice Standard.	D Beaven 21 Feb 06	20 Mar 06 CAA will allocate resources to this task when the results of the trials of CAP 755 are known.
GASCo/ 01	J Thorpe 7 Feb 06	Training at Unlicensed Aerodromes - Microlight Remove requirement for training flights to be conducted from licensed aerodromes; publish Code of Practice.	G Forbes 17 Feb 06	
GASCo/ 02	J Thorpe 7 Feb 06	Increase in Current 450 kg Microlight Weight Limit Allow heavier 3-axis metal and/or composite machines to be classified as microlights.	P Mulcahy 17 Feb 06 Withdrawn by J Thorpe on 20 Feb 06	21 Feb 06
GASCo/ 03	J Thorpe 7 Feb 06	Six Yearly Attendance at Safety Seminars Require all PPL / NPPL holders to attend a safety seminar once every 6 years.	G Forbes 17 Feb 06	
GASCo/ 04	J Thorpe 7 Feb 06	Flying Club Safety Officers Incorporate recommendation in Code of Practice that all flying clubs should appoint a Safety Officer.	G Forbes 17 Feb 06	

No	Raised By/Date	Subject	Passed to/Date	Response Given
GASCo/ 05	J Thorpe 7 Feb 06	Visual presentation of NOTAMS Change visual presentation of NOTAM information on the AIS website to utilise numbered spots on 1:500000 charts.	R Metcalfe 17 Feb 06	20 Mar 06 CAA is in agreement with NATS that no change should be made. Not all NOTAM information lends itself to the suggested format. Use of the assistance available by telephone and on-line should address any perceived difficulties.
GASCo/ 06	J Thorpe 7 Feb 06	Prohibition of Microlights at Some Aerodromes Aerodromes should be encouraged not to discriminate between microlights and other aircraft.	G Forbes 17 Feb 06	
GASCo/ 07	J Thorpe 7 Feb 06	Permit Aircraft Overflight of Built-up Areas The present restrictions on overflight of built-up areas by Permit to Fly aircraft and microlights should be lifted.	H Dyer 17 Feb 06	
GASCo/ 08	J Thorpe 7 Feb 06	Helicopter PPL Instrument Flying Substitute flight in poor conditions and precautionary landings for present requirement for 5 hours' instrument experience for PPL(H) holders.	G Forbes 17 Feb 06	
GASCo/ 09	J Thorpe 7 Feb 06	Radio Licence Validity Introduce 10-year validity of radio licence and associated requirement for re-test at renewal.	G Forbes 17 Feb 06	

No	Raised By/Date	Subject	Passed to/Date	Response Given
GASCo/ 10	J Thorpe 7 Feb 06	Landing Fees Discouraging Proper Practice Identify means to enable the MOD and aerodrome licensees to reduce landing/handling charges.	G Forbes 17 Feb 06	
	L Balthazor 12 May 06	Research and Experimental Aircraft There is increasing concern at the lack of design and manufacture of light aircraft to UK original designs. New recreational aircraft designs are being created and produced in Australia, Czech Republic, France, Germany, New Zealand, Poland and the USA, with even those designed in the UK usually transferred elsewhere for development and production. It is suggested that the regulatory framework needs to be changed to encourage the prototyping of modifications to improve safety or reduce operating costs, and of experimental aircraft under rules that are appropriate to the risk to individuals involved and to third parties, bringing it more in line with other countries, making the achievement of profitable light aviation activity much easier.	To be discussed at the next GACC meeting.	

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		In the United States the Federal Aviation Administration (FAA) actively support light aircraft design and manufacture and have an experimental category under which research aircraft can be flown with a minimum of certification complexity. An over prescriptive method of approval for test flight of prototype and other experimental aircraft has a significant cost implication, and causes unnecessary, anti-competitive and time consuming delays in what at an early stage is purely experimental research and development. There is no evidence that aviation safety is compromised in those countries that have a more relaxed view towards experimental light aircraft.		
BGA/01	David Roberts 15 May 06	Registration of Gliders CAA should delegate or devolve registration of gliders to the BGA.	To be discussed at the next GACC meeting.	