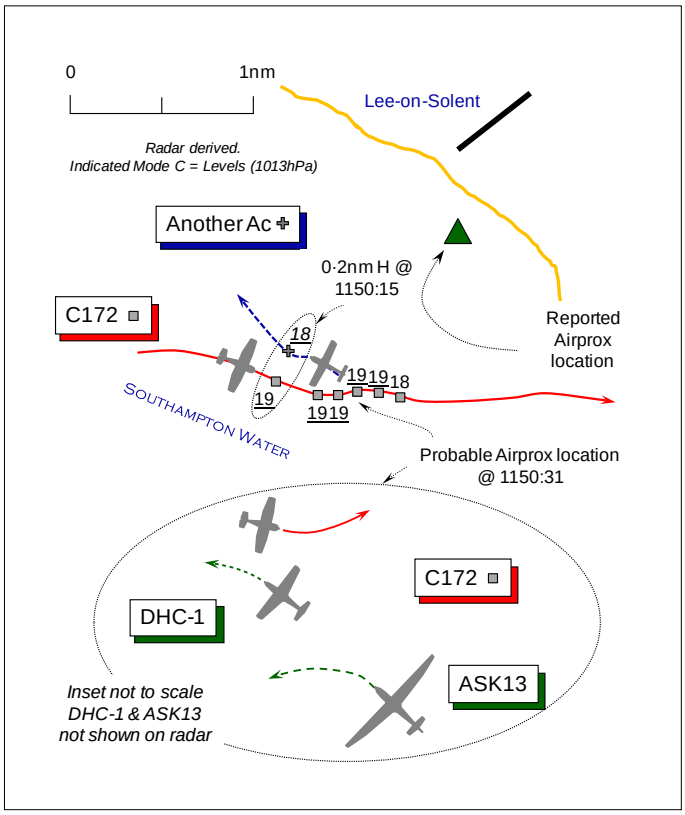
AIRPROX REPORT No 2011125

Date/Time:	24 Sep 2011 1150Z (Saturday)	
Position:	5047N 00113W (1½nm SSW THLD RW05 Lee-on-Solent - elev 32ft)	
Airspace:	London FIR	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	DHC-1 & ASK13 Glider	C172
Operator:	Civ Club	Civ Pte
Alt/FL:	1700ft↑ aal	2000ft QNH
Weather:	VMC CLOC	VMC CLBC
Visibility:	15-20km	8km
Reported Separation:	150ft V/500m H	~200ft below
Recorded Separation:	Not recorded	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PILOT-IN-COMMAND OF THE DHC-1 CHIPMUNK 22 TUG & ASK13 GLIDER COMBINATION reports that the gliding club was conducting winch and aerotow glider launching from RW23 at Lee-on-Solent. The DHC-1 pilot was executing an aerotow launch of the ASK13 glider, piloted by a gliding instructor in the rear seat with a student pilot occupying the front seat; both ac were in contact with Lee RADIO on 118·925MHz. The DHC-1 is coloured blue/white; SSR is not fitted.

After take-off from RW23 the tug-glider combination climbed straight ahead to 500ft and about 200m off-shore, before making a 90° L turn to head towards Browndown, a point of land about 2nm to the SE. On this SE'ly track both the tug pilot and the gliding instructor saw a light ac (LA) above them, about 2nm to the S heading NW. After allowing the LA to pass clear behind, the combination made a 180° R turn climbing through a height of about 1000ft, to return towards Lee-on-Solent on a heading of 315° at 60kt tracking about ½nm off-shore. After about 1½-2min on this NW'ly track at about 1700ft aal the instructor in the ASK13 glider – the PNF - saw an ac at 11 o'clock, but he was unsure of its aspect, suspecting that it might be the previously sighted LA. After a second or two, the ASK13 instructor realised the LA was closing rapidly so he immediately released the glider from the DHC-1 and performed a climbing L turn; there was insufficient time to advise the tug pilot on RT. Upon release, the tug pilot lowered the nose and for the first time saw a red and white high-wing aeroplane, similar to a C172, in his 1 o'clock about 500m away some 150-200ft below him flying on a reciprocal heading so he turned L 10° to a remain on a parallel track. Both the tug pilot and ASK13 instructor immediately reported an Airprox to Lee RADIO. The unknown LA was not in contact with Lee RADIO. The Risk was not assessed.

THE CESSNA F172H (C172) PILOT reports he was flying VFR from Bristol to Goodwood and was in receipt of a BS from SOLENT RADAR; a squawk of A3663 was selected with Mode C on. His aeroplane is coloured white.

He had transited beneath the Solent CTA, below 2000ft QNH along the Stoney Cross – Beaulieu Corridor, before following an E'ly heading from Beaulieu climbing to 2000ft after clearing the end of the Solent CTA. His routeing took him to the S of Lee-on-Solent and the Glider Launching Site

marked on the 1:500,000 VFR chart (confirmed by GPS). SOLENT RADAR passed a warning of another ac, which was spotted and avoided by a slight deviation in course to the S for additional clearance as the opposing traffic deviated slightly to the N. Very shortly afterwards, heading 100° at 105kt in a level cruise at 2000ft (1014mb), a glider tug appeared from below his ac at about 3 o'clock (he did not specify the distance). The blue tug ac appeared to be pitching up steeply and then banked away towards the S, so to avoid the tug he banked towards the N as soon as he saw it. The glider passed by in his 2 o'clock several hundred feet below and some distance away from his aeroplane. SOLENT RADAR gave no advance warning of this traffic. He assessed the Risk as 'low'.

UKAB Note (1): The UK AIP at ENR 5-5-1-4, notifies the Glider Launch Site at Lee-on-Solent A/D as active every day from Sunrise to Sunset. Aerotow and winch launching is notified to 2000ft above the aerodrome elevation of 32ft amsl.

ATSI reports that the C172 pilot had departed Bristol International for a flight to Goodwood and was in receipt of a BS from SOLENT RADAR on 120.225MHz.

The Southampton 1150Z METAR: 21005KT 170V240 9999 FEW020 SCT048 17/12 Q1014.

The C172 pilot called Solent RADAR and at 1136:10, the flight details, position, level and intentions were passed. A BS was agreed, the pilot instructed to squawk A3663 and the QNH read-back correctly.

The C172 was instructed to remain clear of CAS and, having passed the Stoney Cross VRP, routed around the southern edge of the Southampton CTR. The C172's SSR was validated and verified by the Solent RADAR controller at 1142:20.

At 1149:40, as the C172 was mid-Solent, N abeam Cowes, the Solent RADAR controller passed TI on an unknown LA [not the tug-glider combination] ahead of the C172 by 1.5nm, tracking NW at an altitude of 1900ft. The C172 pilot called visual with this ac at 1149:50. The unknown ac was not transmitting any Mode S identification information and remains unidentified.

The C172 continued on a course towards the Spinnaker Tower, Portsmouth, indicating 1900ft Mode C (1013mb). At 1151:19 the C172 crossed the coast at Browndown Point.

The reported Airprox was not visible on the available surveillance replay and, given the lack of transponder and initial low-level manoeuvring of the DHC-1, it is possible that there was no position indication symbol displayed to the SOLENT RADAR controller. Solent primary surveillance radar is provided by a Watchman 10cm radar sited on Southampton Airport; SSR is supplied by the Pease Pottage Radar. The primary surveillance information from SOLENT RADAR was not available for this investigation.

It is likely that, as the C172, heading SE'ly, crossed with another ac on a NW'ly course, the C172 was not clearly visible to the DHC-1 pilot. Cloud in the area was FEW and SCT which, when combined with the white colour-scheme of the C172, might make visual acquisition of the ac difficult. The DHC-1 pilot executed the 180° R turn after the unknown ac on a NW'ly course cleared astern. Before doing this the DHC-1 pilot had not seen the C172 astern as they were flying towards the same land feature.

There is no requirement for SOLENT RADAR to be informed of traffic activity at Lee-on-Solent. Manual of Air Traffic Services Part 2 (Southampton) Edition 1/11, 3 May 2011 (NATS) Section 4 paragraph 3.10 notes to unit ATCOs that:

> 'there are numerous airspace restrictions and obstacles within the proximity of the airspace under their control and..ATCOs are to have an awareness of those relevant to the normal operation of the unit.'

Under a BS a controller with access to surveillance derived information may issue a warning to a pilot if it is considered that a definite risk of collision exists.

The Airprox occurred in Class G airspace when the DHC-1 pilot turned and climbed into proximity with a previously unseen C172.

Contributory to the incident was:

Another ac in the vicinity that may have initially masked the C172's presence.
The potential difficulty of visually acquiring the white C172 against the prevailing cloud and into sun.

UKAB Note (2): The LAC Swanwick radar recordings do not illustrate this Airprox as the DHC-1 Chipmunk 22 tug and ASK13 glider are not shown at all, either individually or as a combination. However, the C172 is shown maintaining 1900ft Mode C (1013mb) passing abeam another ac at 1150:15, that is probably the LA seen by the pilots involved on a NW'ly course before the Airprox occurred. The C172 makes a short L turn at 1150:31, 1·7nm SSW of Lee-on-Solent, before reversing back on course, which may be indicative of the pilot's avoiding action L turn upon sighting the DHC-1 and ASK13. The C172 then continues on track for the Spinnaker Tower VRP at Portsmouth Harbour. At an indicated 1930ft QNH (1014mb), the C172's Mode C suggests the ac was in the order of 200ft above the DHC-1 tug pilots reported equivalent altitude of 1732ft amsl.

HQ NAVY COMMAND comments that whilst the Gliding Club operates under the rules and assurance of the BGA, Navy Command HQ maintains an overview of the operation of the club. The report suggests that all parties involved did everything required of them and that the Airprox was the result of late sightings of ac that are difficult to spot due to their colour schemes and definition against the cloud cover and sun.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, a transcript of the relevant RT frequency, radar video recordings and reports from the appropriate ATC and operating authorities.

Although not compelled to do so, the controller had helpfully provided a warning to the C172 pilot about the other ac shown to be in the vicinity. Although he was only providing a BS, SOLENT might also have warned the C172 pilot about the DHC-1 and glider combination if the controller had been aware of it so it is unfortunate that the DHC-1 is not fitted with SSR as this would make it more conspicuous to radar-equipped ATSUs such as SOLENT Radar. The BGA Member reaffirmed the BGA's recommendation to fit SSR to aerotow ac where possible for this purpose. When seen, the C172 pilot had elected to avoid the other ac by turning to the S, unfortunately bringing his aeroplane closer to the tug-glider combination that was at that stage unseen. Nevertheless, it was clear from the C172 pilot's report that he subsequently saw the DHC-1 in his 3 o'clock as it appeared from below his aeroplane, just as the instructor pilot in the glider released the tow and about the same time as the DHC-1 pilot saw the C172 and turned away. The C172 pilot had a responsibility to remain clear of the tug-glider combination under the RoA, but could only do so if he saw it in time. Here it was plainly the glider instructor and the DHC-1 pilot that had initiated avoiding action beforehand. The Members concluded that a late sighting by the C172 pilot was part of the Cause.

Earlier, the DHC-1 pilot had taken account of the other ac before he turned the combination onto its NW'ly heading, but was unaware of the conflict that would develop with the C172 when he turned about. Nevertheless, it was there to be seen in the prevailing good visibility on the inside of the R turn as the DHC-1 pilot turned about. The BGA Member highlighted the limited visibility from the DHC-1's cockpit whilst towing a glider; the high nose-up attitude whilst towing is not conducive to an efficient all-round scan and consequently it is imperative to weave the aeroplane to clear the airspace directly ahead of the nose. The Member explained that this inherent nose-up attitude might be why the the glider instructor spotted the C172 before the tug pilot, who was the PIC of the combination.

The instructor PIC would, however, have been focused on what his student was doing as an aerotow demands concentration, so it was fortunate that the instructor spotted the C172 in time to release his glider from the tug and initiate a climbing turn to the L. This not only ensured he could avoid the C172, but also allowed the tug pilot greater freedom of manoeuvre if needs be. As it was, as soon as the weight came off the tow and the DHC-1 pilot lowered his aeroplane's nose, he saw the C172 in his 1 o'clock about 500m away, some 150-200ft below him he reports. Members agreed the other part of the Cause was a late sighting by the DHC-1 tug pilot.

Because of the absence of radar data on the DHC-1, the relative geometry could not be ascertained independently. Although the C172's Mode C suggests the ac was in the order of 200ft above the DHC-1 tug pilot's reported equivalent altitude of 1732ft amsl when the Airprox occurred, the DHC-1 pilot also reported the C172 to be below his aeroplane when he saw it. As the C172 pilot says the tug/glider appeared from below it might be that the DHC-1 had already climbed up through the C172's altitude when the tug pilot saw the C172 but this could not be resolved with certainty. Nevertheless, robust avoiding action was not apparently required by the DHC-1 tug pilot with only a 10° L turn necessary to remain on a parallel track and maintain horizontal separation at a minimum of 500m. This convinced the Members that no Risk of a collision had existed in these circumstances.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Late sightings by the DHC-1 and C172 pilots.

Degree of Risk: C.