Lower Airspace Radar Services funding review report (LARS)

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Background

1. Ministers commissioned Department for Transport officials and the Civil Aviation Authority (CAA) jointly to carry out a review of funding for Lower Airspace Radar Services (LARS). The review team comprised representatives from Department for Transport, the CAA's Directorate of Airspace Policy (DAP) and Safety Regulation Group (SRG). All papers were sent to HM Treasury in case they wished to comment at any stage.

2. The objectives of the review were to examine the strengths and weaknesses of current funding arrangements and identify and evaluate options for future funding.

3. The terms of reference were:

- to consult with relevant aviation interests and interested Government departments.
- to examine the strengths and weaknesses of current funding arrangements for LARS.
- to assess the pressures on service providers and the different user groups.
- to identify and evaluate options for the future funding of LARS.
- to report to Ministers and the CAA Chairman.

4. A consultation letter was issued to representatives of airspace users on 16 August 2001 and a workshop to discuss the emerging issues with representative organisations (see Annex A) was held on 9 January 2002.

Aim of LARS

5. LARS was originally established in the 1970s to improve the efficiency of air traffic control services provided to aircraft in the vicinity of airfields not protected by controlled airspace. Its primary objective is to aid the flow of air traffic arriving at, and departing from, these airfields by encouraging aircraft transiting the area to receive an air traffic service (ATS). This reduces the amount of avoiding action for all aircraft and also enhances the efficient use of that airspace by providing a known traffic environment. LARS supplements existing services outside controlled airspace between 3000 and 9500 feet above mean sea level. General aviation is the largest LARS user group.

Principles of LARS

6. Participation in LARS, either as a user or as a service provider, is not compulsory. It is an advisory and information service provided through voluntary agreement between the CAA and the operator of the airfield concerned, using spare capacity from equipment and staff established for other purposes. At present, there are 28 airfields providing the service, of which 18 are military, 2 are civilian units where the service is provided by National Air Traffic Services (NATS) and 8 are civilian units where the service is provided by the airport operator.

How LARS is funded

7. The current level of funding for LARS is approximately £1.6 million per year. The service is paid for via the Eurocontrol route charges system as an element of the UK's unit rate. All aircraft above 5.7 tonnes pay route charges and thereby contribute to the cost of LARS. Aircraft between 2 and 5.7 tonnes flying under instrument flight rules (IFR) also pay route charges. Aircraft between 2 and 5.7 tonnes flying under visual flight rules (VFR) and all aircraft below 2 tonnes are exempt from route charges. Effectively, this means that LARS is currently funded by commercial airlines and business aviation of whatever nationality flying in UK airspace.

Issues considered by the working group

Capacity

8. With air traffic service providers focusing on efficiently meeting the needs of their core business, the spare capacity which is currently used to provide LARS is likely to diminish. Although the spare capacity is not expected to reduce over the next 12 months, it is difficult to predict in the longer term. Individual military unit budget holders do not benefit directly from funding for LARS as MOD payments are made to the MOD Centre. This makes LARS vulnerable to individual airbase economy initiatives.

Contribution from General Aviation

9. Leisure flyers, who are a major LARS user, predominantly operate under VFR in aircraft below 5.7 tonnes and therefore do not pay route charges. However, all aviation users derive a benefit from LARS as it reduces the possibility of inadvertent incursions into controlled airspace. Therefore, there is an argument that the cost of the service should be shared by all users of it. In turn, this raises the issue of how such a contribution could be collected and how much it would be.

Existing funding

10. The present level of funding for LARS is insufficient to cover the cost of a standalone service but it is a useful form of supplementary income for air traffic control units using their existing resources. Indeed, a standalone service could not presently be provided even if funding could be found because of the shortage of air traffic controllers in Europe. This situation is likely to pertain for the foreseeable future.

Safety considerations

11. Loss of spare ATS capacity in South East England has already provoked debate about LARS provision and, in particular, the question of whether LARS is safety critical. SRG's recent report on LARS provision in South East England indicated that although LARS provides specific safety advantages, these could not be quantified because there is insufficient data available on aviation activities outside controlled airspace. However, it concluded that degradation or withdrawal of the service could erode existing safety standards. This was also the view taken at the workshop. In short, the report did not come to a conclusion on whether LARS in the SE was safety critical.

Service provision

12. Provision of LARS varies around the country. Because it depends on the availability of spare capacity, there is a perverse situation of LARS provision declining where the intensity of use of the airspace is increasing. LARS is a voluntary service and both the CAA and general aviation would prefer that it remain so. If the acceptance or provision of LARS or a similar service were to be made compulsory, air traffic service providers would argue that they should be allowed to recover the full cost of providing the service - thereby increasing that cost several times over. Alternatively, where airspace became congested, the CAA might consider upgrading its classification in order to provide a known traffic environment. This, however, would exclude users who possessed neither the qualifications nor radio communication aids to use such airspace and would, therefore, be strongly resisted by general aviation users. In addition, in order to ensure the safe and expeditious use of the airspace as a whole, the CAA might as a condition of agreeing to an airspace classification upgrade, place obligations on the ATS provider to offer a service in the unregulated airspace immediately adjacent to the upgraded airspace. This would have financial and resource implications for the ATS provider.

Options for funding

Status quo

13. It is better to regard this option as 'steady state' rather than status quo. In recent years, there have been concerns over LARS coverage in South East England as a result of the withdrawal of key LARS providers in the area. Where airfields withdraw from LARS, as Luton did, the CAA attempts to encourage other suitably equipped ATS providers in the vicinity to join. However, because the current funding arrangements do not fully remunerate provision and thus offer little incentive to provide a service, replacements are becoming increasingly difficult to secure. As ATS providers strive for efficiency, spare capacity will reduce further and the number of potential providers decrease.

14. Retaining the steady state means retaining the current inefficiencies and inequities. Within two to three years, the situation may become unsustainable. General aviation would still not contribute towards LARS funding if the status quo is retained and commercial aviation would continue to bear the cost. Although the airlines would like to see the current £1.6 million funding removed from the unit cost base as they attempt to reduce their operating costs in the future, they have indicated - reluctantly - that they can live with the current system in the short term. However, they do not see any reason for them to fund increased provision.

Scrap LARS

15. Whilst scrapping LARS would represent a cost saving to commercial aviation, there would be a number of significant drawbacks.

- The cost saving to commercial aviation would be small since £1.6 million is less than 1% of the UK's total air traffic control cost base.
- As SRG's report concluded, there could be an erosion of safety standards within SE England. In addition, this could have a negative effect on the efficient use of airspace in the vicinity of airfields.
- LARS providers would lose revenue.

16. It was generally agreed that this option was undesirable, and that LARS withdrawal might have a negative impact on safety. On the other hand, it was thought likely that many ATS units without associated controlled airspace, would continue to encourage pilots in their vicinity to contact them so as to enable them to establish a known air traffic picture. This would enable them to provide a safe and expeditious service to aircraft arriving at or departing from their airfield.

Cost sharing options

17. Introducing a system of cost sharing between general and commercial aviation would mean that more of those who benefited from the service contributed to its costs. Provided the commercial aviation contribution remained in place, this would result in an increase in the revenues received from LARS, thereby making additional money available to remunerate LARS providers. Although it is unlikely that sufficient revenue would be raised to provide a full cost recovery, it may encourage additional units to participate.

18. Although this raises issues of charging leisure flyers for LARS, the workshop generally felt it would be equitable to collect a contribution from general aviation, particularly if this led to an increase in coverage.

19. There are a number of potential methods for collecting contributions:

- Hypothecation of aviation fuel duty
- Charge users of the service at point of use
- Airport Charge
- Annual Charge

Funded out of Fuel Duty

20. The aviation fuel AVGAS, which in the main is used by leisure flyers and the smaller end of business aviation, is subject to fuel duty. AVTUR, which is used by commercial flyers, is exempt. AVGAS users regard this as unfair and argue that, if they are to contribute to the cost of LARS, then some of the money they pay in fuel duty should be made available for this purpose. On the face of it, hypothecating part of the duty paid on AVGAS would be a simple way of collecting a contribution from general aviation. Furthermore, general aviation representatives have stated that they would only be willing to contribute through hypothecation if funds were diverted from existing tax revenue and LARS provision was increased as a result. In short, they would not support this option if it cost them additional money or did not result in increased coverage.

21. Department for Transport understands that it is not Government policy to hypothecate taxation and that where exceptions have been made, it has been only in areas of major Government policy. Nonetheless, given the strength of feeling among general aviation representatives, the matter is worth discussing with Treasury.

Charge at point of use

22. This was not considered a viable option. The revenue would be difficult to collect as there is no easy method of either recording or collecting those monies from VFR flights. A 'per-minute' charge would not be cost-effective as the cost of administration would probably exceed the receipts. Moreover, a charge at point of use could discourage pilots from using the service. This would have unacceptable implications for safety and efficiency.

Airport charge

23. The working group considered whether a LARS charge could be collected as part of an airport charge, but this would be contrary to the 1986 Airports Act. It is doubtful in any case whether this would be a fair and effective method of collection since LARS is not generally used by aircraft landing at the airfield providing the service but by those transiting the airspace around it.

Annual charge

24. The working group felt that, if hypothecation of fuel duty were ruled out as a means of cost sharing, then some form of annual charge would be preferable to collecting charges at the point of use from general aviation. The following options were considered:

Aircraft registration charge

25. An annual tax disc, or 'season ticket' would be a straightforward method of collection and the cost of collection would be unlikely to exceed receipts. To make the charge easier to collect, it could be combined with another regulatory charge such as that for radios. This would also take into account whether the aircraft was equipped to use LARS. However, it was noted that this could lead to people paying for a tax disc in areas where no LARS is provided. Moreover, it could result in UK aircraft owners registering their aircraft overseas to avoid payment.

26. Initial investigations suggest that to provide funds to support a standalone LARS would require the charge to be set at an unacceptably high level. Excluding balloons, microlights and small light aeroplanes, there are 8537 aircraft on the UK Register, 7419 of which weigh less than 5.7 tonnes and 699 of which weigh between 2 tonnes and 5.7 tonnes. Depending on the number of aircraft to be included in the scheme, raising approximately £1.6 million from an annual charge for each aircraft on the UK Register with a valid Certificate of Airworthiness or Permit to Fly would require a charge ranging between £187 and £2289 per aircraft.

Pilot licence charge

27. Alternatively, a flat rate contribution could be paid by each private pilot licence holder. Because leisure flyers frequently share the use of an aircraft, this alternative would generate additional revenue whilst maintaining the charge per licence at a reasonable level. However, some pilots would pay for LARS whilst living or flying in an area where no LARS is provided.

28. Excluding balloon, microlight, and glider pilots, it is estimated that there are approximately 30,000 holders of Private Pilot's Licences (PPL) with valid medical certificates. This is the best measure of current leisure pilots, because UK licences used to be issued for life. It would require an annual charge of £54 to each active PPL holder to generate approximately £1.6 million. However, this approach is likely to prove unpopular.

29. Doubling the funding would still not be enough to fund a standalone service. Moreover, neither option is consistent at the moment with the Eurocontrol route charges system which requires charges to be levied per flight. Eurocontrol has been looking at the introduction of a new centrally operated charging mechanism which would aim to recover a flat-rate charge from all aircraft between 2 and 5.7 tonnes but this idea has now been taken off the table as being fraught with unresolveable difficulties.

Conclusions

- The existing arrangements for the funding and provision of LARS enable the current level of service provision to continue in the short term.
- There is unlikely to be a problem in the immediate future but, looking beyond one or two years, LARS provision is likely to become more patchy as units' spare capacity is further reduced. This problem is likely to be most apparent in SE England where there is much traffic in a complex environment and safety considerations may require action.
- General aviation would be prepared to accept cost sharing so long as their share came out of fuel duty. They believe that the fuel duty should be kept at the current level and it should be used solely to enhance LARS service levels.
- Airlines are willing to accept the status quo in the short term but they are likely to take steps to reduce their LARS costs over the next few years.
- There is a general view that if a radar service is essential in certain areas, then a change in airspace classification would be more appropriate than mandating LARS. Improvements should be targeted towards areas where an enhanced LARS is most needed. However, again, it may be that the most appropriate response is a change in airspace classification in these areas. There is also a consensus that while LARS may not be crucial to safety in itself, it is highly desirable in contributing to efficient use of airspace.
- The funding issue cannot be wholly isolated from the question of service provision and it is sensible to look first at the level of funding that can reasonably be achieved and then the level of service which can be provided on this basis.

Recommendations

- That Department for Transport should consult the Treasury on the possible hypothecation of aviation fuel duty to facilitate enhanced LARS provision.
- That the CAA be tasked to continue to monitor LARS provision and funding arrangements to ensure that safety requirements are met whilst awaiting the outcome of the Eurocontrol Route Charge initiative.
- That LARS funding arrangements should be re-visited in 2004 and, in the meantime, the CAA should investigate LARS cost sharing options between general and commercial aviation further.
- That the cost of LARS should be frozen at £1.6 million for financial year 2002/3 (notwithstanding the need to take into account annual inflation).
- That the outcome of this review be notified publicly.

Annex A - Organisations invited to attend LARS funding review workshop

Aircraft Owners and Pilots Association (AOPA)
Airport Operators Association (AOA)
Army
Atlantic Airlines
British Air Transport Association (BATA)
British Gliding Association (BGA)
British Hang Gliding & Paragliding Association (BHPA)
British Helicopter Advisory Board (BHAB)
General Aviation Manufacturers & Traders Association (GAMTA)
General Aviation Safety Council (GASCo)
HQ Strike Command
National Air Traffic Services (NATS)
Popular Flying Association (PFA)
Royal Navy