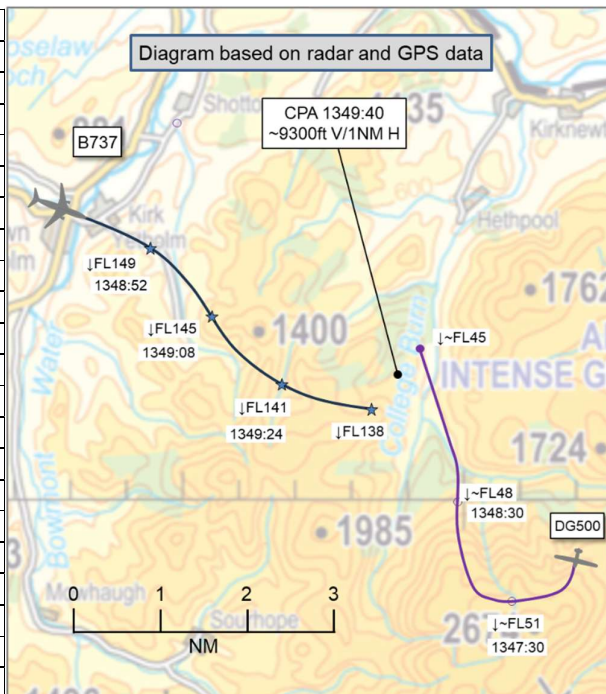


AIRPROX REPORT No 2026019

Date: 04 Mar 2026 Time: 1350Z Position: 5531N 00211W Location: 2NM SSW of Hethpool

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	B737	DG500
Operator	CAT	Civ Gld
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	IFR	VFR
Service	Deconfliction	Listening Out
Provider	Newcastle Radar	Milfield Base
Altitude/FL	↓FL138	4785ft (~FL45)
Transponder	A, C, S+	Not fitted
Reported		
Colours	Company	White
Lighting	Std	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	'Descending'	4700ft
Altimeter	SPS (1013hPa)	QFE (1023hPa)
Heading	NK	340°
Speed	NK	90kt
ACAS/TAS	TCAS II	FLARM
Alert	None	None
	Separation at CPA	
Reported	Not seen	10,000ft V/3NM H
Recorded	~9300ft V/ 1.0NM H	



THE NEWCASTLE RADAR CONTROLLER reports that [B737 C/S] was handed over by Prestwick Centre Tay controller approximately 35NM to the north-northwest of Newcastle against a PSR contact which looked to be an aircraft with less than 6NM lateral separation and converging. The controller issued avoiding action, subsequently followed by Traffic Information. The initial turn given was [heading] 090° so as not to turn toward the active D512B. The contact appeared to be manoeuvring, but it became clear the contact began to pick-up speed and travel northbound. The controller quickly issued further avoiding action instructions with an immediate right turn heading 180°. Deconfliction minima was lost resulting in 1.1NM lateral separation and unknown vertical separation. The controller then routed [B737 C/S] toward the coast to remove from any other possible confliction in that area, the crew landed safely.

The controller perceived the severity of the incident as 'High'.

THE SCOTTISH CENTRE CONTROLLER reports that they had been working as OJTI on Talla sector. There had been inbound traffic to Newcastle via TLA, [B737 C/S]. These aircraft leave CAS between HAVEN and OTBUN dependant on their descent profile. An acceptance level was agreed by Tay sector and Newcastle and subsequently coordinated with their trainee to give [B737 C/S] clearance directly to Newcastle Radar and remain clear of D512B confines due to there being inconsistencies with activity information (therefore Newcastle is effectively treating D512B as always active up to 18,000ft). Tay then subsequently verbally coordinated with the OJTI and their trainee that Newcastle was requesting the [B737 C/S] to be vectored north of D512 and then be transferred when clear of the area. UKFIS was agreed with the pilot prior to leaving CAS [...]. When traffic left CAS, the OJTI pointed out an intermittent primary contact to their trainee to provide Traffic Information and avoiding advice when relevant. The scenario overall was getting busier and the OJTI took the sector back from the trainee and passed Traffic Information and a turn of 30° to the left to avoid a primary contact. They updated the pilot with information on this contact and that it had faded from the radar. When the OJTI was happy there was no further relevant 'traffic' to affect, the pilot was issued direct NATEB which kept it clear of D512 and

transferred. After transfer to Newcastle Radar, the OJTI noticed the [B737 C/S] taking further turns to the north but didn't necessarily see any returns on radar.

THE B737 PILOT reports that they had been in the descent into [...] from [...]. A Deconfliction Service was provided by ATC (initially Scottish Control on 124.500MHz then Newcastle Radar on 124.380MHz). They had been Pilot Monitoring [whilst] the First Officer was Pilot Flying with the autopilot and autothrottle engaged. ATC (they were not certain whether this was Scottish Control or Newcastle Radar at that point) advised of traffic and issued an assigned heading due to unknown traffic showing on radar. This heading was then amended several times. The B737 crew were then told that they were clear of the traffic and continued the descent under a Deconfliction Service then Radar Control Service. A normal approach and landing was carried out. The B737 pilot reported that they only became aware of the Airprox when they received a phone call from their company flight safety department 10 days later.

THE BORDERS GLIDING CLUB REPRESENTATIVE reports that they had spoken to the pilot involved, reviewed the [branded EC equipment] data and seen the [open-source aircraft tracking application] tracks of both aircraft. [The DG500] was one of 5 gliders operating from the Borders GC base at Milfield airfield on the day, all bar one of these gliders had [branded EC equipment] and the non-equipped aircraft landed before the incident time. None of the glider pilots reported being above FL080 on the day (in mountain wave conditions with generally clear skies). Milfield is notified as active gliding 7 days a week and they operate in Class G airspace up to FL195, with the site being well known for wave flying. The area is marked on the CAA 1:500,000 chart as 'Area of Intense Gliding Activity'. [The club] has very good links with the military who will often co-ordinate with them. Apart from GA, the airspace around them is generally little used by airliners - they would normally be expected to route between TLA VOR and Newcastle airport through the Borders CTA Class A airspace under positive control, or to be above FL195. [The reporter opined that] it is very strange that the airliner captain opted to route through Class G airspace, marked as intense gliding and had then reported an Airprox [they believe] with a glider some 10,000ft below.

The pilot assessed the risk of collision as 'None'.

Factual Background

The weather at Newcastle Airport was recorded as follows:

METAR EGNT 041350Z 18009KT 130V210 CAVOK 12/06 Q1022=

Analysis and Investigation

Newcastle Safety Investigation

Immediate Actions (Watch Manager):

The Radar 1 ATCO immediately made it known that minima had been lost and [the Watch Manager] took over in position. This allowed for the relevant documentation to be filed and, as it was at the end of the shift, meant the ATCO was not required in any operational capacity. As UCA (Unit Competency Assessor), [the Watch Manager] was able to review the recordings and assess that there was no PI (Post-Incident) [action] required; action had been taken and reported to rectify a situation. The following investigation highlights learning points.

Investigation (Investigator/Assessor):

1335:33 Tay request for coordination

Request a Level [B737 C/S]. [B737 C/S] descend FL110, descend FL110 and are they coming from the TLA direction do you know, yeah very much from the TLA direction, I'll dodge the danger area for you. Much appreciated, thank you.

1341:25 previous ATCO request to TAY

I can see the [B737 C/S] there if it's not going to cause you too many headaches could I have him to the north and east of Otterburn please. N and E will do, I'll talk to Tay, he's working TMA at the moment.

1344:15 Handover Notes

[B737 C/S] I asked for him north and east of Otterburn just so I didn't have to dodge the big windfarm there. (Windfarms selected due TERMA [branded radar equipment] out of service) I thought he might have beaten the [...] in but it may look the other way around now.

1347:05 Not on frequency - [B737 C/S] visible on Radar (C/C selected) 45NM NW tracking SE with a #7000 15NM due east indicating A37.

1347:30 Not on frequency - [B737 C/S] turns east descending FL110, towards #7000 now 10NM east A31.

1347:41 Primary contact appears 10NM SE of [B737 C/S], tracking north.

1348:45 [B737 C/S] checked in descending FL110 direct NATEB (turn has been made to track SE), Primary contact 6NM SE tracking north, #7000 9NM east tracking east A26. ERBM (Electronic Range and Bearing Measurement) utilised, showing 5.4NM. Separation in 49s 0.1NM.

1348:52 [B737 C/S] *identified DS, avoiding action turn left immediately heading 090°. Left heading 090°, [B737 C/S]. ERBM showed 4.6NM. Separation in 38s 1.4NM. Unknown traffic SE of your position, no height information slow moving northbound. Copied, looking, and not visual.*

1349:21 *That traffic now turning avoiding action turn right immediately heading 180°. Right heading 180°. ERBM showed 2.5NM. Separation in 15s 1.8NM.*

Tower ATCO intercoms Radar re: helicopter traffic in the vicinity.

1349:40 ERBM showed 1.1NM, no Mode C as the [B737 C/S] passed southbound.

1349:49 [uninvolved ac] inbound.

1350:07 [B737 C/S] *clear of traffic, FH 135. FH135 [B737 C/S].*

Deconfliction minima

Section 1, Chapter 3 (CAP493)

1.2 In Class G airspace, separation between aircraft is ultimately the responsibility of the pilot; however, in providing a Deconfliction Service or a Procedural Service, controllers will provide information and advice aimed at achieving defined deconfliction minima.

Flights receiving either the Deconfliction Service or Procedural Service shall be given Traffic Information and deconfliction advice in accordance with CAP774 – UK Flight Information Services; see note 2

Note 2: When the controller considers that more immediate action is required by the pilot, traffic avoidance advice may be passed by ATC before traffic information.

CAP774 4.10 The deconfliction minima against uncoordinated traffic are: 5NM laterally (subject to surveillance capability and regulatory approval); or 3000ft vertically and, unless the SSR code indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge. (Note: Mode C can be assumed to have been verified if it is associated with a deemed validated Mode A code. The Mode C data of aircraft transponder code 0000 is not to be utilised in assessing deconfliction minima).

CAP1434 Deconfliction Service only available to IFR flights in Class G airspace. An ATCO will use radar to provide you with detailed Traffic Information on specific conflicting aircraft AND advice on how to avoid that aircraft. However, the pilot retains responsibility for collision avoidance; you can opt not to follow the ATCO's advice.

CAP413 RT Manual

The controller will inform the pilot when the conflict no longer exists.

MATS Part 2

Coordinating IFR traffic arriving or transiting from outside CAS with outside ATSU's and with Director;

APR 2.1 No LOAs exist with Tay Sector or RAF Leeming and therefore standard ATC procedures apply.

APR 2.6.1 Inbound traffic from the FIR being controlled by PC can come from a multitude of different sectors (Tay, Tyne, Humber etc.) depending on the time of day or night. The sector controlling the inbound traffic will route the aircraft towards NATEB and will individually co-ordinate levels with RAD 1.

Positive Safety Actions – several actions reduced risk during the event:

Early identification of potential conflict using ERBM;
Immediate avoiding action instructions;
Continuous monitoring of predicted separation;
Additional avoiding action issued when traffic manoeuvred; and,
Clear confirmation once conflict was resolved.

These actions likely prevented a closer proximity event or collision risk and were consistent with expected Deconfliction Service provision.

Human Factors Considerations - no evidence of:

Procedural non-compliance;
Delayed response by the controller; and,
Misapplication of CAP774.

The event was primarily influenced by unknown traffic behaviour within Class G airspace, where controllers cannot guarantee separation.

Observation

Radar was in Bypass mode, TERMA Out of service at 1330.

Operating in radar bypass mode can reduce some system functionality depending on the unit configuration (e.g., safety nets, filtering, processing redundancy, or display enhancements).

Possible implications:

Reduced radar processing capability or filtering;
Potential reduction in surveillance tools or safety nets;
Increased reliance on controller visual scan rather than automated assistance.

In this occurrence, the controller still had ERBM conflict prediction available, which functioned correctly. Therefore, radar bypass mode did not directly cause the loss of deconfliction, but may have reduced overall surveillance resilience.

Bypass mode relevant when the STAR or both the STAR and the WAM fail.

Overview of the Event

An aircraft, [B737 C/S] operating IFR and receiving a Deconfliction Service, was inbound to the sector descending to FL110 following coordination with the TAY sector. During descent and routeing towards NATEB, the controller identified conflicting traffic: a squawk 7000 aircraft east of [B737 C/S] tracking east and an additional primary-only contact tracking north. The primary contact subsequently conflicted with [B737 C/S], resulting in avoiding action being issued. Despite controller intervention, deconfliction minima were not maintained, with the closest point of approach approximately 1.1NM laterally, significantly below the 5NM lateral minimum required under CAP774 for Deconfliction Service.

Root Cause

Loss of Deconfliction Minima with Unknown Traffic.

The loss of deconfliction occurred because an unidentified primary-only contact manoeuvred into conflict with [B737 C/S] before sufficient avoiding action could establish the required 5NM lateral separation.

Key aspects:

The primary contact had no SSR information (no Mode A/C);
Altitude of the traffic was unknown, preventing vertical deconfliction;
The contact was first detected already inside the 10NM conflict horizon, leaving limited time to resolve the geometry, this resulted in avoiding action being issued late relative to the developing conflict geometry, with predicted separation rapidly reducing.

Contributing Factor:

Mandatory windfarm avoidance procedures with compressed routeing corridors due to danger area activity.

Observation:

Incorrect application of Bypass mode from 2 ATCOs.

Subsequent Actions:

The controller's actions were appropriate and consistent with procedures, and the event reflects operational limitations inherent in Class G airspace rather than individual performance issues.

[...]

A Safety Bulletin to raise awareness of avoiding action, appropriate measures and phraseology to be produced.

On review of the investigation - whilst the ATCO recognised the conflict, the turn was insufficient and it was decided that a debrief and Airprox report would be beneficial.

NATS Safety Investigation

Newcastle ATC submitted an Airprox report relating to inbound [B737 C/S], which had previously worked PC TMA sector, and a primary only contact which had been 6NM south west of [B737 C/S] when the pilot had checked-in with Newcastle Approach. The primary only target was not visible on NATS radar at the time of transfer but there had previously been an intermittently visible target in the aircraft's vicinity, and the TMA sector had provided the pilot of [B737 C/S], in receipt of a Deconfliction Service, with appropriate deconfliction instructions and Traffic Information.

Description and Investigation

[B737 C/S] was a Boeing B737 inbound to [...] from [...] and had been transferred to the PC TMA (Talla and Galloway sectors, bandboxed) controller under training (operating in a combined tactical and planner role, along with their on-the-job training instructor (OJTI) at 1338:50. The expected coordination sequence for aircraft inbound to [...] from the west was that Talla would transfer the aircraft to Tay who would then coordinate an inbound level and release with Newcastle ATC. In the case of [B737 C/S], the Tay controller coordinated the flight with Newcastle, descending to FL110 to be positioned to the north and east of the Otterburn Danger Areas (EGD512). To facilitate a more expeditious routing for the flight and reduce the number of frequency transfers for the crew, the Tay controller coordinated these details with the Talla controller who agreed to retain the aircraft on their frequency until subsequent transfer to Newcastle ATC. The pilot of [B737 C/S] was informed they would be leaving controlled airspace in around three minutes, and was instructed to descend to FL110 at 1342:53. The pilot was again informed they would shortly be leaving controlled airspace, at 1344:58, and asked which service they were requesting outside. The pilot requested a Deconfliction Service and this was agreed. [B737 C/S] left controlled airspace descending through FL210 at 1345:36, 11NM bearing 033° from reporting point HAVEN.

At 1345:51 an intermittent primary-only contact appeared on radar 23.3NM ahead of [B737 C/S], which was descending through FL207 at the time. In response, the controller issued a heading of 120° to the pilot of [B737 C/S]. The primary-only target dropped from radar at 1346:38 and did not reappear. At 1346:49, another primary-only target appeared ahead of [B737 C/S], passing FL183, at a range of 5.4NM. This intermittent target appeared to be tracking very slowly north. At 1347:03 the controller instructed the pilot of [B737 C/S] to turn left 30° and once they had read this back, the OJTI passed Traffic Information to the pilot, *“...there’s an intermittent primary contact that’s just going in from your one to twelve o’clock, it’s still in your one o’clock, range about five miles. There’s no height information”*. The pilot responded, *“Copied. Looking. Not visual”*.

This controller action was assessed as being in line with CAP774 which detailed that, when providing a Deconfliction Service, controllers should aim to achieve 5NM or 3000ft against uncoordinated traffic but that, ‘...it is recognised that controllers cannot guarantee to achieve these deconfliction minima; however, they shall apply all reasonable endeavours’. NATS was unable to definitively associate this primary target as a credible aircraft return. In accordance with the above assessment, after ceasing to display and reappearing on radar on a couple of occasions, the primary target appeared to turn back on itself and have turned east. During this investigation, Safety Investigations checked third party FLARM and ADS-B tracking sites but there were no aircraft shown which would correlate with this target. The primary-only target dropped from radar a final time, at 1347:41, 1.4NM southeast of [B737 C/S], which had been descending through FL167.

At 1348:03, when [B737 C/S] was 1.8NM northeast of the last radar position of the primary target, the OJTI provided the pilot with further information; *“Previously mentioned contact now in your four o’clock, it has faded from the radar, still no height information. You can resume your own navigation to NATEB”*.

[B737 C/S] was transferred to Newcastle ATC at 1348:29, 4.1NM northeast of the last displayed radar position of the primary-only target. Newcastle ATC subsequently informed NATS that they would be filing an Airprox between [B737 C/S] and another aircraft as described below:

‘The aircraft [B737 C/S] contacted Newcastle radar at 1348:45 with a primary contact 6NM to the southeast of the aircraft tracking northbound with no level displayed. An avoiding action turn was given but lateral separation minima was lost’.

After transfer to Newcastle ATC, [B737 C/S] was observed to make a hard right turn in accordance with the above. No other radar targets were visible in the vicinity of [B737 C/S] at the time Newcastle took this action, and the description provided by Newcastle ATC above did not appear to correlate with the last known radar position of the previous primary target, which was southwest of [B737 C/S]

at the time of transfer. As detailed within this investigation, the controller actions were commensurate with their responsibilities defined within CAP774.

Conclusions

NATS received notification that Newcastle ATC had submitted an Airprox report between [B737 C/S] and an unknown aircraft after [B737 C/S] was transferred to them from the PC Talla sector. Although the Talla controller-under-training had given the pilot of [B737 C/S] deconfliction advice earlier, it is not possible to definitely state that this was against a credible aircraft return, nor that the target involved correlated with the target subsequently seen on radar by Newcastle ATC. When [B737 C/S] was transferred to Newcastle ATC, no other targets were visible on NATS radar in its vicinity. Newcastle ATC reported that they issued avoiding action to the pilot thereafter, against a north-tracking primary target to the aircraft's southeast.

CAA ATSI

The Scottish sector controller and the Newcastle Radar controller were using different radars. The radars are set up for different operational tasks, in that the Newcastle radar is set up to ensure that aircraft are detected at the lower levels as they descend towards the Airport, with the intention of landing. As such, the radar coverage at the lower levels in the vicinity of this Airprox will be better than the coverage of the Scottish sector radar at the lower levels in the same area. This would explain why a contact displayed to the Newcastle Radar controller would not necessarily be displayed to the Scottish sector controller.

Based on speeds and trajectories, the PSR target that the Newcastle controller attempted to avoid did not appear to be the same PSR target that the Scottish sector controller had reacted to prior to the reported Airprox. This PSR target was reported as not visible to the Scottish controller before the transfer of control of the B737 took place. ATSI is of the belief that both controllers exercised best endeavours to avoid intermittent PSR targets in an unknown traffic environment, with the intentions of these PSR targets not being known to the controllers.

UKAB Secretariat

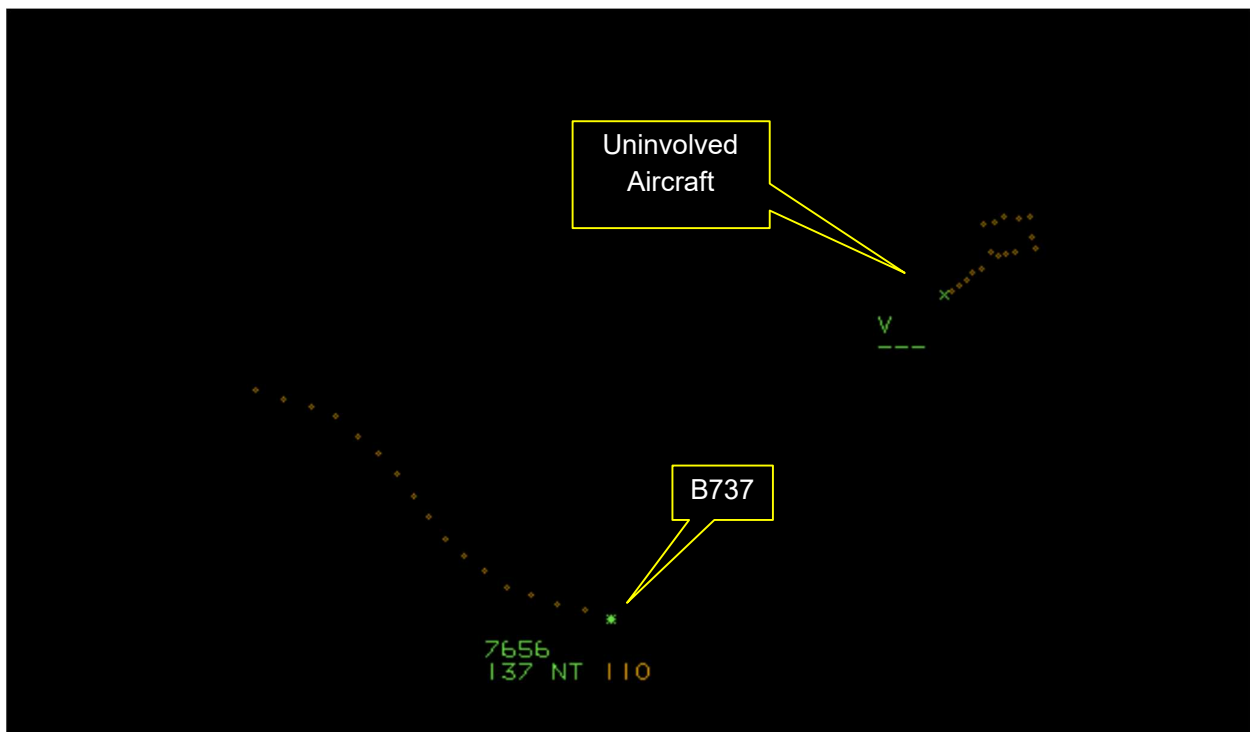


Figure 1: at CPA (1339:40) ~9300ft/1NM

The B737 was tracked via radar and identified through Mode S data. The DG500 did not appear on radar (leading up to and immediately after CPA) but was tracked and identified via its onboard [branded EC] equipment. The diagram at page 1 was constructed using both radar and GPS data sources, with altitudes correlated through conversion to the Standard Pressure Setting to give approximate pressure altitudes for both aircraft at CPA.

The B737 and DG500 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.¹

Comments

BGA

Examination of other instances of this flight number arriving from the northwest into Newcastle shows that they are normally routed to the southwest of D512B, either passing through or to the southwest of D512A – presumably depending on the activation status of the latter. These appear to be following Lower ATS Route Y96.² However, we understand from the reports that on the incident date, “TERMA” was out of service, and that this is radar equipment which is not affected by the wind farms immediately under the usual approach route. Further, there was no definitive information available on the activation status of D512A. Consequently, the B737 was routed to the northeast of D512B, directly through the centre of an area marked on the CAA 1:500,000 VFR chart as an “Area of Intense Gliding Activity”. These are shown in figure 2.

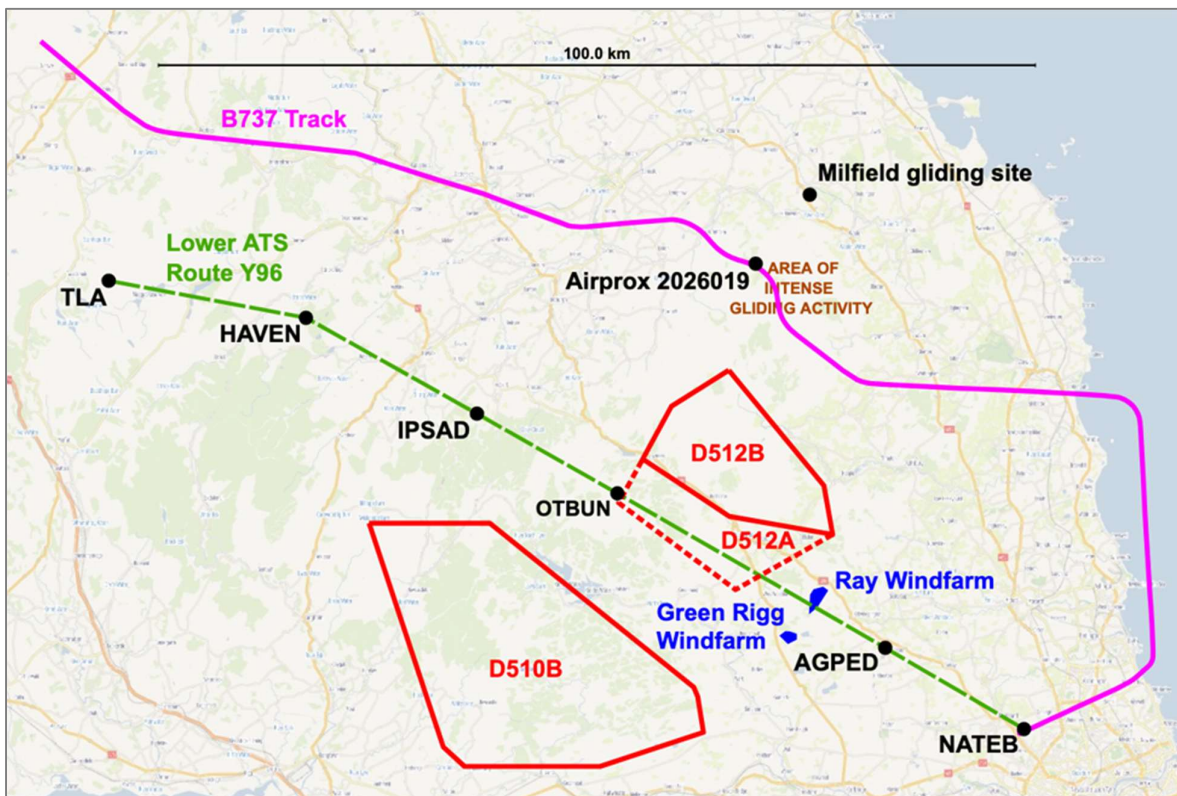


Figure 2

The origin airfield of the DG500 is well known for wave lift, enabling both altitude and cross-country glider flying by local members and visitors. Such flights may be encountered at any height up FL195 as described in the CAA Aeronautical Information Circular Y 027/2023 “Gliding Activity in the UK”.

¹ (UK) SERA.3205 Proximity.

² AIP ENR 6.69.

Although in general a transponder is required above FL100, gliders have the benefit of an exemption³ in numerous areas⁴ (Non-SSR Gliding Areas – NSGAs) of the UK where wave lift can be exploited. The vicinity of the incident is in such an area.

The club that owns the DG500 notes excellent cooperation with the military to deconflict service flying from gliding and does not normally have concerns about CAT because such traffic is not normally directed through the Class G airspace in which they routinely operate. In common with all but a small proportion of gliders, the incident DG500 does not carry a transponder and its SRD860-based EC equipment is not able to detect ADS-B transmissions. Even if it were so equipped, a display in the DG500 connected to show ADS-B traffic would almost certainly have filtered out the B737 because it was so very much higher than the glider. The DG500 appeared on radar screens as a primary-only return and the controller was understandably uncertain whether it created a loss of separation situation with respect to the B737. However, the DG500's EC equipment was transmitting, and this would enable its position and altitude to be displayed on a Flight Information Display (FID) with GPS accuracy. Commercially available FIDs that integrate transponder, glider SRD860 EC and ADS-B data in a single display in real-time give ATSU controllers situational awareness of gliding activity across the UK. The BGA would be happy to advise any ATSU wishing to use readily available, real-time EC data to enhance flight safety in this way. System performance predictions⁵ suggest that the SRD860 transmissions from the DG500 at the time of the incident would have been captured and relayed to internet connected clients.

A controller seeing a primary return in the exact centre of an Area of Intense Gliding Activity might usefully have attempted to reference to one of these applications to satisfy themselves whether glider activity was likely to have created the return.

Summary

An Airprox was reported when a B737 and a DG500 flew into proximity 2NM south-southwest of Hethpool at 1350Z on Wednesday 4th March 2026. The B737 pilot was operating under IFR in VMC in receipt of a Deconfliction Service from Newcastle Radar, and the DG500 pilot was operating under VFR in VMC not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data, 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.

Members firstly discussed this event from the aircraft perspective, recognising that neither pilot had any situational awareness of the other aircraft (**CF3**), had not identified the other aircraft as a threat, that equipment carried by each airframe would not have reacted to the other at that distance and that, with a separation in excess of 10,000ft, neither pilot had been expected to see the other aircraft. The Board quickly agreed that both pilots had managed their respective flights correctly.

Members moved on to discuss the actions taken by, and reasoning behind, the relevant air traffic controllers. It was noted that, due to the airspace structures in this area, traffic arriving into Newcastle from the north will usually, unless they head to Pole Hill (approximately 80NM south of Newcastle), depart CAS and transit Class G airspace until captured by the Newcastle CTA. This is a recognised approach and much utilised by commercial traffic. Under 'normal' circumstances, traffic is managed along the route shown in green in figure 2 (above), with descending traffic expected to enter Class G airspace at or around waypoint OTBUN. Aircraft altitude is driven here by the activity status of D512A. This transition is coincidental with windfarms which create difficulty for air traffic radar systems due to

³ AIP GEN 1.5 section 5.3.4.1(a)(ii).

⁴ List in AIP ENR 5.2, Chart in AIP ENT 6-63.

⁵ <https://range.onglide.com/>

clutter. Newcastle has resolved that clutter issue through the acquisition of the TERMA specialist radar, which is able to isolate aircraft responses from that clutter. Members accepted that, in this case, the TERMA was unserviceable (**CF1**) and the decision was made to route this southbound traffic to the northern edge of D512A and B (as shown in pink at figure 2). This is a track chosen when driven by such unserviceabilities and can result in traffic passing through the area marked (on UK VFR 1:500,000 charts only) as an 'Area of Intense Gliding Activity'. That warning does not appear on UK produced enroute charts and therefore it would not have been displayed to the B737 pilot on their equipment. An occasional alternative to this route is for traffic to depart CAS, as this B737 had done, continue due east to the coast and then track southeast to Newcastle over water. This alternative has the potential to then conflict with military traffic descending into low-level to the north of Newcastle to utilise LFA17 and the Otterburn range areas. Members noted that the reports from the Scottish and Newcastle units highlighted differing radar capabilities with one (Newcastle) better able to see primary tracks at low level in the subject area and others (Scottish) having a less-certain view of such activity. This situation had, though, led to both controllers gaining generic situational awareness of non-squawking traffic in that area (**CF2**).

Concluding their discussion, members appreciated that both controllers had reacted in accordance with the restrictions and understanding that they had. With no height information on the primary track of the DG500, avoidance action was taken and deconfliction minima were ultimately maintained. Members were satisfied that the actions taken by the controller had ensured that the separation between the aircraft had remained adequate and that there had been no risk of collision. The Board assigned Risk Category E to this event and members agreed on the following contributory factors:

CF1. The route chosen for the B737 had been driven primarily by the lack of availability of the TERMA radar system.

CF2. With no height information available, the air traffic controllers had only generic situational awareness of the position of the DG500.

CF3. Neither pilot had gained any situational awareness of the presence of the other aircraft.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2026019			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Manning and Equipment				
1	Technical	• Radar Coverage	Radar Coverage	Non-functional or unavailable
• Situational Awareness and Action				
2	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
3	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

Degree of Risk: E.

Safety Barrier Assessment⁶

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the B737 pilot had only generic situational awareness of the presence of the DG500 and the DG500 pilot had no situational awareness of the presence of the B737.

Electronic Warning System Operation and Compliance were assessed as **not used** because the equipment carried by both aircraft had been unable to detect electronic emissions from the other aircraft, and their relative positions had been well outside the parameters for a warning to be generated.

See and Avoid were assessed as **not used** because the aircraft were separated by approximately 10,000ft and therefore would have been unlikely to have been visible to their respective pilots.

Airprox Barrier Assessment: 2026019		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 5%]				
	Manning & Equipment	⚠	✓	[Green bar to 2.5%]				
	Situational Awareness of the Confliction & Action	⚠	✓	[Green bar to 15%]				
	Electronic Warning System Operation and Compliance	⊘	⊘	[Grey bar to 2.5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 10%]				
	Tactical Planning and Execution	✓	✓	[Green bar to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Red bar to 20%]				
	Electronic Warning System Operation and Compliance	✗	⊘	[Red bar to 15%]				
	See & Avoid	✗	⊘	[Red bar to 20%]				
Key:								
	Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	⚠	✗	⊘	⊘			
Application	✓	⚠	✗	⊘	⊘			
Effectiveness	Green	Yellow	Red	Grey	Red outline			

⁶ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).