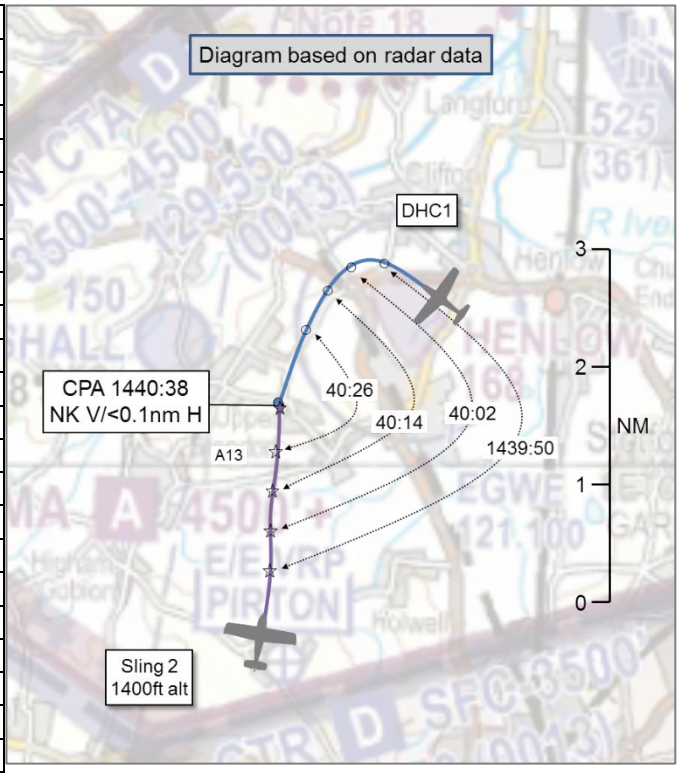
AIRPROX REPORT No 2019109

Date: 15 May 2019 Time: 1441Z Position: 5201N 00020W Location: Henlow aerodrome – elev 168ft

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DHC1	Sling 2
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Unknown
Provider	Henlow Radio	N/A
Altitude/FL	NK	1400ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Cream, red	Red, white
Lighting	Landing, nav	LED nav, strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	1600ft
Altimeter	QFE (1018hPa)	QNH (NK hPa)
Heading	200°	Northerly
Speed	80kt	100kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	30ft V/60ft H	Not seen
Recorded	NK V/<0.1NM H	



THE DHC1 PILOT reports that he was downwind to land in the LH circuit for RW02. He was in the back seat and the PF was in the front seat. Fortunately, the front-seat pilot's 600 hours or so of experience meant he was keeping a good look out. The PF first noticed a landing light and then a low wing tricycle aircraft at the same level, 300m dead-ahead which he reported to the rear-seat pilot. The rear-seat pilot had time to look past the PF's head and see the other aircraft; the PF then banked slightly right and descended a little to keep it in sight. It passed down their left side, about 30ft above and a couple of wing spans out. It was white with an orange lower fuselage trim and, although the same configuration as a PA28, it was a different type. At that point they were abeam the RW02 threshold; no radio calls were heard by them or Henlow Radio.

The pilot assessed the risk of collision as 'Low'.

THE SLING 2 PILOT reports that he had exited the Luton zone at the Pirton VRP. He had flown the route a number of times previously and was familiar with the positions of and activity at Meppershall and Henlow airfields. He was routing between the two airfields and maintaining what he thought was a good lookout before starting his descent to overhead his destination. Although he reported he was talking to Luton, he could not recollect the point at which he changed frequency to the destination airfield, but he certainly had the field in sight and would have wanted to broadcast his intentions because at that time the airfield had no AFISO service. The fact that an Airprox was reported indicated to him that the Luton Basic Service had ceased only just before. The pilot noted that, in future, he would continue with Luton Radar and maintain altitude until well past Meppershall/Henlow and cease the service only when he was in the destination airfield's overhead, monitoring its frequency for other joining traffic.

The Sling 2 pilot did not see the DHC1.

Factual Background

The weather at Luton was recorded as follows:

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METAR EGGW 151450Z AUTO 07007KT 020V110 9999 NCD 18/06 Q1025=
METAR EGGW 151420Z AUTO 06007KT 350V120 9999 NCD 18/07 Q1025=
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Analysis and Investigation

UKAB Secretariat

The DHC1 and Sling 2 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[2]. An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation[3].

NATS Investigation

Swanwick ATSI were notified by the Airprox Board of a confliction between [Sling 2 C/S] and [DHC1 C/S] in the vicinity of Henlow. The Luton Radar Controller had previously provided the pilot of [Sling 2 C/S] with a service to cross the Luton Zone prior to issuing a Basic Service when the aircraft left Controlled Airspace. The pilot of [Sling 2 C/S] proceeded to leave the frequency, immediately prior to the confliction.

Sector: Luton Intermediate Approach (GW INT).
Airspace: London FIR (G).
Reporting aircraft: [Sling 2 C/S], a [Sling 2] inbound to [destination].
Conflicting aircraft: [DHC1 C/S], a DHC1 operating in the vicinity of Henlow.
Time of encounter: 14:40 (all times UTC).
Height of encounter: [Sling 2 C/S] was operating at 1400 feet.

Description of event: [Sling 2 C/S], a [Sling 2] from [departure to destination] displaying Mode-A 4670 was tracking North toward the Luton CTR. The pilot reported onto the GW INT frequency and was cleared to transit through the airfield overhead, not above 2400 feet. As the aircraft was vacating Controlled Airspace, the GW INT controller instructed the pilot of [Sling 2 C/S] at 14:39:16 “leaving the zone, Basic Service outside,” which was correctly readback.

There were two aircraft operating in the vicinity of Henlow, approximately 3nm to the North of the Luton Zone, see Figure 1 for relative positions of aircraft at time of the issuance of the Basic Service. One of these aircraft operating in the vicinity of Henlow, [DHC1 C/S] a DHC1 believed not to be displaying Mode-A information, was in contact with Henlow Radio.

At 14:40:07, the GW INT controller passed traffic information to the pilot of [Sling 2 C/S] “keep a good lookout, there is traffic in vicinity of Meppershall and Henlow.” The pilot responded “I’ll look out for the traffic, I’ll switch to FIR seven thousand (Mode-A) and switch (frequency) to [destination],” to which the GW INT controller responded “roger, your service terminates, bye bye.”.

The aircraft believed to be [DHC1 C/S], subsequently turned South toward [Sling 2 C/S] and the closest point of approach occurred at 14:40:38 when then the returns merged, see Figure 2.

Following the confliction, there was no track or height deviation observed from the radar return of [Sling 2 C/S].

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[3] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

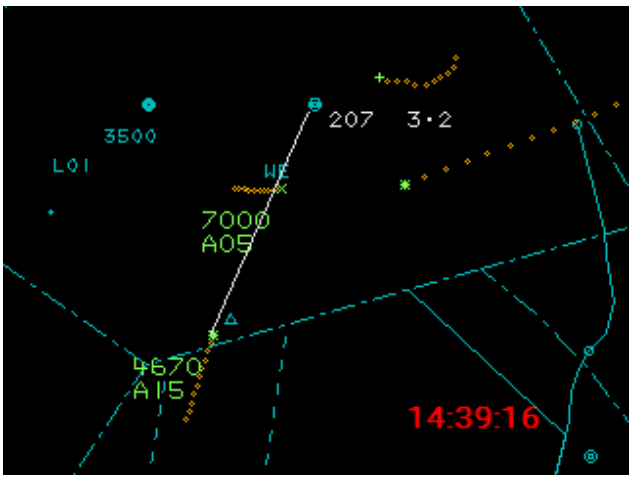


Figure 1

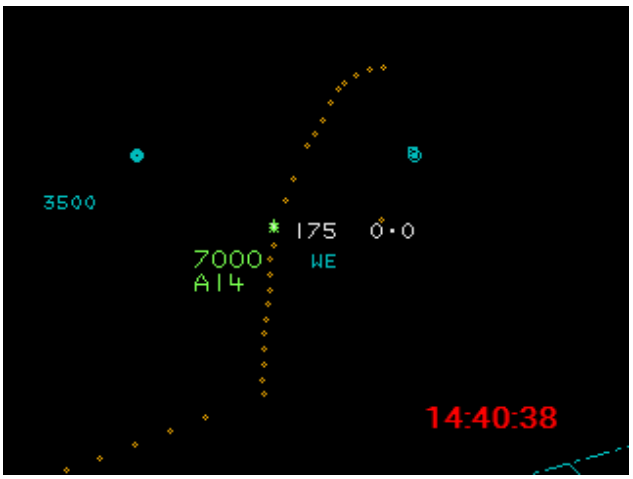


Figure 2

Summary

An Airprox was reported when a DHC1 and a Sling 2 flew into proximity at 1441UTC on Wednesday 15th May 2019 near Henlow airfield. Both pilots were operating under VFR in VMC, the DHC1 pilot in receipt of an AGCS from Henlow and the Sling 2 pilot in contact with his destination airfield, which did not have a service available.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the Sling 2 pilot's actions and noted that although he was aware of the proximity of Meppershall and Henlow and had been given generic Traffic Information on 'traffic in the vicinity of Meppershall and Henlow' (**CF5**) this had not resulted in him changing his plan. Members agreed that there was a degree of hindsight to that reasoning but that the resulting Airprox was cause enough to highlight the need to adopt a defensive flying mentality and act promptly when presented with potential threat information.

Ultimately, the requirement to integrate with or avoid the pattern of traffic intending to land at an airfield without an ATZ means that pilots transiting at or near circuit altitude close to such airfields are reliant on their ability to see and remain clear of circuit traffic. Given the obvious risk of conflicting with circuit traffic if it is not detected, one easy mitigation is not to transit nearby at circuit altitude. In this instance the Board felt that the Sling 2 pilot had therefore not remained clear of the Henlow visual circuit pattern traffic (**CF1**, **CF3**), that he could reasonably have planned to do so beforehand (**CF2**), and that the generic Traffic Information he was passed by the Luton controller was sufficient to prompt a change in altitude (**CF6**) or to contact Henlow to announce his intended routing (**CF4**).

Members surmised that the Sling 2 pilot was probably changing frequency at the time of the Airprox (**CF7**) and consequently did not see the DHC1 (**CF8**). Fortunately, the DHC1 pilot gained visual contact a little while before CPA (**CF9**) although, given his reported separation estimate, the Board were surprised that he had assessed the risk of collision as low. In light of the non-sighting by the Sling 2 pilot and the late sighting by the DHC1 pilot, the Board felt that in this case the DHC1 pilot's overall report and radar replay indicated that safety had been much reduced below the norm, especially because, even if the DHC1 pilot was relaxed about the final separation he could not have known that the Sling 2 pilot might not have manoeuvred unexpectedly and therefore ended up even closer than the reported 30ft V and 60ft H.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

	2019109		
CF	**Factor**	**Description**	**Amplification**
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	• Tactical Planning and Execution		
2	Human Factors	• No Decision/Plan	Inadequate planning
3	Human Factors	• Aircraft Navigation	Did not avoid/conform with the pattern of traffic already formed
4	Human Factors	• Communications by Flight Crew with ANS	Pilot did not communicate with appropriate controlling authority
	• Situational Awareness of the Conflicting Aircraft and Action		
5	Contextual	• Situational Awareness and Sensory Events	Pilot had no, only generic, or late Situational Awareness
6	Human Factors	• Lack of Action	Pilot flew close enough to cause concern despite Situational Awareness
	• See and Avoid		
7	Human Factors	• Distraction - Job Related	Pilot looking elsewhere
8	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
9	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Recommendation: Nil.

Safety Barrier Assessment[4]

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

Flight Elements:

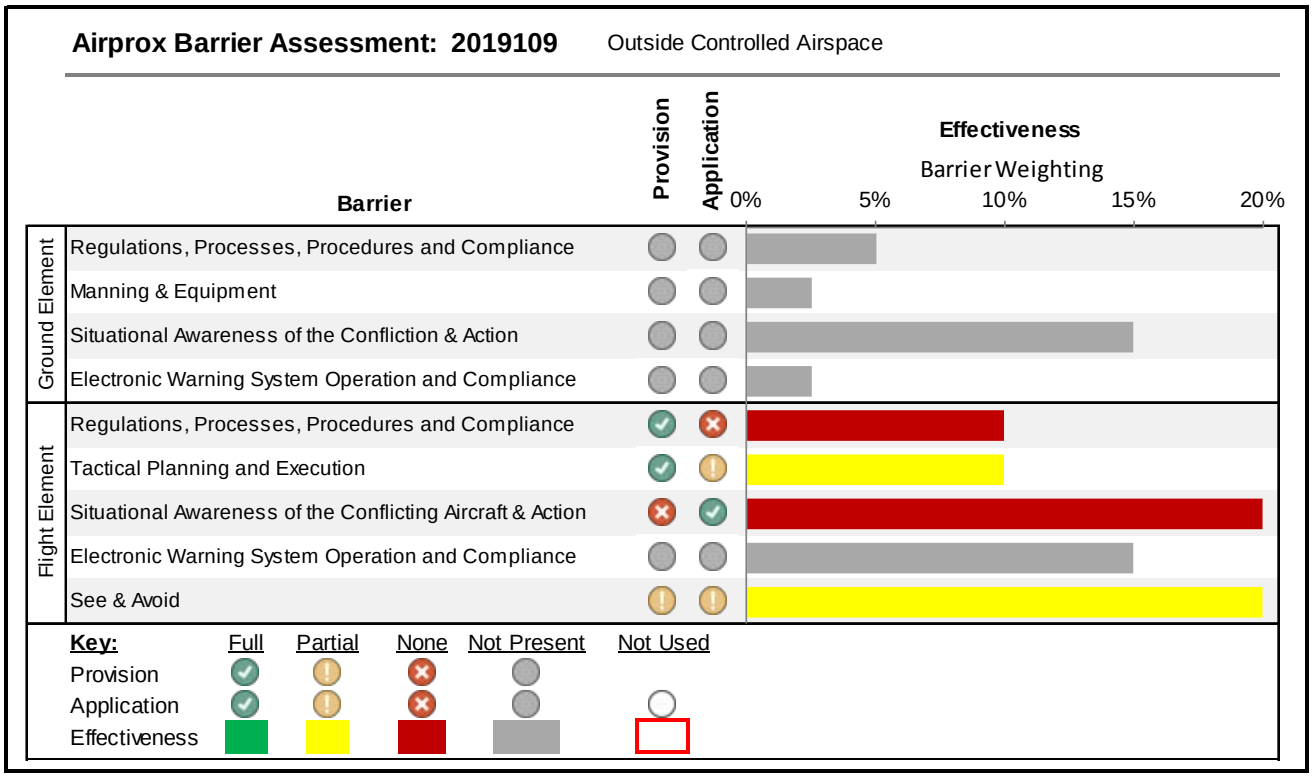
Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Sling 2 pilot did not remain clear of the pattern of traffic intending to land at Henlow.

Tactical Planning and Execution was assessed as **partially effective** because the Sling 2 pilot elected to transit at an altitude which brought him into conflict with circuit traffic at Henlow when a higher altitude was available.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot was aware of the other aircraft until the Sling 2 was seen by the DHC1 pilot.

See and Avoid were assessed as **partially effective** because the Sling 2 pilot did not see the DHC1 and the DHC1 pilot only saw the Sling 2 at a late stage.

[4] The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.


Airprox Barrier Assessment: 2019109
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid
Key:
Full
Partial
None
Not Present
Not Used
Provision
Application
Effectiveness