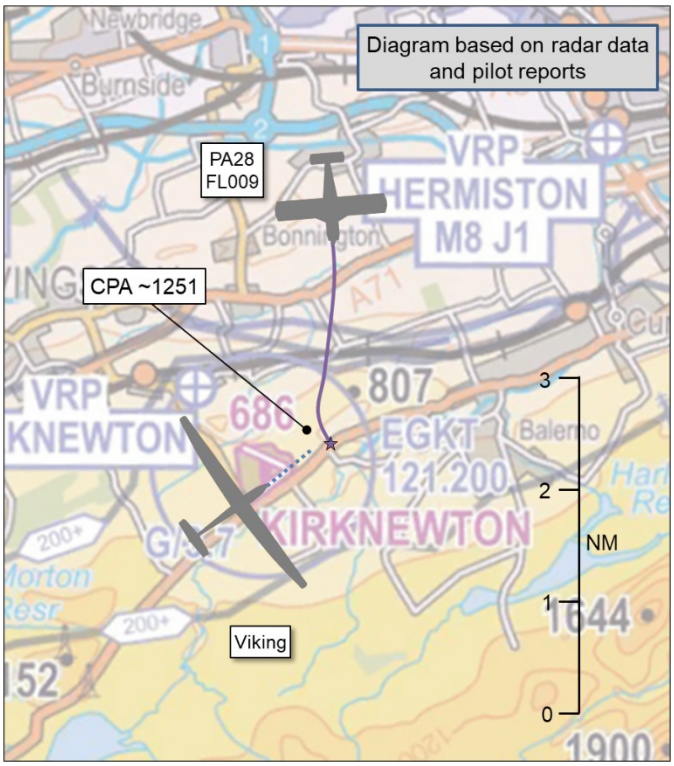
AIRPROX REPORT No 2024057

Date: 20 Apr 2024 Time: ~1251Z Position: 5553N 00323W Location: IVO Kirknewton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Viking	PA28
Operator	HQ Air (Trg)	Civ FW
Airspace	Edinburgh CTR	Edinburgh CTR
Class	D	D
Rules	VFR	VFR
Service	AGCS	Radar Control
Provider	Kirknewton	Edinburgh
Altitude/FL	NK	FL009
Transponder	Not fitted	A, C
Reported		
Colours	White	Blue, White
Lighting	Nil	NR
Conditions	VMC	VMC
Visibility	5-10km	>10km
Altitude/FL	1550ft	NR
Altimeter	QFE (1005hPa)	NK
Heading	55°	NR
Speed	50kt	NR
ACAS/TAS	FLARM[1]	SkyEcho
Alert	N/A	Unknown
Separation at CPA		
Reported	0ft V/400m H	Not Seen
Recorded	NK	



THE VIKING PILOT reports that, immediately after the student had completed the launch, just prior to the top of launch trim, the instructor identified a powered aircraft in the 12 o'clock position, co-height, crossing left-to-right and at approximately 400m. The instructor immediately took control while assessing the vector of the other aircraft, which was assessed to be increasing the distance between the aircraft. The closest point of approach was approximately 400m horizontally and 0ft vertically. Kirknewton Radio was contacted to report a potential Airprox, and they informed the instructor that Edinburgh Approach had been communicating with Kirknewton Radio (on a different frequency) during the launch to build situational awareness between the units; the timeframe did not allow information to be passed to the airborne Viking. Edinburgh Approach was then contacted by the instructor over their Approach frequency to report a potential Airprox. Post-flight, a telephone call was made to the Edinburgh Watch Supervisor to discuss the incident; they informed the instructor that they were submitting paperwork of their own because the powered aircraft (identified as a PA28) failed to comply with issued instructions from Edinburgh ATC. Although more accurately reported as an airspace infringement [sic], the aircraft commander felt that it was worth raising as a potential Airprox due to the close proximity of the other aircraft to the top of climb of the winch launch. The launch is a vulnerable period for a glider, with reduced forward visibility due to the high nose attitude, and reduced manoeuvrability due to the attached cable, as well as relatively low airspeed if the cable is released in this attitude.

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

THE PA28 PILOT reports that they were conducting a cross-country flight returning via Edinburgh airport. They were flying with a passenger, a qualified pilot, and the passenger was conducting the radio transmissions to allow them to concentrate on the flying. Prior to reaching Kelty, the route was planned for a zone transit using the VRPs which were, the Bridges, Kirkliston, Cobbinshaw. Approach was called

[1] The Viking was also fitted with SkyEcho out only.

and the zone transit request was made and accepted with instructions to call Tower. As they arrived over the Bridges they were instructed to orbit and did so. They then continued over the Forth towards Kirkliston where they were again instructed to orbit, as a commercial airliner was on finals to RW06. After completing the orbit they continued south, expecting a clearance to Cobbinshaw direct, or via the VRP at Kirknewton. However, a short time later the Tower controller issued a turn to the left. A further Tower instruction was received to turn further left to pass east of Kirknewton airfield. At no time was any glider aircraft activity seen in the vicinity. After passing the airfield, the flight continued well clear to the south side and on towards Cobbinshaw. The pilot noted that they were very much aware of this area, as they had been involved in the original development of the Flying Club that operates at Kirknewton and had been involved with the setting up of all the necessary operational protocols to be used by the club.

THE KIRKNEWTON AGO reports that the daily operation at Kirknewton was conducted as per SOP, including the activation of the Designated Gliding Area (DGA) utilising RW05. The PA28 was heard on the Edinburgh radar frequency calling up from the north, requesting a transit of the Edinburgh zone via Kirknewton. No action was taken by the AGO, except to maintain listening to the radio as Edinburgh Radar normally directs aircraft around the Kirknewton DGA. A short period later, Edinburgh Radar was heard trying to contact [PA28 callsign] but the pilot was not heard replying. As per standard procedure, before launching [the Viking], a full lookout was conducted ahead, above and behind and confirmed by both the AGO and the duty supervisor. During the ground run, Edinburgh Radar contacted Kirknewton Radio by radio to advise that they had lost contact with [the PA28 C/S] and that they were south of the field. The AGO advised that they had one aircraft launching but no other traffic in the DGA. As the Viking approached the top of the launch [the PA28] was seen crossing from north-to-south over Ravelrig Quarry (just east of the airfield, within the DGA) and into the launch path of the Viking. The Viking pilot called on the radio to confirm awareness of the aircraft and appeared to take avoiding action before contacting Edinburgh Radar to advise of the Airprox. A short period afterwards [the PA28 pilot] was heard contacting Edinburgh Radar, where they were informed that an Airprox had occurred.

THE EDINBURGH CONTROLLER reports that the pilot of [PA28 C/S] had called in the vicinity of Balado to request a VFR zone transit. Several requests for details were necessary to establish their desired routeing to their destination. Initially, they requested to route VRPs Kelty, Forth Bridges, overhead Edinburgh, Hermiston, Kirknewton. They were advised that Kirknewton was active with gliders up to altitude 3700ft. They stated they would route to the north of Kirknewton by '3 or 4 miles' but, as RW06 was in use at Edinburgh, they were advised they would have to route to the south of Kirknewton, rather than the north. With this information passed, clearance to leave the zone via Cobbinshaw en-route to [destination] not above altitude 2000ft was issued.

The PA28 was notified to AIR via EFPS (electronic flight progress strip) offer and accept. They called AIR to advise that the pilot had been informed of gliding activity at Kirknewton and requested to route to the south of the airfield, rather than the north, and to alert them to monitor the aircraft to ensure compliance as they weren’t confident that the pilot would do as requested. They observed [the PA28] routeing through the Edinburgh overhead and could see the aircraft continuing toward Kirknewton. When it was clear the aircraft wasn't turning away from the gliding area, they called Kirknewton Radio to alert them to a possible infringement [sic] and ask if they had gliders in the air. One was in the process of launching.

They called AIR to advise them that they had contacted Kirknewton Radio, the AIR controller advised that [the pilot of PA28 C/S] appeared to think that routeing just to the east of Kirknewton would keep them clear of the gliding area, and had instructed the aircraft to turn east. Kirknewton Radio called back to advise they had the PA28 in sight. [Viking C/S], believed to be the airborne glider, advised that they would be filing an Airprox, which they acknowledged and advised that they also intended to do so. When [the pilot of the PA28] contacted Edinburgh Radar again routeing toward VRP Cobbinshaw, they advised them that they had infringed the Kirknewton gliding area, and an Airprox was being filed.

Factual Background

The Kirknewton entry for the UK AIP is:

KIRKNEWTON GLIDER SITE (MIL), LOTHIAN (AD) (W) 555234N 0032400W	Upper limit: 3000 FT AGL Lower limit: SFC	Airfield Duty Supervisor during notified hours: 07920-782209. Aerodrome Operator Tel Syerston Ops: 01400-264520, Email: SYE-2FTS-HQ-OpsOC@mod.gov.uk.	Freq: 121.205 MHz (Edinburgh APP); 124.100 MHz (VGS). Site elevation: 652 FT AMSL. Note 1: PNR for Military aircraft. PPR for civil aircraft not available. Note 2: Site located within Edinburgh CTZ. Hours: Fri-Sun, & PHs, 0830-SS+15 (0730-SS+15).

The weather at Edinburgh was recorded as follows:

```
METAR EGPH 201250Z 08004KT 030V150 9999 FEW039 11/02 Q1030=
```

Analysis and Investigation

Edinburgh investigation

Investigation

[PA28 C/S] checked-in on the Edinburgh Radar frequency, requesting a routeing through the Edinburgh Control Zone. The Edinburgh Radar controller made multiple transmissions to [PA28 C/S] to obtain aircraft details and ascertain details of the requested routeing.

[PA28 C/S] was cleared to enter the Edinburgh Control Zone at Kelty, routeing to the Bridges and then via the overhead to Hermiston, not above altitude 2000ft on QNH 1029hPa. The Edinburgh Radar controller advised [PA28 C/S] that Kirknewton was active with gliders up to altitude 3700ft and suggested that they think of an alternative routeing beyond Hermiston, and to advise what they would prefer. [PA28 C/S] said they could route to the north of Kirknewton, by about three or four miles, towards Livingston. The Edinburgh Radar controller stated that such a routeing would put them in conflict with Edinburgh's final approach for RW06 but could reassess as they got a little bit closer and that a routeing to the south and around Kirknewton, then out via Cobbinshaw may be an option. [PA28 C/S] confirmed that Cobbinshaw would be no problem.

[PA28 C/S] entered Edinburgh Control Zone and was instructed that their clearance limit was the Bridges, this was acknowledged. The Edinburgh Radar controller called the Edinburgh Air controller to inform them that they had told [PA28 C/S] that Kirknewton was active and discussed the routeing. The Edinburgh Air controller acknowledged this and confirmed that the routeing was around to the east and then the south of Kirknewton. The Edinburgh Radar controller told the Edinburgh Air controller to keep an eye on [PA28 C/S].

As [PA28 C/S] was approaching the Bridges, the Edinburgh Radar controller clarified that their clearance was to route via the overhead, then Hermiston and then Cobbinshaw, routeing around to the east and then the south of Kirknewton. There was some confusion from [PA28 C/S] as they believed they were routeing direct to Kirkliston and then Cobbinshaw Reservoir, a routeing which would take them directly through the final approach for RW06. The Edinburgh Radar controller reiterated that their routeing after the overhead was to route towards Hermiston and then east and then south of Kirknewton towards Cobbinshaw. There was some confusion again from [PA28 C/S] and they queried a routeing of Palmerston. The Edinburgh Radar controller reiterated that it was Hermiston, which was the VRP to the south of the airfield. [PA28 C/S] acknowledged Hermiston and then Cobbinshaw and was then instructed to hold at the Bridges, which they complied with.

[PA28 C/S] was then transferred to the Tower frequency, they checked in on the Tower frequency and were instructed to route to Kirkliston to hold, they complied.

[PA28 C/S] was given Traffic Information on an inbound A321 at a four-mile final for RW06 and was asked to report that traffic in sight. It was the Edinburgh Air controller's intention to cross [PA28 C/S] above and behind the inbound A321. [PA28 C/S] replied that they had copied the traffic and were looking, and then later replied that they were not visual. [PA28 C/S] was then instructed to hold at

Kirkliston and remain north of RW06 at all times. Only part of the instruction to remain north at all times was read back. The Edinburgh Air controller reiterated to hold at Kirkliston, this was read back.

The Edinburgh Radar controller phoned the Edinburgh Air controller to say that they had told [PA28 C/S] that they would be routeing east and then south around Kirknewton and that there was a bit of confusion with that. The Edinburgh Radar controller wasn't sure how it had come across to the Edinburgh Air controller and advised to watch [PA28 C/S].

[PA28 C/S] was cleared to cross RW06 via the threshold, this was read back. The Edinburgh Air controller advised [PA28 C/S] to change their routeing to route via the East of the Kirknewton gliding circuit and then route around it to the south, as that is what they had agreed with the Radar controller. [PA28 C/S] replied "*that's affirm, err Kirknewton and then south of Kirknewton*".

When [PA28 C/S] was approximately two miles north of the locally agreed Kirknewton DGA-Soaring area, heading south, the Edinburgh Radar controller called Kirknewton Radio on the Edinburgh Radar frequency to pass Traffic Information, stating that there was a PA28 just south of Edinburgh airfield, that it was meant to be routeing to the east of Kirknewton, but that the controller wasn't entirely sure that it was going to do that and asked if there were any gliders airborne. Kirknewton Radio replied that they had one on the cables, launching. The Edinburgh Radar controller acknowledged this and said that they would see if the Tower could get [PA28 C/S] to move clear.

The Edinburgh Air controller advised [PA28 C/S] that their current track was going through the Kirknewton gliding circuit. [PA28 C/S] replied that they were just staying to the east of Kirknewton and then south. The Edinburgh Radar controller phoned the Edinburgh Air controller to ask that [PA28 C/S] be turned to the east as Kirknewton were about to launch a glider. The Edinburgh Air controller asked [PA28 C/S] to amend their routeing east, acknowledging that there was the Kirknewton VRP, but that the gliding circuit was a wider area. [PA28 C/S] entered the locally agreed DGA-Soaring area at altitude 1300ft, descending and confirmed that they would route east.

The Edinburgh Radar controller advised Kirknewton Radio that the previously mentioned PA28 traffic was just east of them, and was turning eastbound, that it was in their gliding area, just to the east of the site, indicating 1300ft, but turning hard left towards the east. Kirknewton Radio acknowledged this and reported that they were visual. [PA28 C/S] was at altitude 1300ft, descending. The Edinburgh Air controller advised [PA28 C/S] to continue an easterly routeing for another mile or so to be clear of the gliding area. [PA28 C/S] replied that they would continue east for another mile before turning west. The Edinburgh Air controller advised that they were to continue east for about a mile and then to route about another mile and a half to the south before coming out of the gliding zone. [PA28 C/S] acknowledged this and routed southeast, leaving the DGA Soaring area at altitude 1500ft.

The Viking pilot checked-in on the Edinburgh Radar frequency reported an Airprox and advised that they would be reporting when on the ground. They requested that radar tapes be held. The Edinburgh Radar controller acknowledged this and stated that they would be reporting as well.

Once clear of the DGA-Soaring area, the Edinburgh Air controller advised [PA28 C/S] that they could track westbound to exit via Cobbinshaw VRP, this was acknowledged and [PA28 C/S] was given climb to not above altitude 3000ft.

[PA28 C/S] was transferred to the Edinburgh Radar frequency. The Edinburgh Radar controller advised [PA28 C/S] that they were very close to the gliding activity at Kirknewton as they were routeing through the area and, just for their information, that Kirknewton were going to file an Airprox. The PA28 pilot acknowledged this. The Edinburgh Radar controller added that Kirknewton had them in sight.

[PA28 C/S] left the Edinburgh Control Zone approximately two miles southeast of Cobbinshaw Reservoir and, when outside Edinburgh Controlled Airspace, requested to change frequency to Scottish Information. The frequency change was approved.

The details of the locally agreed dimensions of the Kirknewton DGA-Circuit and the Kirknewton DGA Soaring areas are not in the Kirknewton Glider Site U.K. AIP ENR 5.5 entry, or on UK maps or SkyDemon and it's reasonable to anticipate that pilots who transit the Edinburgh Control Zone are not aware of the locally agreed dimensions, and therefore are unable to plan to avoid the locally agreed DGA-Circuit and DGA-Soaring Areas.

MATS Part 2, Section 1, Chapter 3

3.1.1.6 Listening Watch on Edinburgh Approach

Kirknewton Radio and all active gliders will maintain a listening watch on Edinburgh Approach VHF frequency at all times when gliding is taking place. Gliders will change frequency to Edinburgh Approach after launch and when required by para 3.1.1.5 to complete a satisfactory radio check. Late downwind gliders may change frequency to Kirknewton Radio. Unless a radio check is required there is no requirement.

3.1.1.11.1 Other Traffic Edinburgh

ATC will not prevent other aircraft from operating in the vicinity of RAF Kirknewton and will not withhold ATC clearance for such aircraft; however, the 2 FTS Aerodrome Operator (AO) is responsible for approving all other PPR departures and arrivals at RAF Kirknewton. ATC may tactically manage traffic to avoid the area if appropriate. ATC will advise other aircraft of gliding activity as appropriate.

3.1.1.11.2 Traffic Information

In the event that it is necessary for Edinburgh ATC to pass traffic information to RAF Kirknewton, this will be done on Edinburgh Approach VHF frequency, addressed to "Kirknewton – all stations".

Kirknewton Radio and all airborne gliders must acknowledge all traffic information.

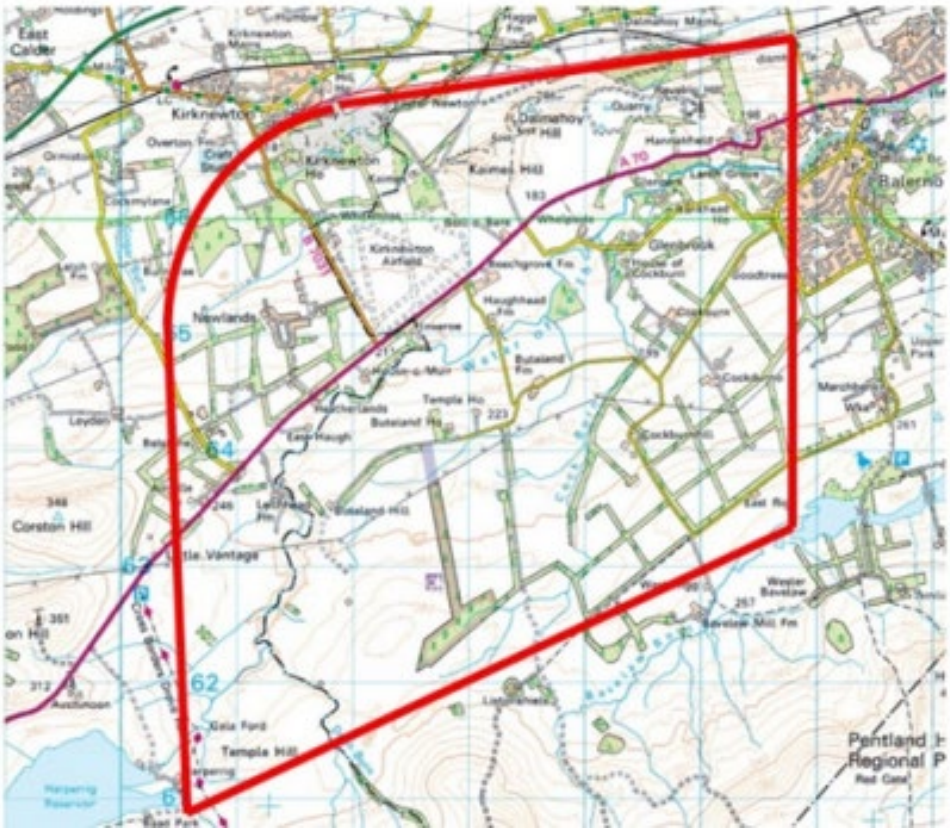


Figure 1 RAF Kirknewton Delegated Gliding Area

UKAB Secretariat Note:

The LoA quoted above is out of date, whilst the DGA remains as in Figure 1, the LoA in place at the time of the Airprox stated:

3.1.4 Glider Radio Check

There is no requirement for individual gliders to carry out a satisfactory radio check on Edinburgh Approach VHF frequency. Edinburgh Approach will pass any relevant information to Kirknewton Radio for relay.

3.1.5 Listening Watch on Edinburgh Approach

Kirknewton Radio will maintain a listening watch on Edinburgh Approach VHF frequency at all times when gliding is taking place.

5.2 Traffic Information

In the event that it is necessary for Edinburgh ATC to pass traffic information to RAF Kirknewton, this will be done on Edinburgh Approach VHF frequency and addressed to Kirknewton Radio.

Kirknewton Radio must acknowledge all traffic information.

CAA ATSI

Synopsis

The pilot of the Viking T1 glider, who was under instruction, had just completed a cable launch at Kirknewton when the PA28 was seen at the same height, passing from-left to-right. The PA28 was on a return VFR flight to [destination] via Alyth to the north of Edinburgh and in communication with Edinburgh Tower.

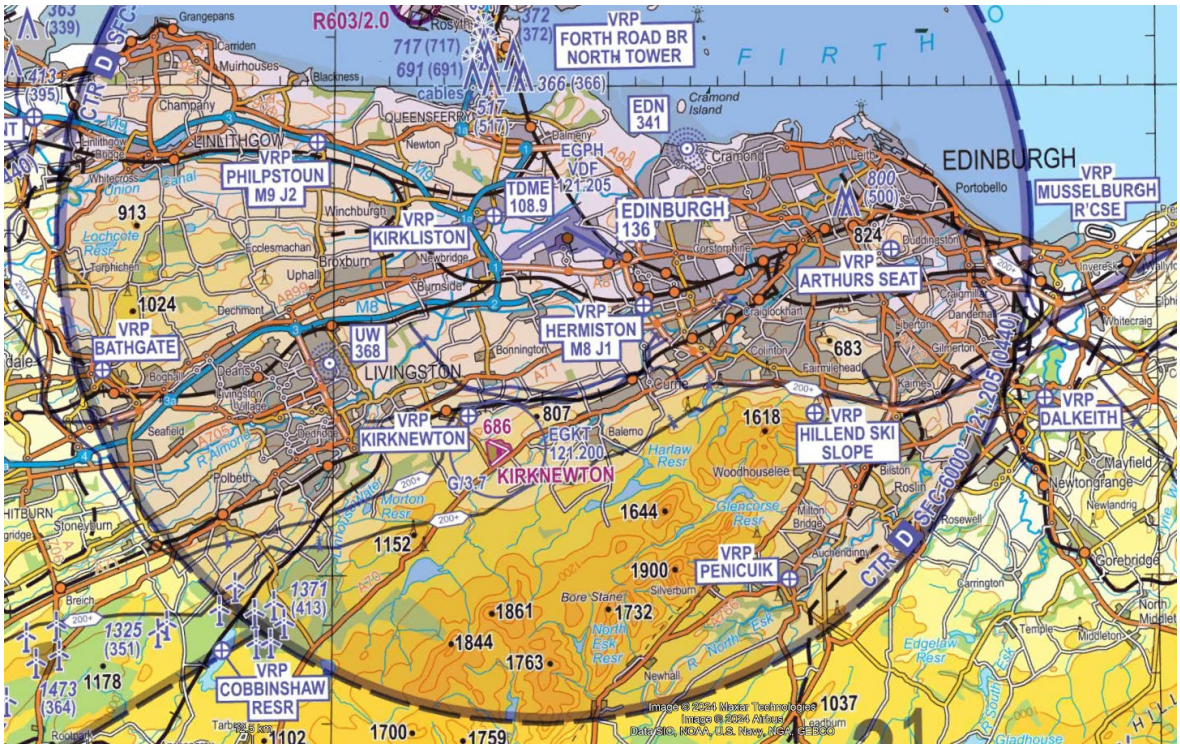


Figure 2 - Edinburgh VRPs

The pilot of the PA28 first contacted the Edinburgh Radar controller at 1236:45:

Edinburgh Radar this is (callsign) – is a PA28 overhead Balado requesting a zone transit from Kelty north to the south.

Basic Service at the moment (QNH) and just what's your full callsign?

(Pilot confirms full callsign)

Roger Basic Service (QNH) and pass the rest of your details.

(QNH) and it's a Basic Service.

Are you looking to transit the control zone and if so how would you like to do so?

Er that's affirm we like to transit er Kelty, Bridges through the overhead and then M8 Junction at Hermiston.

And then after Hermiston where would you like to route?

We're going to route direct overhead Kirknewton then back to Prestwick.

1238:00 *Roger - cleared to enter the Edinburgh Control Zone at Kelty routeing to The Bridges then via the overhead to Hermiston not above altitude 2000ft on (QNH)*

Route direct to the bridges via Kelty VFR not above 2000ft on (QNH)

that is correct and squawk 0432 and report Kelty

Squawk 0432

1238:28 *[C/S] for information Kirknewton is active at the moment with gliders up to altitude 3700ft you may have to think of an alternative routeing beyond Hermiston – if you just let me know what you would be prefer.*

Er that's affirm - we can er route to the north if you are happy of Kirknewton by about 3 or 4 miles towards Livingstone?

That would bring you into conflict with our final approach for Runway 06 but erm we can see how it looks when you get a little bit closer might be able to route you to the south and around that way out via Cobbinshaw perhaps

Er yes if you want Cobbinshaw is no problem

The radar controller, who was also providing a surveillance approach service to two aircraft inbound IFR, provided descent and vectors to RW06.

Then at 1239:55:

Edinburgh Radar [C/S] is [? unreadable]

Roger clearance limit is The Bridges

Bridges (callsign)

The controller then dealt with a pilot to the north who was requesting a radio and transponder check and then gave a final vector to, and cleared the pilot of, the first IFR aircraft for the ILS.

At 1241:57 the PA28 pilot reported approaching The Bridges (VRP).

1242:12 *Roger and just to clarify your clearance – after the overhead Hermiston and then Cobbinshaw routeing round to the east and then the south of Kirknewton*

Er we're routeing direct to Kirkliston (sic) *and then Cobbinshaw reservoir, not above 2000ft VFR (QNH)*

1242:30 *after the overhead it would be routeing towards Hermiston then east to er, east and south of Kirknewton towards Cobbinshaw*

Er that's affirm -erm - is it Palmerston you were saying?

No Hermiston VRP - to the south of the airfield

1242:48 *Oh, Hermiston sorry – er route direct Hermiston and then direct Cobbinshaw Reservoir*

if you just take up a hold at the bridges for the moment tower have traffic

Affirm hold at the bridges.

1243:00 *(callsign) contact tower for further on (frequency) goodbye* (no reply so is repeated)

The PA28 pilot contacted Edinburgh Tower at 1243:30:

Edinburgh Tower this is (callsign) on frequency holding at The Bridges

(callsign) Edinburgh Tower route to Kirkliston to hold at Kirkliston

(readback)

The Tower controller was providing services to inbound and outbound aircraft, as well as to the pilot of a helicopter which was flying repeated trips from a site just north of the RW06 threshold across to Edinburgh City Centre. The controller passed Traffic Information to the pilot of the PA28 on the helicopter, which was returning to its landing site. Then the controller issued a take-off clearance to one aircraft, a discretionary landing clearance to the helicopter pilot, Traffic Information to the next inbound aircraft on the PA28, followed by a landing clearance.

At 1245:08 the Tower controller passed Traffic Information on the next approaching aircraft to the pilot of the PA28 and requested the pilot report visual with that aircraft (Figure 3)

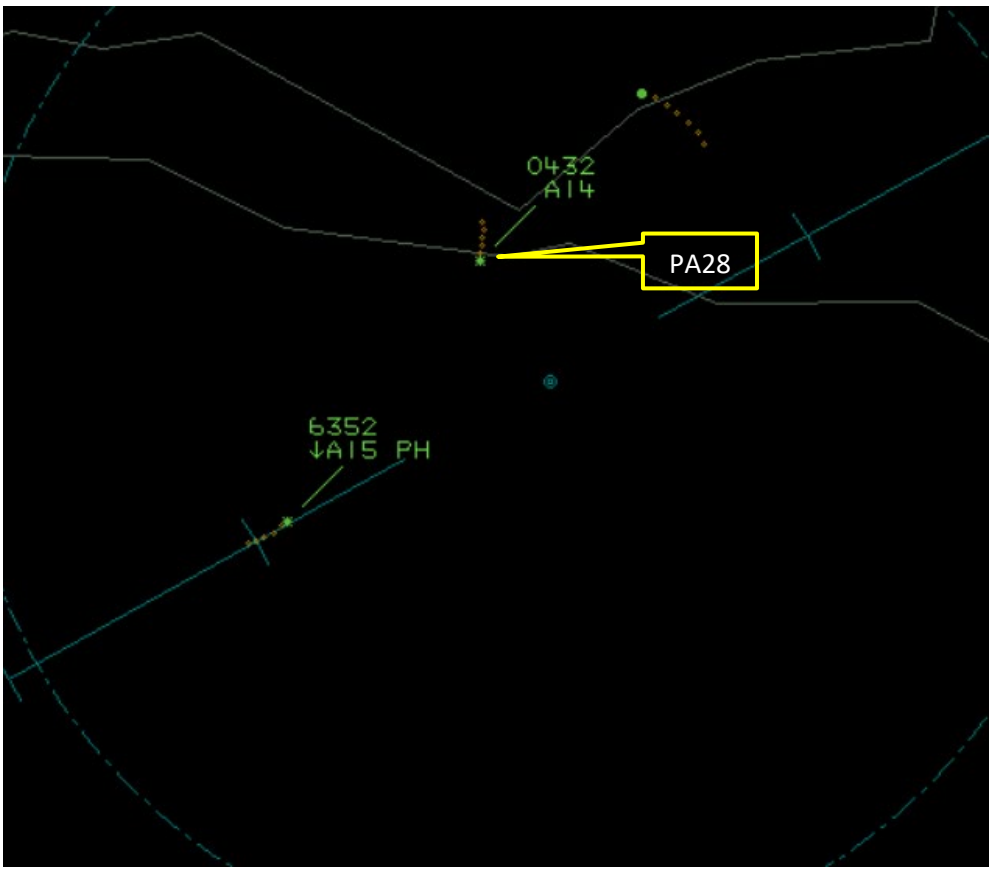


Figure 3 – 1245:08

At 1245:36 the PA28 pilot reported:

(callsign) is negative visual

Roger Hold at Kirkliston remain north of Runway 06 at all times

Affirm remaining north at all times

1245:43 *And (callsign) just confirm holding at Kirkliston?*

holding at Kirkliston

The Tower controller transferred an outbound aircraft to their next frequency and at 1246:54 the PA28 pilot reported:

Affirm (callsign) visual with a/c over threshold

1247:04 Cross runway 06 via the 06 threshold

Affirm cross the runway via the 06 threshold

The Tower controller lined-up a departure on the runway, held the pilot of the helicopter who was ready for their next flight on the ground due to the PA28 passing over their location, passing Traffic Information to the helicopter pilot on the PA28. They then gave taxi instructions to a previously landed aircraft, then a take-off clearance to the aircraft on the runway, a change of frequency to the taxying aircraft, a discretionary lift clearance to the helicopter pilot and finally a "continue approach" to another inbound aircraft.

Then at 1248:40 the Tower controller advised the PA28 pilot:

If you erm change your routeing to route via east of the Kirknewton gliding circuit and then route round it to south I believe that is erm what you spoke with the radar controller about? (Figure 4).

That's affirm Kirknewton and then south of Kirknewton

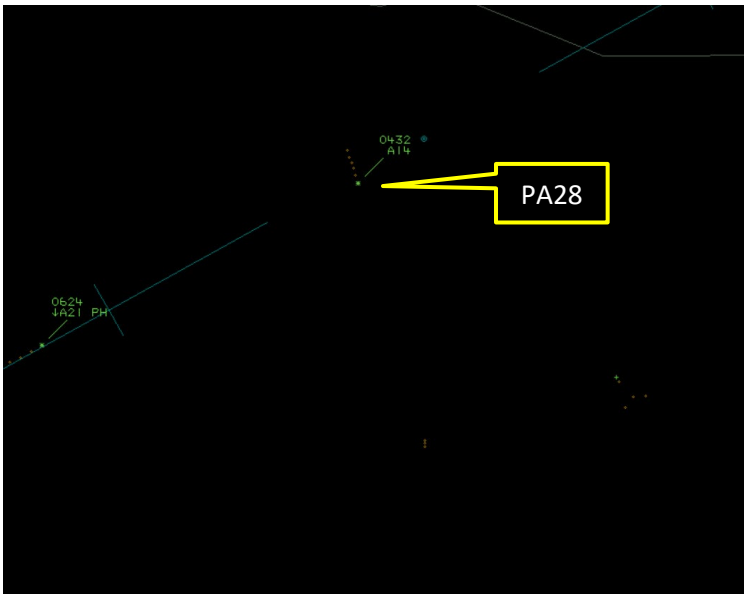


Figure 4 – 1248:40

The Tower controller then issued Traffic Information to the pilot of the next inbound aircraft on the helicopter, then reciprocal Traffic Information followed by a transit clearance to the helicopter pilot before, at 1249:52, contacting the PA28 pilot:

Just to confirm your current track is going through the Kirknewton gliding circuit

That's affirm er we're just staying to the east of Kirknewton and then south (Figure 5).

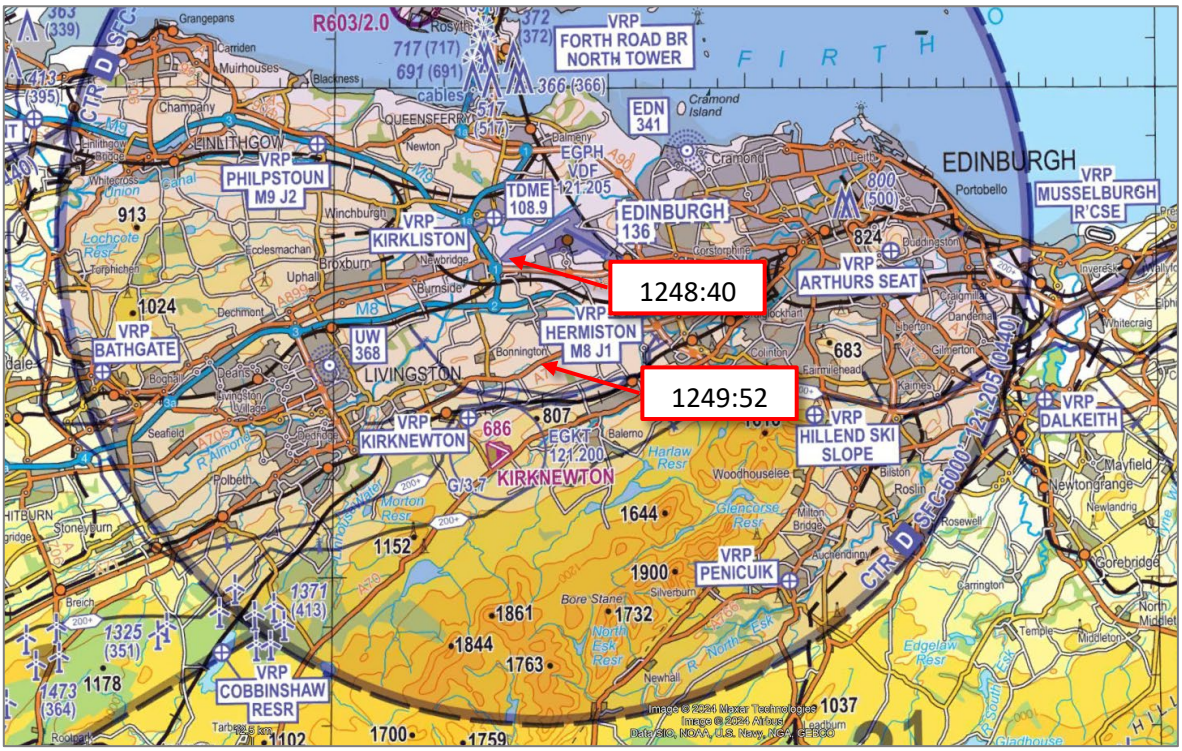


Figure 5 – PA28 positions at 1248:40 and 1249:52

The Tower controller then requested, at 1250:08:

If you amend your routeing east – I know it's the Kirknewton VRP but the gliding circuit is actually a wider area than that.

Er affirm we'll take us east

The Tower controller transferred the previously departing aircraft to the next frequency and then at 1250:38:

And (PA28 callsign) if you continue an easterly heading for about another mile or so to the south and then you'll get ??? the gliding zone

That's affirm another mile and then we'll turn west for Cobbinshaw

just to confirm once you are about a mile east er, you'll need to route about another mile and a half to the south before coming out of the gliding zone

That's affirm (Figure 6)

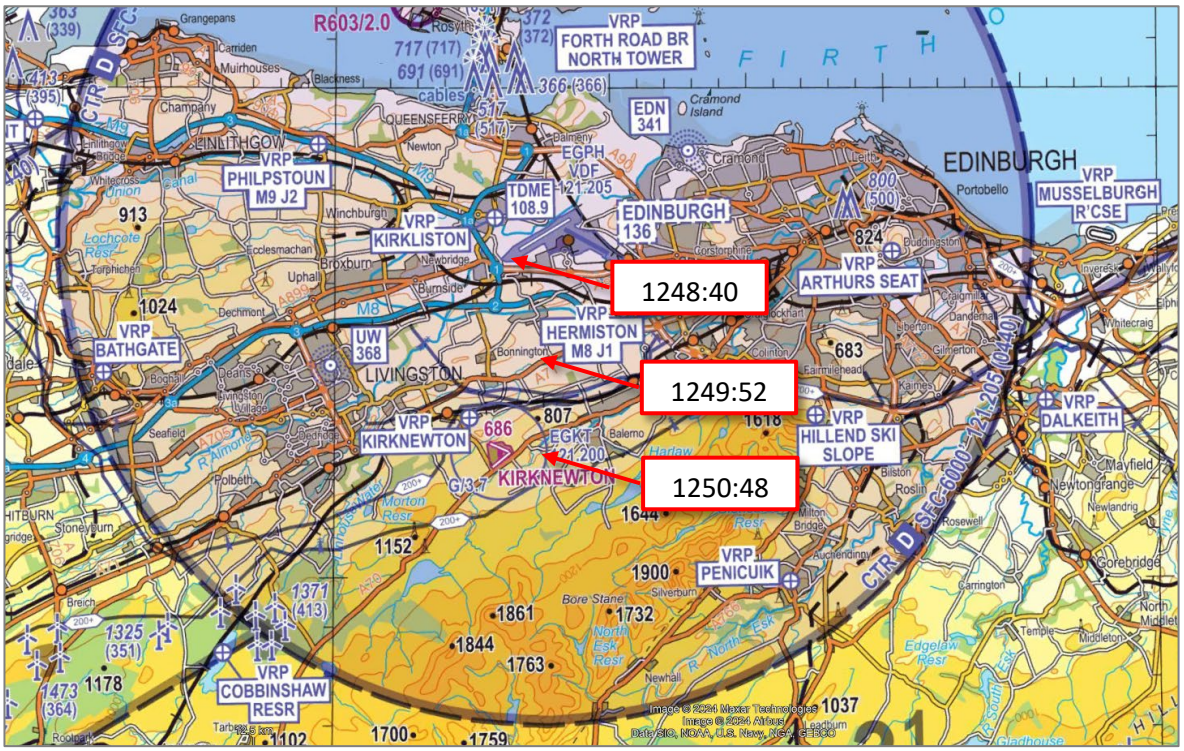


Figure 6 – PA28 positions at 1248:40, 1249:52 and 1250:48

Analysis

ATSI reviewed reports from the pilots of both aircraft, the Radar controller's report, and the Edinburgh ATC investigation report. Although area radar was used to provide some snapshots in this report, and did occasionally show contacts in the Kirknewton area, believed to be gliders, the Airprox itself was not visible.

The ATC report and investigation suggested some confusion by the pilot as to their routeing, specifically that which was ultimately issued within their controlled airspace crossing clearance. Both the Radar and Tower controllers maintained extra vigilance on the track of the PA28, and attempted to correct it in respect of its proximity to Kirknewton airfield. Once it became apparent that the aircraft would fly through the Kirknewton gliding area, the Radar controller contacted the Kirknewton Radio Operator to advise on the proximity of the PA28. The Viking glider was already on the ground run of their tow launch and so it was too late to advise the pilot, who spotted the PA28 at the top of their launch just after releasing the cable.

Throughout the communications between Edinburgh ATC and the PA28 pilot, Kirknewton airfield was never mentioned in full, rather, all references were to 'Kirknewton' only. 'Kirknewton' refers to both an airfield and a VRP. The VRP is located within the northwest sector of the gliding site airfield marked on aviation charts. It could not be determined at any stage by ATSI, and was not referenced in the Edinburgh unit investigation, whether there was a possibility of confusion by the pilot of the PA28 when given multiple routeing instructions which included reference to Kirknewton, as to whether it was clear that the Kirknewton being referred to was the airfield or the VRP. It was clear that the controllers' intentions with regards to routeing were to keep the PA28 clear to the east and then south of the airfield.

On two occasions, incorrect readbacks of routeing instructions by the PA28 pilot were not challenged by the controllers:

At 1242:48 the pilot read back: "*Oh Hermiston sorry – er route direct Hermiston and then direct Cobbinshaw Reservoir",* whereas the original routeing instruction issued by the radar controller was*: "after the overhead it would be routeing towards Hermiston then east to er, east and south of Kirknewton towards Cobbinshaw".* The pilot was then transferred to the Tower frequency.

At 1248:40 the Tower controller instructed the PA28 pilot *"If you erm change your routeing to route via east of the Kirknewton gliding circuit and then route round it to south I believe that is erm what you spoke with the radar controller about".* However, the pilot readback: *"That's affirm Kirknewton and then south of Kirknewton"* (omitting the instruction to pass to the east).

Whilst neither omission in themselves could be said to have singularly contributed to the PA28 pilot's eventual routeing into proximity with the gliding activity at Kirknewton, they contributed to an overall confusing picture with regards to exactly what routeing the pilot thought they were to follow.

The pilot of the PA28 appeared to acknowledge all the routeing instructions issued by Edinburgh ATC, but they had to be corrected a number of times. They also reported being aware of the presence of Kirknewton Airfield.

In trying to be helpful to the PA28 pilot in issuing a CTR transit clearance, the slightly ambiguous nature of the routeing instructions issued by ATC possibly led the pilot to fly in proximity to the Viking glider. With the benefit of hindsight, an alternative routeing utilising other VRPs in the Edinburgh area, or even a refusal to issue a clearance might have been the better option. Edinburgh ATC were occupied at that time with providing services to both inbound and outbound aircraft on the easterly runway. The PA28 pilot's requested routeing was always going to either conflict with the RW06 final approach, or the gliding activity at Kirknewton.

Conclusion

The PA28 pilot's routeing through the Edinburgh CTR brought it into proximity with gliding activity taking place at Kirknewton Airfield and, in the opinion of the Viking T1 pilot, close enough so that the distance between aircraft as well as their relative positions and speed had been such that the safety of the aircraft involved may have been compromised.

The possibility of confusion regarding use of and/or referencing Kirknewton when the airfield was also active with gliding activity cannot be discounted.

Edinburgh ATC is reminded of its obligations under Assimilated Regulation (EU) 2017/373 of 1 March 2017, ATM/ANS.OR.A.065 paragraphs (a) through (e), with regards to the initial submission of a mandatory occurrence report and any follow up reports within the specified timescales as defined within Assimilated Regulations (EU) 996/2010 and 376/2014.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The PA28 could be identified using the position report and squawk and could be seen routeing southbound through the Edinburgh CTR, see Figures 7 and 8, with Kirknewton marked by the white cross. The Viking could not be seen on the radar replay throughout the event.

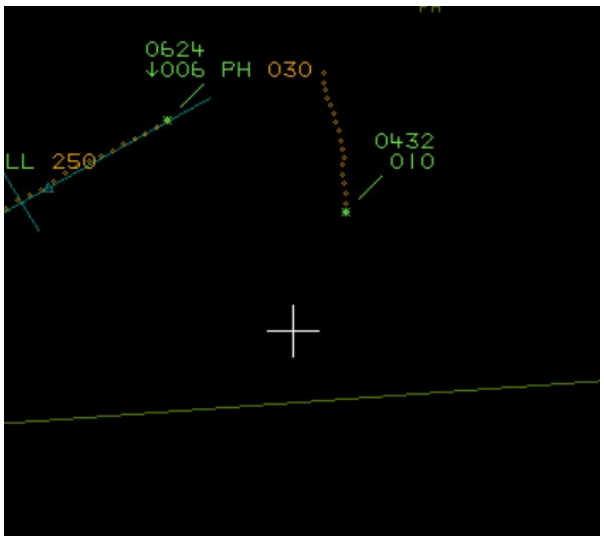


Figure 7 - 1249:55

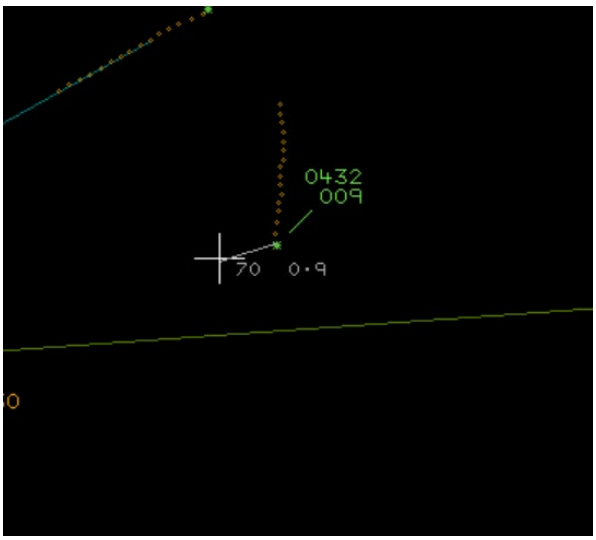


Figure 8 - 1250:38

The Viking and PA28 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[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]

Comments

HQ Air Command

It's reassuring to see evidence of close coordination between Edinburgh and Kirknewton to safeguard operations of gliders and other aircraft in their airspace. Given the PA28 pilot did not see the Viking, another method was required to fulfil their obligation to give way. Avoiding this known area of winch-launched gliding as published on the VFR charts would have been a better solution. It's evident that some confusion may have ensued between the Edinburgh controllers and the PA28 pilot, but the PA28 pilot was still responsible for avoidance of the glider, and therefore the notified site. It follows that it would have been better for the PA28 pilot to avoid Kirknewton by a greater margin. Once it was apparent this was not going to happen, the measures taken between Edinburgh controllers and Kirknewton were not timely enough to effect any meaningful change to the situation, but were welcome, nonetheless. The Viking pilot should be commended for a thorough lookout, which mitigated the risk of MAC after failure of the other barriers.

AOPA

The designated gliding area is known to air traffic and the VGS, however this isn't promulgated to the general aviation community. Consequently, pilots are not aware of this large gliding area. Nor does it appear to have any legal status. It is unfortunate that there is a VRP within this gliding area, with the same name as the airfield, that the pilot was being directed by ATC to fly towards. It is interesting that the gliding supervisors heard the VHF exchange with the pilot and air traffic whilst the pre-launch checks were being carried out, and yet with this information still allowed the launch to take place.

Summary

An Airprox was reported when a Viking and a PA28 flew into proximity in the vicinity of Kirknewton at around 1251Z on Saturday 20th April 2024. Both pilots were operating under VFR in VMC, the Viking

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

pilot in receipt of a AGCS from Kirknewton and the PA28 pilot in receipt of an Aerodrome Control Service from Edinburgh.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs, reports from the air traffic controllers 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 discussed the actions of the Viking pilot, members were told by a military representative that although the Viking had been fitted with dual watch radios to allow the capability of monitoring the Edinburgh frequency, in this case the Instructor had muted the frequency in order to allow them to instruct a low-hours student. The Board was told that the radio configuration was such that this frequency selection had to be made when on the ground, as the back-seat Instructor had no radio control once in the air. Members were sympathetic to the idea that a continual radio chatter could be distracting for the student, nevertheless, they noted that had the Edinburgh frequency been selected, the pilot would have heard the broadcast made by the Edinburgh Radar controller providing information on the PA28 and without it they had lost an opportunity to receive situational awareness on the PA28 (**CF10**). The Board agreed that the CWS on the glider could not have detected the PA28 (**CF12**) and the first time the Viking pilot saw the PA28 had been when it had been crossing their 12 o'clock, too late to have taken any action (should any have been required), making this effectively a non-sighting (**CF14**).

Turning to the PA28 pilot, the Board noted that one pilot had been conducting the flying, with a second conducting the radio calls. Members noted that this was a perfectly acceptable situation, but that the pilot-in-command (PIC) must still ensure that they can hear the radio calls, and they wondered whether that had happened in this case, because although the PA28 pilot's narrative for the Airprox stated that they had been very familiar with the area and the VRPs, it had been clear from the RT transcript that the pilot conducting the RT had not (**CF8**). They opined that, when it became apparent that the pilot conducting the RT had become confused, the PIC should have taken back control of the RT. Although members acknowledged that the names of the VRPs at Edinburgh could be confusing, still they thought that the PA28 pilot's radio calls had lacked clarity, with numerous readback mistakes (**CF9**) and there had been an apparent lack of understanding about the VRPs and the updated routeing once the initial plan for routeing direct to Cobbinshaw had not been approved (**CF7**). This had caused ATC a higher workload whilst they corrected readbacks and explained why the pilot could not take their intended routeing. Furthermore, the PA28 pilot had not followed the clearance issued by ATC (**CF5**). ATC had told the PA28 pilot that the Kirknewton gliding site had been active early in the exchange of RT (at 1238), and had told the pilot that their routeing had not been suitable, suggesting an alternative through Hermiston and south and east of Kirknewton airfield; this information had been updated by the Tower controller once it had become apparent that the PA28 pilot had not been routeing as ATC had cleared them. The PA28 pilot therefore received generic information on the gliding activity (**CF10**) but, in their continued routeing just to the east of the airfield, it appeared that they had not assimilated this information (**CF11**). Some members opined that at 0.9NM from the airfield, the PA28 pilot could have considered themselves far enough to the east, but others countered that the GASCo recommendation of remaining 2NM clear of an airfield was a better option. The Viking had been operating with ADS-B out, and so the CWS on board the PA28 should have alerted to it, but no such alert had been reported (**CF13**) and the PA28 pilot had not seen the glider as they had crossed ahead of it (**CF14**).

When discussing the ground elements, the Board first looked at the actions of the glider supervisor at Kirknewton. Some members wondered whether the supervisor should have heard the PA28 on the Edinburgh frequency and been alerted to its presence earlier. However, it was noted that, as per the LoA, the supervisor had been listening on the Edinburgh Radar frequency but that the PA28 pilot had been sent across to the Tower frequency, in order to cross through the Edinburgh overhead, and so ground personnel at Kirknewton would not have received the information until the Edinburgh Radar controller had called them directly. It had been unfortunate that this had come at the same time as the

Viking had been launched. The Board therefore agreed that there had been little more the gliding supervisor could have done.

When discussing the actions of Edinburgh ATC the Board was sympathetic to the situation presented to the controllers, who had been trying to give the PA28 pilot the routeing that they had asked for, whilst still keeping Edinburgh traffic flowing and keeping clear of the Kirknewton gliding area. With hindsight, once it had become obvious that the PA28 pilot may not have been familiar with the VRPs, it may have been better to refuse the routeing through the overhead completely. However, when the controllers had issued the clearance to the PA28 pilot, on two occasions the pilot had not read back the clearance correctly and had not been challenged by the controller (**CF3**). The Board also noted that the names of the VRPs at Edinburgh were in many cases similar (**CF1**), which they felt had led to the confusion of the pilot – the controllers had not made it absolutely clear whether they had been talking about Kirknewton VRP or Kirknewton airfield and, although those in the know should have been able to make the distinction easily enough, the fact that the PA28 pilot had not appeared to be familiar with the VRPs should have rung alarm bells for the controllers, so that they explicitly stated whether they were referring to the VRP or the airfield. Members thought that, as an alternative, the controllers could have used other VRPs that would have kept the PA28 well clear of Kirknewton gliding site and that in not doing so, and instructing the PA28 pilot to remain not above 2000ft, with high ground to the southeast of Kirknewton likely keeping the pilot closer in to Kirknewton airfield, the instructed routeing had contributed to the Airprox (**CF4**). The PA28 pilot had been transferred to the Tower frequency for the crossing through the overhead and the Radar controller had kept a track of its progress and had noticed that it had entered the DGA; the Radar controller had then called Kirknewton gliders to warn them. Although the controller had called the gliding club as soon as they had realised that the PA28 would be a factor, the Board agreed that this had been too late to provide timely information to the Viking pilot (**CF2**).

When discussing this Airprox, the Board noted that the Kirknewton VRP and Kirknewton airfield, being the same name and very close to one another, could be easily confused, as appeared to be the case here. Furthermore, Kirkliston and Hermiston VRPs were similar sounding names and indeed had also been confused by the PA28 pilot. Members agreed that this had contributed to the Airprox and therefore made a recommendation that Edinburgh Airport review the naming of their VRPs. Additionally, members noted that, although the DGA was well known to Kirknewton gliders and Edinburgh ATC, it was not promulgated anywhere that GA pilots might be likely to see it. Members noted that other units with a similar arrangement, Luton and Dunstable Downs for example, published the details of the DGA within their AIP entry. The Board therefore recommended that Edinburgh Airport publish the details of the Kirknewton Designated Gliding Area in their UK AIP entry.

When determining the risk of the Airprox, the Board took into consideration the reports from both pilots and the controllers, together with the radar replay. They noted that the heading changes given to the PA28 by ATC had altered the PA28's track to move it further east of the airfield. Although the Viking pilot had not seen the PA28 in time to take any avoiding action, they had assessed the risk of collision as low. The Board therefore agreed that there had been no risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024057			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Organisational	• Aeronautical Information Services	An event involving the provision of Aeronautical Information	The Ground entity's regulations or procedures were inadequate
	• Situational Awareness and Action			
2	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late

3	Human Factors	• ATM Personnel Hear back	An event involving the hearback (listening) of ATM personnel to communications	
4	Human Factors	• Traffic Management Information Provision	An event involving traffic management information provision	The ANS instructions contributed to the Airprox
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
5	Human Factors	• Flight Crew ATC Clearance Deviation	An event involving a deviation from an air traffic control clearance.	
	• Tactical Planning and Execution			
6	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
	• Situational Awareness of the Conflicting Aircraft and Action			
7	Human Factors	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
8	Human Factors	• Readback Incorrect	An event involving incorrect readback	
9	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
10	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
	• Electronic Warning System Operation and Compliance			
11	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
12	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
	• See and Avoid			
13	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: C.

Recommendation: 1. Edinburgh Airport reviews the naming of their VRPs.

2. Edinburgh Airport publishes the details of the Kirknewton Designated Gliding Area in the UK AIP entry for Edinburgh Airport.

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:

Ground Elements:

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

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Edinburgh VRPs, with their similar sounding names, had the potential to cause confusion.

Situational Awareness of the Confliction and Action were assessed as **partially effective** because ATC had missed opportunities to correct the incorrect readback from the PA28 pilot and had not initially made clear that the pilot was to route east and south of Kirknewton airfield, not the VRP.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the PA28 pilot had not followed their clearance to route east and south of Kirknewton airfield.

Tactical Planning and Execution was assessed as **partially effective** because the PA28 pilot appeared to have been unclear in their knowledge of the VRPs and the routeing that they were being asked to take and had not been accurate in their readback of clearances.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Viking pilot had no situational awareness on the PA28 and the PA28 pilot had not appreciated how close they were to the gliding site.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because although the CWS on the PA28 would have been expected to alert to the ADS-B-out on the Viking, no alert had been reported. Furthermore, the CWS on the glider could not detect the PA28.

See and Avoid were assessed as **ineffective** because it had been a non-sighting by the PA28 pilot and effectively a non-sighting by the Viking pilot.