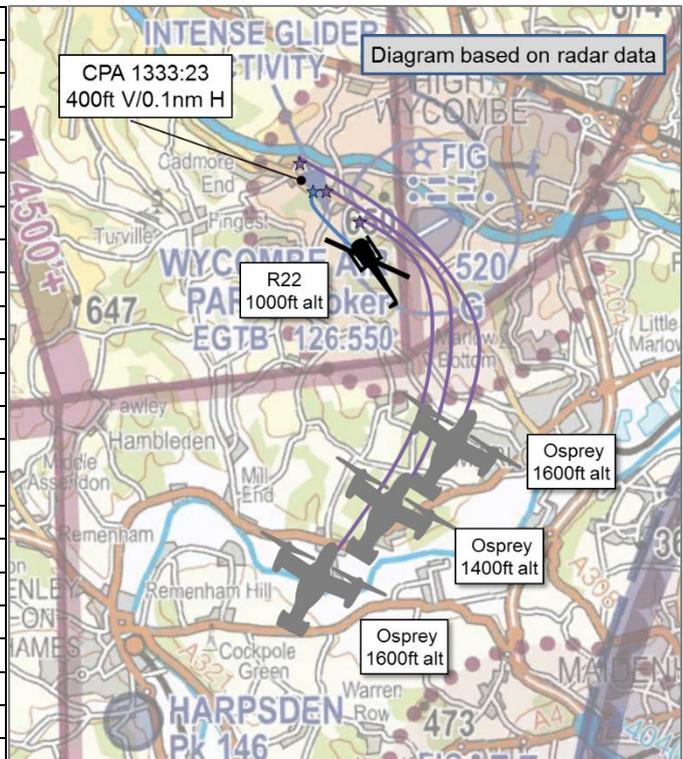


AIRPROX REPORT No 2018163

Date: 09 Jul 2018 Time: 1333Z Position: 5137N 00050W Location: Wycombe Air Park

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	R22	Osprey
Operator	Civ Helo	Foreign Mil
Airspace	Wycombe ATZ	
Class	G	G
Rules	VFR	VFR
Service	ACS	Unknown
Provider	Wycombe	
Altitude/FL	1000ft	1400ft
Transponder	A, C, S	A, C
Reported		
Colours	Green	
Lighting	Strobe, Nav	
Conditions	VMC	NK
Visibility	>10km	
Altitude/FL	500ft	
Altimeter	QFE (1005hPa)	
Heading	060°	
Speed	65kt	
ACAS/TAS	Not fitted	Unknown
Separation		
Reported	100-150ft V	NK
Recorded	400ft V/0.1nm H	



THE R22 PILOT reports that he was in the Wycombe circuit when ATC reported that there was a group of military helicopters to the south going towards the south-west, (he recalled) but that they should stay above and/or out of the ATZ. He saw the group of helicopters and waited in the hover until he saw that they were well clear of the helicopter circuit. He climbed into the helicopter circuit 24R and immediately spotted another group of three helicopters heading towards him. They looked a lot lower and closer than the first group, and they flew a different track, going straight through the Wycombe ATZ. He expected them to turn away from the airfield, but they turned straight towards it. He estimated the height of the Ospreys was helicopter circuit height, about 750ft, so he descended to 400-500ft to keep a safe separation. The first Osprey flew straight over him at ‘a very close distance’, the second above and behind him and the third passed behind. ATC called to warn him about the infringement and he replied that he had taken avoiding action to keep safe.

He assessed the risk of collision as ‘High’.

THE OSPREY PILOTS did not respond to a request to file a report.

THE WYCOMBE CONTROLLER reports that at around 0830hrs he received a phone call from a CAA airspace advisor that at approximately 1400hrs a formation of 9 helicopters would be transiting through the ATZ, south to north at 1500ft QNH (around 1000ft QFE). It was a fine-weather flying day with lots of planned flying and so he refused permission for them to fly through the ATZ unless the CAA imposed a closure of the airfield. As a result, he was informed that the formation would remain outside the ATZ to the west. At around 1325hrs, a formation of 6 helicopters was observed passing to the west of the ATZ without contacting Wycombe TWR. Shortly afterwards 3 Ospreys were observed approaching the airfield at low-level from the south, through the active glider circuit. They overflew the middle of the airfield at around 700ft agl and turned northwest towards an R22 that was operating in helicopter training area N. The R22 was seen to take avoiding action. The Ospreys departed to the north, below

the circuit traffic downwind. He made a broadcast transmission to all aircraft to inform them that the intentions of the Ospreys were unknown.

He then contacted the Swanwick Civil Supervisor to establish who was providing a service to the formation and was told that neither London Mil, Farnborough, nor Northolt were aware of the traffic. The next day, he received another telephone call from the CAA advisor who told him the Osprey pilots had been briefed to avoid the ATZ, but had deviated from their route and that the pilots had been debriefed and made aware of their error. He opined that in 40 years of controlling he had never witnessed such a serious incident and that it was fortunate that nothing more serious occurred.

He perceived the severity of the incident as 'Serious'.

Factual Background

The weather at Benson was recorded as follows:

EGUB 091350Z 36007KT CAVOK 27/13 Q1024 BLU NOSIG=1

A NOTAM was issued to cover the flight:

Q) EGTT/QWVLW/IV/M /W /000/025/5136N00046W018
 A) EGTT B) 1807091340 C) 1807091420
 E) MIXED-TYPE FORMATION OF UP TO 10 HEL WILL TRANSIT ON A POSITIONING FLIGHT SOUTH TO NORTH WI 5NM EITHER SIDE OF A TRACK BETWEEN: 512345N 0004657W (BRACKNELL) - 513643N 0004821W (BOOKER AD) - 514727N 0004411W (RAF HALTON). ACFT MAY BE UNABLE TO COMPLY WITH RAC. 2018-07-0499
 F) SFC G) 2500FT AMSL)

Analysis and Investigation

CAA ATSI

In the period running up to the Airprox, a flight of helicopters associated with the Osprey formation passed from south to north, to the west and clear of the Wycombe ATZ, (Figures 1 & 2).

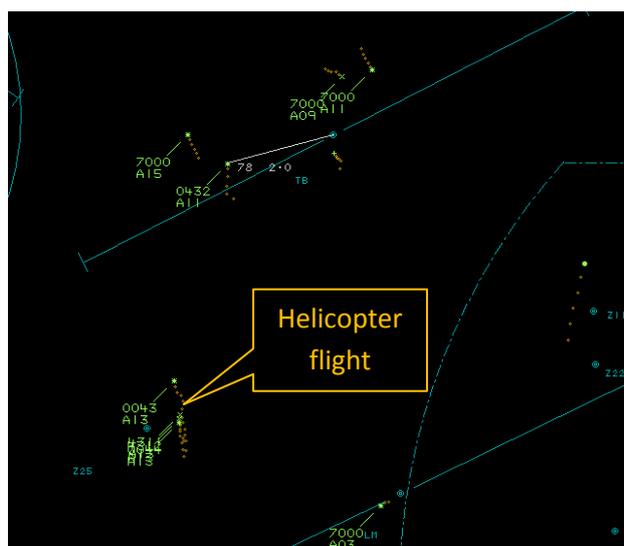


Figure 1 – 1327:59

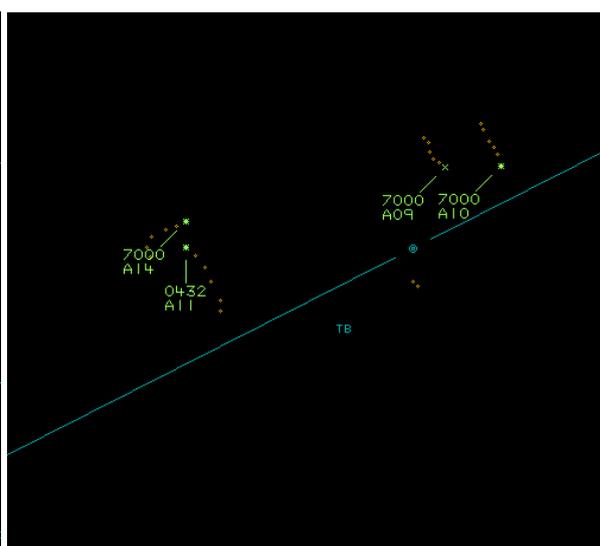


Figure 2 – 1328:15

¹ Nearest relevant airfield – Wycombe do not produce METAR although the R22 pilot reported the weather conditions at Wycombe as 360/08kts 320V030 9999 NCD Q1023 which was very similar.

At 1328:28, the Wycombe Tower controller made a broadcast call, advising that 5 military helicopters were passing from south to north, outside the ATZ at 1500ft QNH/1000ft QFE, and advised the circuit traffic to keep a good lookout.

At 1331:49 (Figure 3), the formation of 3 Ospreys was observed on the radar replay having completed a turn from a northerly track in the vicinity of Harpsden Park airfield onto a north-easterly track. The R22 which had been conducting flight training in the Helicopter Training Area 'N' at Wycombe, was climbing-out with a previous departing aircraft ahead. At 1332:28 (Figure 4), the tower controller called another aircraft that was in the circuit and which had just completed a touch-and-go. The pilot replied immediately and advised that they were visual with the three 'helicopters'.

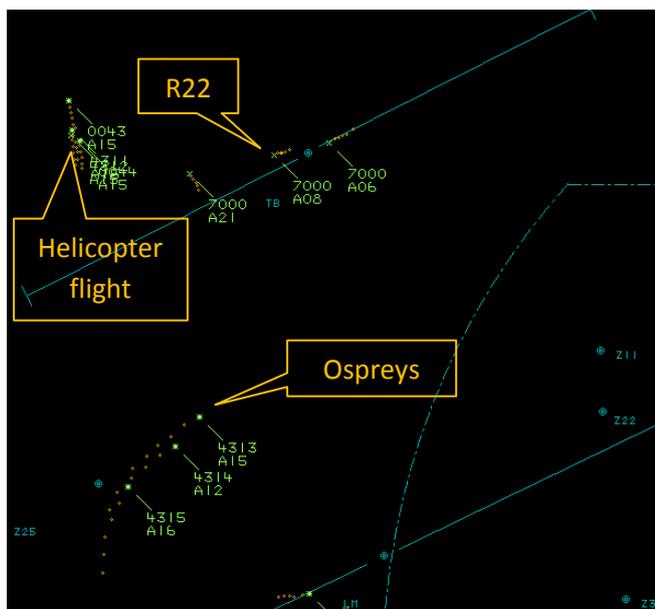


Figure 3 – 1331:49

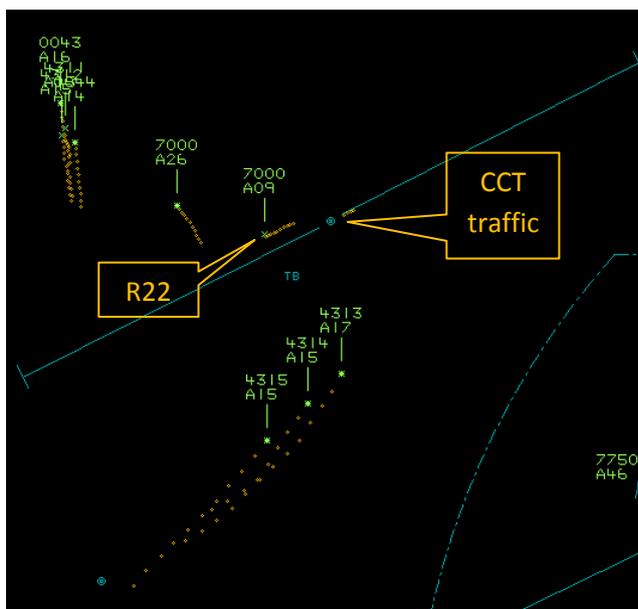


Figure 4 – 1332:28

At 1333:00 (Figure 5), the tower controller made a further broadcast call advising that there were 3 'helicopters' in the overhead at 1000ft, and advising that it was an unauthorised transit.

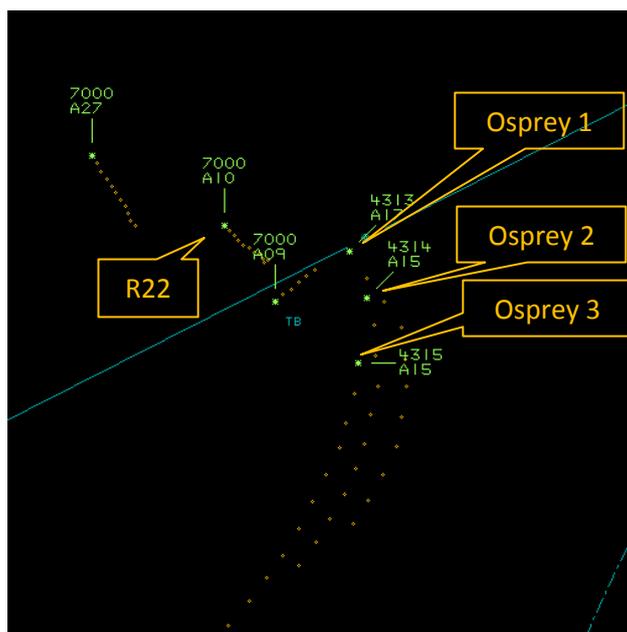


Figure 5 – 1333:00

A third pilot called that they were visual, and the R22 pilot then confirmed, at 1333:20, that they too were visual (Figure 6). CPA occurred on radar at 1333:23 (Figure 7), with the R22 and Osprey 2 separated by less than 0.1nm laterally and 400ft vertically.

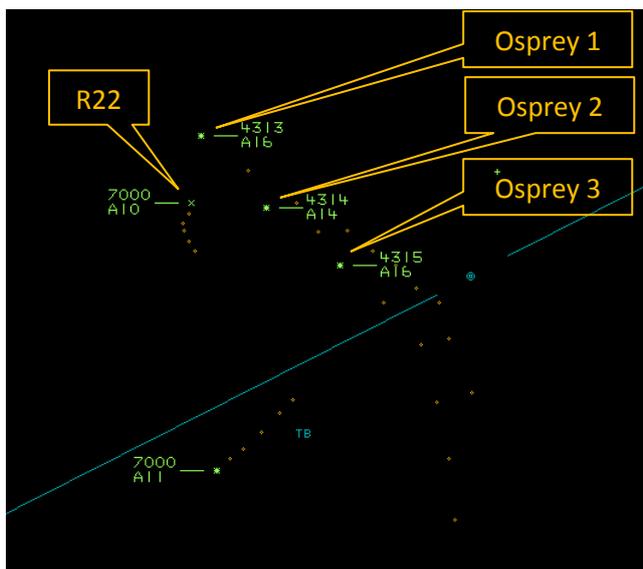


Figure 6 – 1333:20

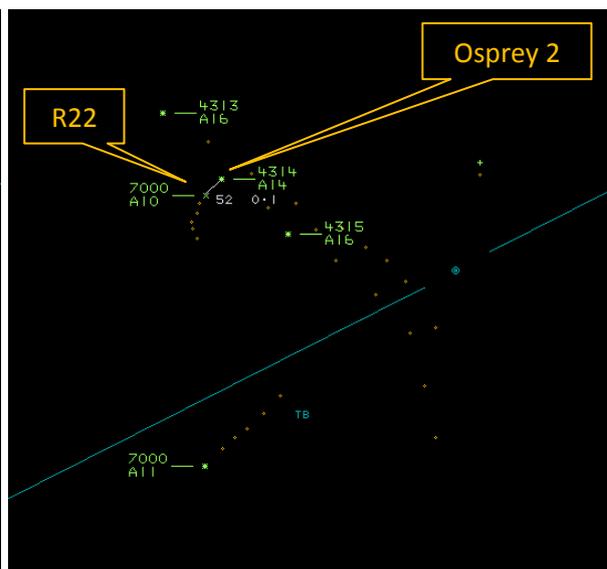


Figure 7 – 1333:23 CPA

Wycombe ATC is a tower-only function with no surveillance capability. The Wycombe controller reported receiving a phone-call from a member of the CAA earlier that day to discuss the transit of the aircraft. A NOTAM was in place for the transit times (although the Ospreys were in the vicinity earlier than the NOTAM times), and an initial request for permission to transit the ATZ was declined due to gliding activity which would also be taking place on the airfield at that time. This was acknowledged by the caller, who agreed that the aircraft would remain clear, and who, in a subsequent phone-call the next day, confirmed that all flight crew involved in this operation had indeed been briefed to remain clear of the ATZ. The airfield is notified as having 'Intense Glider Activity', with glider flying taking place parallel to the tarmac runway and 'on and around the aerodrome'.

Neither the aircraft in the helicopter group nor any of the Ospreys contacted Wycombe Tower during their flight in the vicinity/through the ATZ. Although a member of the CAA was present as a passenger in one of the helicopter aircraft, they were not flying the aircraft, and ATSI were unable to positively determine if any of the two formations were receiving an ATS at the time. The Wycombe ATC report stated that in a phone-call made to Swanwick ACC on the day, they had been advised that neither Swanwick Military, RAF Northolt or Farnborough LARS were aware of the aircraft.

UKAB Secretariat

The helicopter and Osprey aircraft were conducting a route and site reconnaissance rehearsal flight for a task later in the week that involved flying to various high profile sites. Although not closed on the day of the Airprox, Wycombe Air Park was planned to be closed when the actual task was due to be flown.

The Osprey 43XX squawks are listed as London Control non-standard flights and were probably given to the Osprey formation either as part of their planning or earlier in the sortie when they were transiting within the London CTR. Because of the nature of the tasking, it is believed that the aircraft were not receiving an ATS at the time of the Airprox; it was reported that neither Swanwick Military nor Farnborough LARS were aware of them.

The R22 and Osprey pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard². 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 operation³. An aircraft must not fly within the ATZ of an aerodrome that has an Air Traffic Control Unit unless the commander of the aircraft has obtained the permission of that unit.⁴

USAFE

The 3 Osprey aircraft were operated by the US Marine Corps and were not based in the UK. In preparation for their task, which was to take place later in the week following this rehearsal flight, the Osprey crews received a brief from NPAS and a member of the CAA; further, both the rehearsal and the actual operation were to be escorted by Police helicopter(s). Wycombe Air Park, which was on their route, was to be closed during their passage on the day of the actual mission, but not for the rehearsal. In the absence of a report from the Osprey lead it is surmised that he followed the briefed route for the actual mission without realizing that Wycombe Air Park ATZ might have to be avoided on the day of the rehearsal.

Summary

An Airprox was reported when an R22 and a formation of 3 Ospreys flew into proximity in the Wycombe ATZ at 1333hrs on Monday 9th July 2018. The R22 pilot was operating under VFR in VMC in the Wycombe helicopter circuit, in receipt of an Aerodrome Control Service from Wycombe. The Osprey pilots were believed to be operating VFR in VMC without an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the pilot of the R22, transcripts of the relevant RT frequencies, radar photographs/video recordings, a report from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

The Board first looked at the actions of the R22 pilot and quickly agreed that there was very little more he could have done in the circumstances. He was operating in the helicopter training area at Wycombe Air Park, and would normally have expected to have the protection of the ATZ during his flight. Neither he nor ATC would have been expecting the Ospreys to route through the Wycombe circuit, and it was fortunate that he received ATC's broadcast and updated Traffic Information once they had realised the developing situation as the Ospreys approached the overhead. Alerted by the Traffic Information, once he became visual with the Ospreys the R22 pilot took appropriate avoiding action by descending.

For their part, the Board noted that the Osprey pilots were practising a high-profile task that they were intending to fly later in the week. Members noted that Wycombe Air Park was due to be closed for the live event, during which they were planning to route directly through its overhead. A CAA representative had reported that the Osprey pilots had been briefed about the variance in the routing, but members wondered whether this had been sufficiently emphasised to the Osprey pilots given that they were likely to be unfamiliar with UK operations and may not have assimilated all aspects of the change. The Board were also briefed that the Osprey pilots had been instructed to follow the routing of the UK Police helicopters, who routed to the west of the Wycombe ATZ. However, without a report from the Osprey pilots, the Board were not able to positively establish why they did not follow the police helicopters or the briefed routing. Some members wondered whether the Police helicopter crews could have intervened when it became apparent that the Ospreys were deviating from the rehearsal route; the Board surmised that the Police helicopter crews would probably have been looking ahead and not able to monitor closely the Osprey formation behind. One member wondered whether it would have been a better plan to have positioned one of the Police helicopters behind the Osprey formation so that its crew could then have actively monitored the Osprey routing (the Board were subsequently informed

² SERA.3205 Proximity.

³ SERA.3225 Operation on and in the Vicinity of an Aerodrome.

⁴ Rules of the Air 2015 Section 3 Rule11 Flight within Aerodrome Traffic Zones.

that this was what happened for the live mission as a result of this incident). In defence of the Osprey pilots, the USAFE advisor told the Board that for all of their operations in the US, any local airspace is closed and their direct passage through is assumed. The Board wondered whether, despite the briefing that they had received, the Osprey pilots were operating under this assumption in the UK also. Ultimately, although there was no report from the Osprey pilots to confirm their perception of their routing and subsequent separation from the R22, the Board thought it probable that the Osprey pilots were visual with the Wycombe circuit traffic given that their aircraft would be fitted with a collision warning system that would have alerted them to the presence of the R22.

The Board then looked at the actions of the Wycombe controller. Having been briefed during the phone call with the CAA member that the helicopters and Ospreys would avoid the ATZ, he was understandably expecting the Ospreys to follow the helicopters and route to the west. Nevertheless, by keeping a watchful eye on them he could see that they were routing towards his airfield and gave, and repeated, timely Traffic Information to all of the pilots operating in the circuit to enable them to become visual and take action. The Board agreed that, in this respect, he did all that could have been expected of him under the circumstances, and the Board commended him for it. The Board did however wonder whether Wycombe ATC as a unit could have been more pro-active towards the helicopter/Osprey mission when contacted by a CAA staff member to request clearance to fly the same route as the actual mission task, which they refused. By refusing permission for the helicopters/Ospreys to route through the ATZ, the Osprey pilots were faced with a last-minute change to their plan which likely set in place the conditions for their mistake to be made. Whilst acknowledging that there were likely commercial repercussions from temporarily putting a circuit embargo in place (as was done for the actual mission), members agreed that, in the circumstances, it would have been advantageous to have enabled the rehearsal conditions to match those of the task itself.

In determining the cause of the Airprox, the Board quickly agreed that the Osprey pilots had flown through an active and promulgated ATZ without clearance and into conflict with the R22. Some members thought that it should be a contributory factor that the late-notice lack of clearance through the Wycombe ATZ for the rehearsal was different to that which was expected on the day of the task, thereby sowing potential confusion. However, after some debate, the majority felt that this change had reportedly been briefed in reasonable time ahead of the flight, that it was for the Osprey pilots to assimilate and follow the new plan, and that the briefing to 'follow the helicopters' should have been enough to ensure that they remained outside the ATZ. Turning to the risk, whilst acknowledging the R22 pilot's and ATC's concern about the ATZ infringement and potential rotor downwash from the Ospreys, it was clear to the Board that the R22 pilot had seen the Ospreys in sufficient time to avoid them, and that it was likely that the Osprey pilots would have been aware of the R22 from their on-board systems. Noting also that the radar recordings showed that there was 400ft separation between the R22 and Osprey 2 at CPA, the Board concluded that although safety had been degraded there had been no risk of collision; risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Osprey pilots flew through an active and promulgated ATZ without clearance and into conflict with the R22.

Degree of Risk: C.

Safety Barrier Assessment⁵

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

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the Osprey pilots flew through the Wycombe ATZ without clearance.

Tactical Planning was assessed as **ineffective** because the Osprey pilots were briefed to route clear of the ATZ but did not do so.

Warning System Operation and Compliance were assessed as **ineffective** because it was thought that the Ospreys would be fitted with TCAS, but the pilots didn't appear to act upon it.

See and Avoid were assessed as **effective** because the R22 pilot was able to take avoiding action in sufficient time to ensure separation.

