

Summary: Intervention & Options

Department /Agency: Safety Regulation Group / Civil Aviation Authority	Title: Impact Assessment of Proposal to amend the Air Navigation Order 2005 Article 25(8)(c)	
Stage: Final Proposal	Version: 1	Date: 1 May 2008
Related Publications: Air Navigation Order 2005 (ANO)		

Available to view or download at:

<http://www.caa.co.uk/consultations>

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What is the problem under consideration? Why is government intervention necessary?

Police helicopter operations in the UK have been conducted for many years with a flight crew or equipment alleviation compared to other forms of public transport. It is now considered prudent to require those standards to be harmonised and for police helicopters to meet the same levels of equipment requirement and crew composition as other public transport helicopters. The increase in safety is a positive benefit and reflects the thrust of the recommendations of the CAA study into helicopter accidents occurring during flight in degraded visual conditions.

What are the policy objectives and the intended effects?

To improve the safety of police operations by harmonising the requirements for the composition of crews of police helicopters with those of public transport helicopters by removing the alleviation for single pilot IFR operations without the required autopilot being fitted. The improved level of safety provided by this change has already been widely achieved as the majority of police units now operate compliant helicopters.

What policy options have been considered? Please justify any preferred option.

1. Do nothing. This option would not recognise the findings of the CAA study into the causes of helicopter accidents in conditions of degraded visibility and would not allow the enhanced safety benefits of better-equipped helicopters to be realised.
 2. Amend Article 25(8)(c) of the ANO to remove the alleviation for police helicopters to operate single pilot Instrument Flight Rules (IFR) flights without an appropriate autopilot being fitted thereby improving safety and reducing risk.
- Option 2 is the preferred option if safety enhancement in this area of police aviation is to be achieved.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

The increased levels of safety have to a large extent already been achieved and will continue to be monitored under the normal safety oversight of these operations by the CAA who will conduct a full review in 2015.

Ministerial Sign-off For final proposal/implementation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option: 2	Description: Amend the ANO 2005 Article 25(8)(c) to require an autopilot for single pilot IFR police helicopter operations
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COSTS	ANNUAL COSTS	<p>Description and scale of key monetised costs by 'main affected groups'</p> <p>The sum of the costs to reach compliance is likely to be in the region of £4.5M per police operating unit less a trade-in value of approximately £1M. The total cost will be in the order of £17.5M split between the Police Air Operations units concerned and the Home Office. Average annual costs are expected to be equivalent to current operational costs and therefore neutral.</p>			
	One-off (Transition) Yrs				
	£ 17.5M		10		
	Average Annual Cost (excluding one-off)				
	£ N/A	Total Cost (PV)		£ 17M	
<p>Other key non-monetised costs by 'main affected groups'</p> <p>There will be little if any social, environmental or other cost.</p>					

BENEFITS	ANNUAL BENEFITS	<p>Description and scale of key monetised benefits by 'main affected groups'</p> <p>The proposal will have a positive safety effect on the operation of police helicopters for flights under IFR, including at night, and provide an enhanced level of safety to helicopter occupants and third parties alike and reduce the risk of an accident and loss of life.</p>		
	One-off Yrs			
	£ N/A			
	Average Annual Benefit (excluding one-off)			
	£ N/A	Total Benefit (PV)		£ N/A
<p>Other key non-monetised benefits by 'main affected groups'</p> <p>This proposal will harmonise safety features of the equipment or crewing requirements for all public transport helicopters operating under Article 25(8) of the ANO and reduce the risk of an accident and loss of life.</p>				

Key Assumptions/Sensitivities/Risks

Operators of older police helicopters will be able to procure newer helicopters that meet the equipment requirements or provide extra pilots to meet the crewing requirement in order to comply with the new regulation and not to be restricted in their operational obligations. It is anticipated that in the main this commitment will have already been addressed within normal re-equipment procurement cycles.

Price Base Year 2008	Time Period Years 10	Net Benefit Range (NPV) £ 0 to -17.5M	NET BENEFIT (NPV Best estimate) £ -17M
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What is the geographic coverage of the policy/option?	UK			
On what date will the policy be implemented?	2009			
Which organisation(s) will enforce the policy?	CAA / Home Office			
What is the total annual cost of enforcement for these organisations?	£ Negligible			
Does enforcement comply with Hampton principles?	Yes			
Will implementation go beyond minimum EU requirements?	No			
What is the value of the proposed offsetting measure per year?	£ Nil			
What is the value of changes in greenhouse gas emissions?	£ Nil			
Will the proposal have a significant impact on competition?	No			
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small N/A	Medium N/A	Large N/A
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of	£ Nil	Decrease of	£ Nil
		Net Impact	£ Nil

Key: Annual costs and benefits: Constant Prices (Net) Present Value

Evidence Base (for summary sheets)

PROPOSAL FOR THE AMENDMENT OF THE AIR NAVIGATION ORDER 2005 ARTICLE 25 TO CHANGE THE CREW COMPOSITION REQUIREMENTS FOR HELICOPTERS FLYING UNDER AND IN ACCORDANCE WITH THE TERMS OF A POLICE AIR OPERATOR'S CERTIFICATE

1 Title of proposal

- 1.1 Amendment to Article 25 of the Air Navigation Order 2005 (ANO) to change the crew composition requirements for helicopters flying under and in accordance with the terms of a Police Air Operator's Certificate (PAOC).

2 Purpose and intended effect

2.1 Background

- 2.1.1 A flight by an aircraft registered in the UK in the service of a police authority is deemed to be, for the purposes of the ANO, a public transport flight. With this comes all the associated requirements for public transport operations including the grant of a PAOC to the operator who has demonstrated competency in securing the safe operation of aircraft in the specified circumstances. Alleviation from some of the requirements is contained in certain Articles of the ANO due to the nature of police operations. One of these alleviations affects the crew composition for Instrument Flight Rules (IFR), including at night, whilst another permits operations at lower weather limits.

2.2 Issue

- 2.2.1 In accordance with Article 25(1) of the ANO, an aircraft shall not fly unless it carries a flight crew of the number and description required by the law of the country in which it is registered. Article 25(2)(a) requires that any aircraft registered in the United Kingdom shall carry a flight crew adequate in number and description to ensure the safety of the aircraft, whilst Article 25(2)(b) requires that the number of flight crew shall be no less than that defined in the flight manual. In addition, aircraft having a predetermined level of complexity are required to carry approved autopilots.
- 2.2.2 Under Article 25(7), the minimum flight crew must be two pilots for helicopters with a maximum total authorised weight of 5700 kg or less flying for the purposes of public transport under IFR, which includes flight at night. Article 25(8), however, provides alleviation from this latter helicopter requirement by allowing the flight crew to be reduced to one pilot if the helicopter is equipped with an autopilot with at least altitude hold and heading mode. Additionally, this article currently further alleviates and allows helicopters flying in accordance with the terms of a PAOC to be flown single pilot under IFR, including at night, without the required autopilot.
- 2.2.3 When Article 25(7) was originally amended to fall in line with the European standard of JAR-OPS 3, most police operators could not meet these autopilot requirements. The CAA recognised that police support activities would be dramatically affected if the requirements were extended to include PAOC holders, and therefore they were specifically alleviated from the requirement. The last ten years has seen a significant change in the availability and introduction of new generation aircraft into police service, with nearly all police operators now meeting the autopilot equipment standards required of an Air Operator's Certificate (AOC) public transport operator.
- 2.2.4 A recent study by the CAA into helicopter flight in degraded visual conditions has led to a change in the weather minima for Visual Flight Rules (VFR) and IFR and highlighted the vulnerability to the loss of control of helicopters in such environments. Holders of PAOCs will, however, continue to be able to operate at lower weather and operating minima than any other similar style of operation in accordance with the rigorous standards laid down in *CAP 612 Police Air Operations Manual*. Training and testing of flight crew along with aircraft performance and equipment fit are all taken into account when mitigating the extra risk involved in such operations. However, to

continue to ignore the significant safety enhancements offered by aircraft fitted with an autopilot system can no longer be justified. It is therefore proposed to remove the alleviation and require police helicopters to meet the same autopilot equipment fit and flight crew composition as those necessary for other public transport helicopters.

- 2.2.5 The proposed change to Article 25(8) is wholly in line with the findings and recommendations of the study which can be found at CAA Paper 2007/3 (*Helicopter Flight in Degraded Visual Conditions*).

2.3 Objective of proposal

- 2.3.1 The objective of the proposed change to Article 25(8) is to enhance flight safety and harmonise police operations with other public transport flights by removing the alleviation for helicopters flying under and in accordance with the terms of a PAOC to be permitted to fly single pilot without an autopilot under IFR, including at night.

3 Options

- 3.1 Two options were considered:

Option 1. Do nothing. This option would not recognise the findings of the CAA study into the causes of helicopter accidents in conditions of degraded visibility and would not allow the enhanced safety benefits of better-equipped helicopters to be realised.

Option 2. Amend ANO Article 25(8). This option would have a positive safety benefit to police helicopter operations and require them to operate to similar standards as those required of all other public transport flights providing an enhanced level of safety to helicopter occupants and third parties alike.

Option 2 is the preferred option if practical safety enhancement in this area of police aviation is to be fully realised.

4 Sectors concerned

- 4.1 This proposal will only affect UK police operators of helicopters.
- 4.2 Of those affected, approximately 75% are already compliant with the proposed equipment requirement to allow single pilot operation under IFR, including at night. Those remaining non-compliant helicopters are likely to be replaced in the near future regardless of the change to the regulations, either in the normal procurement cycle or for other reasons.

5 Impacts

5.1 Safety

- 5.1.1 The proposal will have a positive safety effect on the operation of police helicopters for flights under IFR, including at night, by requiring them either to be equipped with an autopilot with at least altitude hold and heading mode when using a single pilot, or to be operated with two pilots. This will harmonise safety features of the equipment requirements for all public transport helicopters operating under Article 25(8). However, police units are unlikely to wish to utilise the two pilot solution as the police crew concept of operations and the equipment fit of the helicopters concerned require that one of the police crewmembers occupies the co-pilot seat. A two pilot crew would have significant effects on aircraft configuration and equipment requirements, crew training and resourcing, and be difficult to manage.

5.2 Economic

- 5.2.1 There will be a cost to operators of older aircraft in the procurement of newer types that meet the equipment requirements or the provision of extra pilots. As mentioned above, it is unlikely that a two pilot alternative would be chosen by police units therefore replacement helicopters will be

required. Additional costs for such a programme update may include training and support arrangements necessary for the operation of a different type of helicopter. The sum of these costs is likely to be in the region of £4.5M per operation less a trade-in value of approximately £1M. The total cost will be in the order of £17.5M split between the Police Air Operations units concerned and the Home Office. But it is likely that in the main this commitment will have already been addressed within normal re-equipment procurement cycles.

- 5.2.2 One unit is likely to be affected by higher lease charges associated with the requirement for a more capable helicopter.

5.3 Environmental, Rural and Health

- 5.3.1 The change will have little if any environmental, rural or health impact as the operations will still be conducted by helicopters similar in these respects to those already in use.

5.4 Social

- 5.4.1 There are not expected to be any social effects caused by this change covering: human rights, race, gender and disability equality.

5.5 Small Firms Impact Test

- 5.5.1 The CAA does not consider this matter to be an issue for those police helicopter operators likely to be affected by this proposal.

5.6 Other impacts

- 5.6.1 No other impacts have been identified that will result as a consequence of this change.

5.7 Equity and fairness

- 5.7.1 It is considered that the proposed change is both equitable and fair. Many of the operators affected have already become compliant with the new requirements through the normal updating and change of equipment programme. For those operators who have not yet progressed to the higher standard, there will be a financial impact, but this should be ameliorated by prior financial planning for the event which had been indicated by the Home Office several years ago together with its financial support.

5.8 Competition Assessment

- 5.8.1 With regards to competition, it is considered that the proposed amendment to the ANO will not:
- a) directly limit the number or range of suppliers;
 - b) indirectly limit the number or range of suppliers;
 - c) limit the ability of suppliers to compete; or
 - d) reduce suppliers' incentives to compete vigorously.

6 Enforcement, sanctions and monitoring

- 6.1 The mechanism for enforcement through the ANO already exists and no additional resources will be required in this regard. The CAA's Safety Regulation Group, as part of its safety oversight function, will monitor and review the effectiveness of the legislation. The CAA recognises that once the change has occurred operators will be expected to be compliant but that, subject to a case-by-case assessment, short-term alleviation to allow any procurement processes to be completed could be considered, in the normal manner within their powers under Article 153 of the ANO.

7 Implementation and Delivery Plan

- 7.1 The changes to UK legislation implemented by this IA have been anticipated for several years by the UK police aviation operators who have been briefed and consulted with. Affected operators will in the main be compliant with the new requirements when the ANO is amended or have in place arrangements acceptable to the CAA to become compliant.

8 Post-Implementation Review

- 8.1 The CAA, as part of its continuing oversight of aircraft operations, will assess the effect of this and any further amendments on police air operators. Should amendments be required, the CAA will consult on proposals that would modify or supersede the requirements proposed in this IA.

9 Consultation

- 9.1 In the Letter of Consultation (L of C) of 30 November 2007 (FODCOM 37/2007), the CAA detailed a proposal to amend the ANO to introduce a change in the crew composition requirements for helicopters flying under and in accordance with the terms of a Police Air Operator's Certificate. Comments were invited on the proposal.

- 9.2 Comments were received from four police authorities and one commercial operator:

- a. Bedfordshire Police
- b. Northumbria Police – North East Air Support Unit
- c. North Wales Police Air Support Unit
- d. Police Aviation Services
- e. West Midlands Police Air Operations Unit

The comments supported and recognised the positive safety benefit of the proposal. A summary of the comments and the CAA responses is tabulated below. Several of the respondents preferred that their actual comments should remain in confidence and therefore only the general subject matter is recorded. One commenter indicated that the cost of compliance would be in line with the estimations detailed in the IA.

- 9.3 The comments were predominantly focused on the timing of any change to the ANO and therefore the date by which compliance would be required. This particularly affects those operators who will have to procure, or who are in the process of procuring, compliant helicopters. The CAA has responded by indicating that once the change has come into force operators will be expected to be compliant but that, subject to a case-by-case assessment, short-term alleviation to allow any procurement processes to be completed could be considered in the normal manner.

- 9.4 Comments and responses are tabulated at Annex 1. The CAA is satisfied that the views expressed by interested parties during the consultation have been taken into account.

10 Summary and Recommendations

- 10.1 Police helicopter operations in the UK have been conducted for many years with a flight crew or equipment alleviation compared to other forms of public transport. It is now considered prudent to require those standards to be harmonised and for police helicopters to meet the same levels of equipment requirement and crew composition as other public transport helicopters. There is a positive benefit to safety and the change reflects the thrust of the recommendations of the CAA study into helicopter accidents occurring during flight in degraded visual conditions. As the use of two pilots in accordance with Article 25(7) is unlikely to be adopted, the total cost of re-equipping with single pilot compliant helicopters under Article 25(8) will be in the order of £17.5M split between the Police Air Operations units concerned and the Home Office. But it is likely that in the main this commitment will have already been addressed within normal equipment procurement cycles.

- 10.2 The CAA believes that Option 2 will provide an enhanced level of safety to helicopter occupants and third parties alike and is minded to recommend to the Secretary of State for Transport that the ANO be amended at Article 25(8) as detailed in Annex 2.
- 10.3 Option 1 to do nothing was rejected as it would not recognise the findings of the CAA study into the causes of helicopter accidents in conditions of degraded visibility and would not allow the enhanced safety benefits of better-equipped helicopters to be realised.
- 10.4 A summary of Costs and Benefits for amending the ANO is tabulated at Annex 3.

Specific Impact Tests: Checklist

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	No	No
Small Firms Impact Test	Yes	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	Yes	No
Other Environment	Yes	No
Health Impact Assessment	Yes	No
Race Equality	Yes	No
Disability Equality	Yes	No
Gender Equality	Yes	No
Human Rights	Yes	No
Rural Proofing	Yes	No

Annexes

Annex 1

Comments and Responses

Commenter	Comments	Responses
Bedfordshire Police	In these times of severe financial constraint and future year-on-year budgetary reductions, there is a real risk that the high capital costs in meeting the demands of the removal of the current alleviation will prove too high and that no replacement aircraft will be sought. It would be highly regrettable to lose a serviceable and operationally effective aircraft to meet the demands of an arbitrary date when there is considerable life remaining on the existing airframes. A more realistic date would provide time for budgetary planning to be put in place and a staged transition to new airframes that comply with the ANO.	Noted. The effective date for compliance will be provided by the change to the ANO 2005 Article 25(8). The process of amendment has been conducted following an initiative by the Home Office. The CAA recognises that there may be a need for some flexibility in achieving compliance with the amended regulation when it comes into effect. The CAA under Article 153 of the ANO has the authority to address such issues as they arise. The text of the IA has been amended to reflect this.
Northumbria Police – NEASU	Effective date of compliance.	See above.
North Wales Police – ASU	Effective date of compliance.	See above.
Police Aviation Services	Effective date of compliance.	See above.
West Midlands Police – AOU	We support the proposals to change the ANO. However, we would like to ensure that we get some sort of alleviation should the autopilot be unserviceable for a number of days. At the moment we are allowed to fly single pilot at night should our autopilot be unserviceable under certain restrictions and in accordance with the Minimum Equipment List (MEL).	Noted. Article 25(8)(b) partly covers the situation of autopilot unserviceabilities, albeit on start up, and the CAA will review the MEL requirements and weather minima for visual flight at night for police operations as contained in <i>CAP 612 Police Air Operations Manual Part 1</i> .

PROPOSED AMENDMENT TO ANO 2005 ARTICLE 25

1 Amend Article 25 as follows:
Composition of crew of aircraft

- (8) A helicopter described in paragraph (7) shall not be required to carry two pilots if it:
- (a) is equipped with an autopilot with, at least, altitude hold and heading mode which is serviceable on take-off;
 - (b) is equipped with such an autopilot notwithstanding that before take-off the approved autopilot is found to be unserviceable, if the helicopter flies in accordance with arrangements approved by the CAA; **or**
 - (c) **is flying under and in accordance with the terms of a police air operator's certificate; or (deleted)**
 - (d) is flying by day and remains clear of cloud and with the surface in sight.

Summary Costs and Benefits Table for Amending the ANO Article 25(8)(c)

Option	Total benefit per annum: economic, environmental, social policy and administrative	Total cost per annum: economic, environmental, social policy and administrative
1	None.	No direct cost. There would be no improvement in safety for those operators with helicopters that do not meet the public transport autopilot requirements for single-pilot IFR operations with the attendant increased risk to the helicopter occupants and third parties together with the consequential social, economic and administrative burdens that could ensue.
2	The proposal will have a positive safety effect on the operation of police helicopters for flights under IFR, including at night, by requiring them either to be equipped with an autopilot with at least altitude hold and heading mode when using a single pilot, or to be operated with two pilots. This will harmonise safety features of the equipment requirements for all public transport helicopters operating under Article 25(8) and provide an enhanced level of safety to helicopter occupants and third parties alike.	Operators of older aircraft will need to procure newer helicopters that meet the equipment requirements or provide extra pilots to meet the crewing requirement. Many police operators already possess compliant helicopters. The sum of the costs to reach compliance is likely to be in the region of £4.5M per operation less a trade-in value of approximately £1M. The total cost will be in the order of £17.5M split between the Police Air Operations units concerned and the Home Office. Average annual costs are likely to be equivalent to current operational costs and therefore neutral. There will be little if any social or environmental costs.