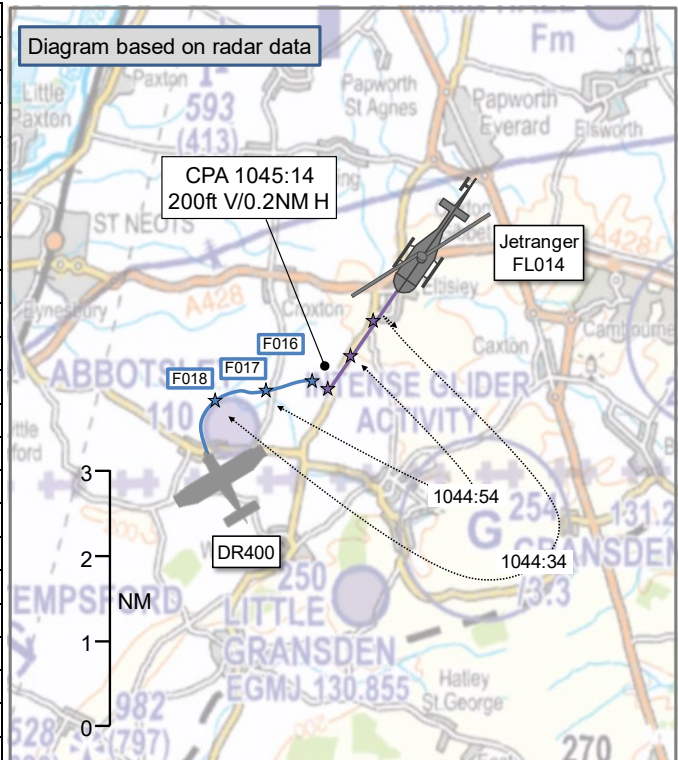


**AIRPROX REPORT No 2023128**

Date: 21 Jun 2023 Time: 1045Z Position: 5212N 00010W Location: 2NM NW Gransden Lodge

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	DR400	B206
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		Luton Int
Altitude/FL	FL016	FL014
Transponder	A, C, S	A, C, S
Reported		
Colours	White, Red	Blue, silver
Lighting	HISLs, Landing	Strobe, Position
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	600ft	1700ft
Altimeter	NK	QNH
Heading	NE	220°
Speed	80kt	110kt
ACAS/TAS	FLARM	PilotAware
Alert	None	None
Separation at CPA		
Reported	0ft V/250m H	Not seen
Recorded	200ft V/0.2NM H	



**THE DR400 PILOT** reports that at approximately 1148, whilst flying the downwind leg RW22 at Gransden Lodge at 600ft to the NW of site, they were confronted with a Bell Jetranger helicopter transiting NE/SW on reciprocal course on the inside of the circuit between the tug and the airfield. They turned to port to move away from the oncoming helicopter, which made no visible sign of seeing or reacting to the presence of the tug, even though both of the tug’s high intensity landing lights were on and pointing at the helicopter. The helicopter continued flying SW without deviation and overflew Little Gransden village and Little Gransden Airstrip [they believed], which was active. This was the second reportable Airprox at Gransden Lodge that morning, within ½ an hour of each other. FlightRadar 24 was checked and the tug course was seen, but there was no indication of the helicopter which appeared not to be transmitting.

The pilot assessed the risk of collision as ‘Medium’.

**THE B206 PILOT** reports that from memory of the flight in question, no aircraft were seen at the reported location that would have required avoiding action or an Airprox to be submitted.

**THE LUTON INT CONTROLLER** reports the Bell Jetranger pilot called for a Basic Service at 1500ft. The call was acknowledged and a squawk issued. They subsequently advised the pilot that they were identified and a Basic Service provided. In keeping with the passing of information applicable to the safe and efficient conduct of flight, and under the realms of duty of care, they immediately advised the pilot to keep a good lookout as they [the controller] could see quite a few contacts in the vicinity of Gransden Lodge on the radar. The service was read back and the advice acknowledged by the pilot. No reference was made on the RT relating to perceived close traffic.

**Factual Background**

The weather at Cambridge was recorded as follows:

METAR EGSC 211020Z 23010KT 180V270 9999 SCT032 23/13 Q1016=

## Analysis and Investigation

### NATS Safety Investigation

Information available to the investigation included:

- CA4114 from Luton Intermediate Approach Controller (GW INT).
- Redacted Airprox report from pilot of [DR400].
- Redacted Airprox report from pilot of [B206].
- Radar and R/T recordings.

The [B206 pilot] contacted Luton Radar and at 1042:16, the GW INT controller asked the pilot to pass their message. The pilot responded that they were a Bell 206 Ranger helicopter from a private site in North Norfolk into [redacted], presently just north-west of Gransden Lodge at 1500ft and they were requesting a Basic Service and zone transit of the Luton CTR. At 1042:26 the GW INT controller instructed [the B206 pilot] to squawk 4670 and issued QNH 1016 which was all read back correctly by the pilot.

The SSR code for [the B206] changed on radar at 1042:50 when the aircraft was 2NM north of Gransden Lodge ATZ [sic]. Simultaneously, an aircraft on SSR code 0034 (Glider tug SSR code as per the UK AIP) was observed indicating 1900ft, 0.9NM north of Little Gransden and 4.3NM southwest of [the B206]’s position. It was believed that this aircraft was [DR400 C/S], a tug operating in the Gransden Lodge area.

At 1043:17 the GW INT controller advised the pilot of [the B206] that they were identified and a Basic Service was agreed. The GW INT controller then advised the pilot that there were quite a few contacts in the vicinity of Gransden Lodge and to keep a good lookout. The pilot read back “*Basic Service and roger the contacts, keeping a good lookout.*” Distance between the aircraft at this time was 3.5NM with [B206 C/S] tracking southwest, and [DR400 C/S] tracking northwest at an indicated 2200ft.

[The DR400 C/S] was then observed to turn west and then it turned towards the east, towards the path of [B206 C/S] and descending. Closest Point of Approach occurred at 1045:14 and was recorded on Multi-Track Radar as 0.2NM and 200ft. See Figure 1.



Figure 1

[The B206’s] position was 2.1NM, Radial 351° from Little Gransden and 1.1NM from the edge of the circle that denotes the Gransden Lodge gliding site. See Figure 2, image taken from VFR 1:250,000 South England Chart.

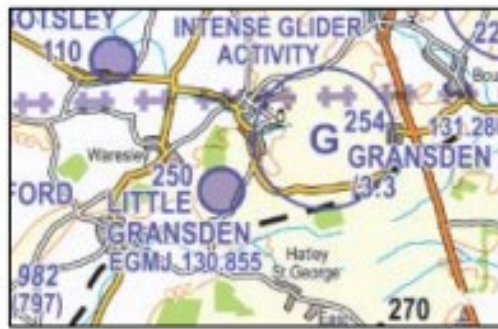


Figure 2

The GW INT controller then instructed the B206 pilot to remain outside controlled airspace and transferred them to the Luton Director frequency at 1048:52 to obtain their CTR crossing clearance. No reference was made on either Luton Approach frequency by the pilot with regard to the proximity of other aircraft.

CAP774 Chapter 2 Basic Service 2.1 Definition stated:

A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility. Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.

The Airprox occurred when [B206 C/S] operating under a Basic Service outside controlled airspace routed within close proximity to [DR400 C/S] that was operating outside controlled airspace in the vicinity of Gransden Lodge.

Closest Point of Approach occurred at 1045:14 and was recorded on Multi-Track Radar as 0.2NM and 200ft. The incident was resolved by the pilot of [the DR400] turning port side to move away from the helicopter.

### UKAB Secretariat

The DR400 and B206 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>1</sup> If the incident geometry is considered as converging then the B206 pilot was required to give way to the DR400.<sup>2</sup>

### Comments

#### BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a "G" symbol, as shown on the chart segment in Part A. As stated in AIC Y 027/2023 (Gliding Activity in the UK), a greater density of both gliders and aircraft towing gliders may be expected within 5NM of a gliding site at any time during daylight hours, and at any altitude up to cloudbase. Gransden Lodge is a very busy gliding site that operates 7 days per week during daylight hours between April and October (weather permitting). There were 18,744 aircraft movements there in the year to 1st October 2023.

<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

## Summary

An Airprox was reported when a DR400 and a B206 flew into proximity 2NM northwest of Gransden Lodge at 1045Z on Wednesday 21<sup>st</sup> June 2023. Both pilots were operating under VFR in VMC, the B206 pilot in receipt of a Basic Service from Luton Radar and the DR400 pilot not receipt of an ATS.

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

Information available consisted of reports from both pilots, radar photographs, reports from the air traffic controller involved and reports 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 looked at the actions of the DR400 pilot. They had released a glider and had been returning to Gransden Lodge when they saw the B206 in close proximity. The Board noted that the DR400 had been fitted with an EWS that could detect gliders, but that could not have detected the transponder signals from the B206, nor its CWS (**CF5**). Consequently the DR400 pilot had not had any prior situational awareness that the B206 had been in the vicinity until they became visual with it (**CF4**). Members noted that the pilot had reported being downwind in the visual circuit, but thought that, whilst they had been positioning for a downwind join, and there were no set parameters for the size of a visual circuit, their position would not normally be considered to be within the visual circuit. They noted that Gransden Lodge does not have an ATZ to protect its visual circuit but, even if it had, the position of the airprox at 2.7NM from the airfield would have been outside any ATZ. The Board agreed that once the DR400 pilot had become visual with the B206, they had been concerned by its proximity and had turned to remain clear (**CF7**).

Turning to the actions of the B206 pilot, the Board noted that they had been receiving a Basic Service from Luton Int. Some members wondered whether this had been an appropriate service, given that pilots should not normally expect to receive Traffic Information under such a service. They were told that the B206 had been too low to receive a radar-derived service from Luton, due to radar coverage, but noted that the controller had provided a generic warning to the pilot about traffic in the vicinity, thus providing the pilot with generic situational awareness that they could expect to see aircraft in the area (**CF4**). Members then wondered whether the B206 pilot had considered the level at which they had been flying. Whilst acknowledging that the pilot might have thought that they had been more likely to get a clearance to cross Luton's CTR at that level, still they had been transiting past a number of airfields at circuit joining altitude (**CF3**). Members thought that if the pilot had wished to remain at that altitude, at the very least they could have called Gransden Lodge to advise of their routing (**CF2**). Members noted that the B206 had been fitted with a CWS that they would have expected to have detected the transponder on the DR400, but that no such alert had been reported. It was not known whether the CWS had not detected the DR400, or simply that the B206 pilot had not remembered having received an alert (**CF6**).

The Board then briefly looked at the part that the Luton Int controller had played in the Airprox. They had been providing a Basic Service and, as such, had not been required to monitor the aircraft on the radar. Furthermore, at 1500ft the B206 pilot had been operating at the base of radar cover. Members heard that the STCA would have been configured outside the select frame for this Airprox and therefore could not have alerted (**CF1**). However, despite this, based on a number of contacts on the radar, the controller had provided the B206 pilot with generic Traffic Information and advised them to keep a good lookout.

When determining the risk of the Airprox, members considered the reports from both pilots and that of the controller, together with the radar screenshots. They agreed that the radar separation between the two aircraft, together with the avoiding action taken by the DR400 pilot, meant that, whilst safety had been degraded, there had been no risk of collision; Risk Category C.

**PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK****Contributory Factors:**

2023128				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Electronic Warning System Operation and Compliance</b>				
1	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
2	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
3	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
4	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
<b>• Electronic Warning System Operation and Compliance</b>				
5	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
6	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
<b>• See and Avoid</b>				
7	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

**Degree of Risk:** C.

**Safety Barrier Assessment<sup>3</sup>**

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

**Ground Elements:**

**Electronic Warning System Operation and Compliance** were assessed as **not used** because the codes selected by the pilots of the 2 aircraft were outside the select frame of the STCA.

**Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the DR400 pilot had no prior situational awareness that the B206 would be in the vicinity whilst the B206 pilot had only generic information from Traffic Information provided by ATC.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the CWS fitted to the DR400 was not compatible with the equipment carried by the B206, and the

<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

CWS carried by the B206 should have detected the DR400 but no alert was reported by the B206 pilot.

<b>Airprox Barrier Assessment: 2023128</b>		Outside Controlled Airspace						
<b>Barrier</b>		<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b>				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Conflicition & 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	✓	✓					
<b>Key:</b>		<b>Full</b>	<b>Partial</b>	<b>None</b>	<b>Not Present/Not Assessable</b>	<b>Not Used</b>		
Provision	✓	!	✗	●	○			
Application	✓	!	✗	●	○			
Effectiveness								