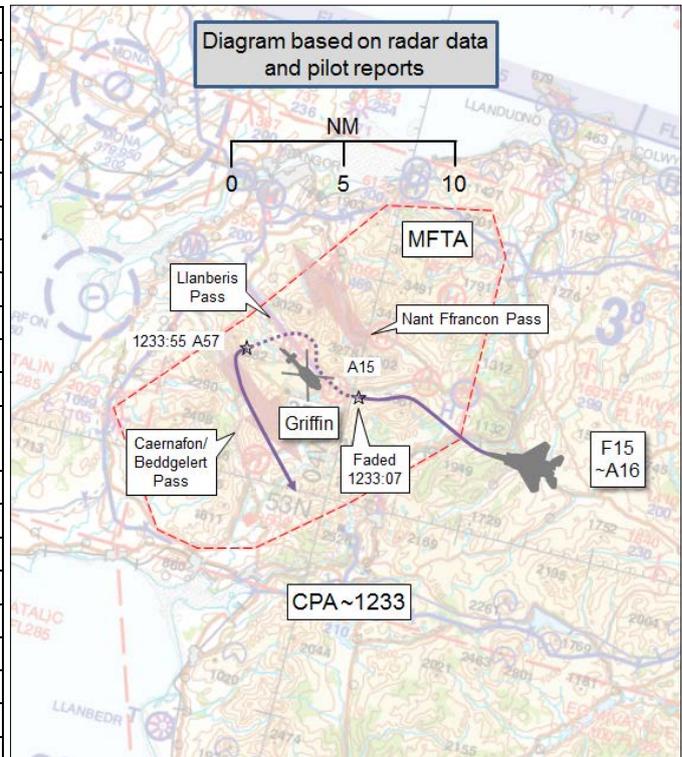


**AIRPROX REPORT No 2017142**

Date: 05 Jul 2017 Time: 1233Z Position: 5305N 00402W Location: Llanberis Pass

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	Griffin	F15
Operator	HQ Air (Trg)	Foreign Mil
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Valley Low Level	LL Common
Altitude/FL	NK	NK
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	Black, yellow	Dark grey
Lighting	Nav, tail, upper and lower HISL	Nav
Conditions	VMC	VMC
Visibility	40km	'Unrestricted'
Altitude/FL	NK	1000-2000ft
Altimeter	NK (1015hPa)	agl (1014hPa)
Heading	120°	300°
Speed	N/A	440kt
ACAS/TAS	TAS	Not fitted
Alert	TA	N/A
<b>Separation</b>		
Reported	100ft V/400m H	200ft V/0.5nm H
Recorded	NK	



**THE GRIFFIN PILOT** reports conducting a mountain-flying workup sortie. As the handling pilot (HP) was presenting his demonstration of a particular exercise, the TAS alert sounded, informing them of traffic in the 12 o'clock at less than a mile. They looked to see an F15 entering the valley and closing rapidly. The HP took immediate evasive action with a hard turn to remain tight against the valley side. The F15 passed down their left-hand side, slightly below and at a distance estimated visually as 400 metres. The Griffin pilot noted that the TAS contact occurred at less than a mile, as the F15 unmasked from terrain. The Griffin pilot contacted Valley approach to inform them of the Airprox.

He assessed the risk of collision as 'Medium'.

**THE F15 PILOT** reports turning down the valley in a right-hand turn when he saw a black and yellow helicopter on the left, slightly high and at a range of 3nm. He turned hard right and climbed to increase separation.

He assessed the risk of collision as 'None'.

**THE VALLEY SUPERVISOR** reports a Griffin Helicopter pilot reported on Valley Approach frequency an Airprox with a grey fast-jet, either an F15 or F18, whilst operating in the Llanberis Pass. The Supervisor spoke to Swanwick Mil who confirmed a pair of F15s from Lakenheath were operating in North Wales, with one at low-level at that time. A short time later, Swanwick Mil called back to confirm that [F15 C/S] had been operating at low-level in Snowdonia and had been visual with a Griffin at the time of the reported Airprox. Neither pilot was in receipt of an Air Traffic Service from Valley and neither aircraft was displayed on radar at the time.

## Factual Background

The weather at Valley was recorded as follows:

METAR EGOV 051250Z 34005KT 9999 FEW013 18/14 Q1019 BLU NOSIG=

An extract from the UK Military Low Flying Handbook edition valid on the date of the Airprox is reproduced below<sup>1</sup>:

**6. The Snowdonia Dedicated Helicopter Mountain Flying Training Area (MFTA).** The MFTA is a dedicated helicopter training area that extends from ground level to 500ft AGL. RW<sup>2</sup> aircrew wishing to use the MFTA but not operating from RAF Valley should, in addition to normal LF booking, inform RAF Valley Stn Ops Ext 7059, giving relevant details including entry and exit points. RW aircrew should listen out on 362.3 MHz (Valley Low Level) when operating in the MFTA. FW<sup>3</sup> aircrew should blind call their intentions to enter the A5 Pass or A4085 Pass on 362.3 MHz wherever possible. Further MFTA restrictions are as follows:

- a. **FW ac should not overfly the MFTA below 500ft MSD.** Except in the Nant Ffrancon (A5) Pass and the Caernarfon/Beddgelert Pass (A4085) where they may fly down to 250ft MSD.
- b. **FW ac should not enter the Llanberis Pass.**
- c. **The Nant Ffrancon A5 Pass.** FW ac should fly the A5 pass in a north-westerly direction only. RW training should not be conducted in the A5 Pass during normal UKLFS operating hours.

## Analysis and Investigation

### UKAB Secretariat

The Griffin and F15 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>4</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>5</sup>.

### F15 Squadron Occurrence Investigation

After reviewing flight data for [F15 C/S], it was determined that the pilot inadvertently turned north into Llanberis Pass. Although the UK Low Fly does not prohibit fixed wing aircraft from flying into that pass, it does state that fixed wing aircraft should not fly into the Llanberis pass. The pilot intended to fly north[wards] up the valley to the east [the Nant Ffrancon Pass], in accordance with local flying procedures. The pilot was thoroughly debriefed on the importance of maintaining positional awareness and flying in accordance with local established flying procedures to ensure de-confliction and maintain flow direction.

## Comments

### HQ Air Command

This incident took place in Class G airspace between 2 aircraft which were both without an ATS but were listening out on the UHF low-level common frequency. The crew of the Griffin was in the process of conducting mountain flying exercises, which involved a demonstration by the HP which would have been observed by the NHP. Even though this was a busy sortie, lookout would have featured as an ever present element of the exercise and would have been further enhanced by

<sup>1</sup> Section 2 The UK Day Low Flying System Restrictions And Procedures, LFA 7.

<sup>2</sup> Rotary wing.

<sup>3</sup> Fixed wing.

<sup>4</sup> SERA.3205 Proximity.

<sup>5</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

the crewman operating in the cabin. The crew was aware that the UK Military Low Flying Handbook states that 'FW aircraft should not enter the Llanberis Pass' and would not have been expecting such a fast-moving aircraft to be in the vicinity. Fortunately, the TAS demonstrated its worth, and alerted the Griffin crew to the emerging conflict. The occurrence investigation highlights the difference in definition between 'shall' and 'should' within the MAA glossary; however, regardless of what is expected, there is nothing certain in aviation. A recommendation has been raised to review the UKMLFHB entry regarding the Llanberis pass.

## **USAFE**

Notwithstanding the nuance mentioned in the Squadron Occurrence Investigation, it has long been recognized by the Wing that the Llanberis Pass is not to be entered by FW aircraft. In this case, the crew mistook the Llanberis Pass for the adjacent Nant Ffrancon Pass, which resulted in the Airprox; they have been debriefed accordingly.

## **Summary**

An Airprox was reported when a Griffin and an F15 flew into proximity in the Llanberis Pass at about 1233 on Wednesday 5<sup>th</sup> July 2017. Both pilots were operating under VFR in VMC, neither in receipt of an Air Traffic Service.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from an air traffic controller involved and reports from the appropriate operating authorities.

Members quickly agreed that it had been a navigation error that had resulted in the F15 pilot inadvertently entering the Llanberis Pass and that as a result he had flown into conflict with the Griffin helicopter. However, the Board noted that the Snowdonia MFTA extended only to 500ft AGL and therefore that FW aircraft could quite legally fly along the Llanberis Pass above 500ft MSD. The HQ USAFE advisor explained that although UK-based USAFE fast-jet aircrew could operate down to 300ft MSD, the associated currency requirements were such that crews normally only operated down to 500ft MSD, given the associated smaller currency overhead. Some members considered it most likely that the F15 pilot had therefore probably complied with the letter (if not the intent) of the UKLFHB regulation covering operation in the vicinity of the Snowdonia MFTA, in that he had likely been above the MFTA. Others pointed out that the regulation clearly stated that 'FW aircraft should not enter the Llanberis Pass', but the debate returned to the fact that this came within the MFTA paragraph, implying that if the FW aircraft was not in the MFTA (i.e. the aircraft was above 500ft MSD) then the Llanberis Pass rule did not apply. Members were aware that RAF fast-jet aircraft did not operate in the Llanberis Pass at all, and wondered whether RAF custom had resulted in a poorly framed regulation remaining current. Whatever the case, it was agreed that this situation was clearly not desirable, with helicopters being operated in close proximity to mountainous terrain, potentially with underslung loads or crew, and that the Snowdonia MFTA regulation did not appear to provide sufficient guidance to assure safe operation between helicopters and fast-jets. Consequently, the Board resolved to recommend that 'ACAS review the wording of the regulation covering use of Low Flying System airspace in the vicinity of the Snowdonia MFTA', with specific emphasis on FW operation within the Llanberis Pass and the vertical limits of the MFTA.

Turning to the risk, members agreed that although the Griffin crew had been alerted to the approaching F15 by their TAS, and had taken avoiding action, and that the F15 pilot had seen the Griffin and also taken avoiding action, the separation, closure rate and circumstances of the helicopter's operation were such that safety had been much reduced below the norm.

**PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS**

Cause: The F15 pilot inadvertently flew along the Llanberis Pass and into conflict with the Griffin.

Degree of Risk: B.

Recommendation: That ACAS review the wording of the regulation covering use of Low Flying System airspace in the vicinity of the Snowdonia MFTA.

**Safety Barrier Assessment<sup>6</sup>**

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

**Flight Crew:**

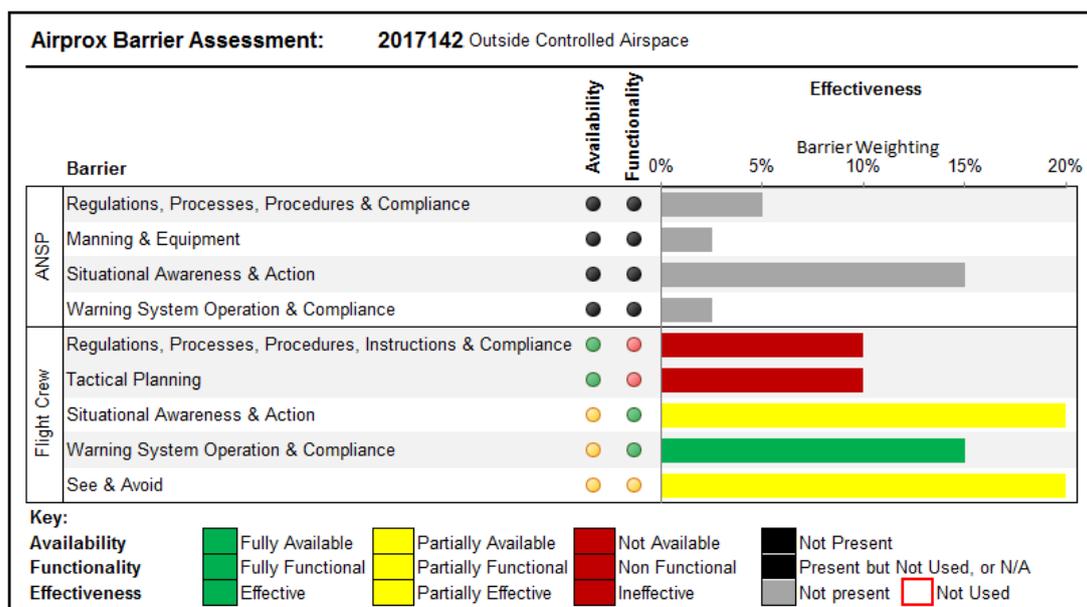
**Regulations, Processes, Procedures, Instructions and Compliance** were assessed as **ineffective** because the UK Low Flying System regulation for the Snowdonia MFTA was ambiguous.

**Tactical Planning** was assessed as **ineffective** because in the execution of his plan, the F15 pilot mistook the Llanberis Pass for the Nant Ffrancon Pass, which he had planned to fly along.

**Situational Awareness and Action** were assessed as **partially effective** because the F15 pilot did not have specific SA about the Griffin helicopter prior to entering the Llanberis Pass.

**Warning System Operation and Compliance** were assessed as **effective** although only the Griffin was equipped with a TAS.

**See and Avoid** were assessed as **partially effective** because neither crew had the opportunity to see the other until at a late stage, due to the geometry of the F15 unmasking from terrain, such that the sightings were later than desirable.



<sup>6</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).