AIRPROX REPORT No 2011053

<u>Date/Time</u>: 6 June 2011 1046Z

Position: 5441N 00549W

(Belfast City 5nm final RW22 - elev 15ft)

Airspace: Belfast City CTR (Class: G)

Reporting Ac Reported Ac

Type: DHC-8 A22 Microlight

Operator: CAT Civ Pte

Alt/FL: 1500ft 800ft

(QNH 1006mb) (QFE NK)

Weather: NK CLBC VMC CLBC

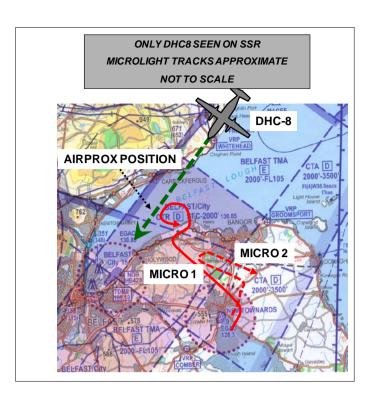
Visibility: 30km 20km

Reported Separation:

Oft V/0.5nm H Oft V/1.5nm

Recorded Separation:

NR V/0.5nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE DHC-8 PILOT reports that while heading 220° at 160kt, descending through 1500ft alt under IFR and Radar Control, on the final approach to Belfast City Airport, an Airprox occurred against a small red coloured microlight that was believed to have infringed CAS. While establishing on to the ILS RW22 a series of confused RT transmissions were heard between 2 microlights and Belfast Radar; one microlight initially stated he was O/H TRN (Turnberry, Ayrshire, Scotland), and after checking this the radar controller told the first microlight to contact Scottish Information for a service.

The microlight queried this and it became clear very quickly that he had just departed Newtownards [6.5nm ESE Belfast City] and had routed generally N putting it in possible confliction with them. The controller realised this and told the microlight to leave CAS immediately and to turn E. This did not seem to be understood by the microlight pilot and confusion ensued. The crew was looking out for the traffic as his position appeared to be a possible threat. A small red high-winged ac was seen at an estimated range of ½-1nm in their 9 o'clock position flying towards them at the same level. The captain (PF) monitored the ac whilst continuing the approach because avoiding action was seen to be taken by the microlight and it was seen to pass behind them removing any risk of collision.

A decision was made to delay the setting of 'Flap 35' because the microlight would pass close behind them and would be subject to wake turbulence; 'Flap 35' was subsequently selected, the approach remained stable, and a safe landing followed.

THE A22 MICROLIGHT PILOT (Micro 1) reports that he filed a VFR Flight Plan on-line at Newtownards for 2xac (himself and another microlight Micro 2) routeing Newtownards - Fair Head – Turnberry -Rossall Field (Near Lancaster). It was agreed Micro 2 would depart first and would contact Belfast to request transit clearance.

Their ac had SSR and elementary Mode S and strobes fitted.

Once airborne the pilot in Micro 2 requested a transit clearance for the 2 microlights and requested Belfast to activate their flight plan that had been filed with Swanwick. Belfast City ATC requested their ultimate destination and Micro 2 pilot replied, 'Rossall Field, Lancashire'. ATC then requested

clarification and they again replied 'Rossall Field, Lancashire then onward to Otherton airfield, Staffordshire'. ATC Belfast City then asked, "why are you requesting clearance through Belfast airspace if you are heading for Staffordshire" and they explained at length that both ac were routeing N to coast-out of Northern Ireland at Fair Head and route via Mull of Kintyre then Turnberry before turning S for initial landing site at Rossall Field.

Belfast ATC then attempted to route the other microlight across Belfast Loch via VRP-Whitehead, the microlight reported that he was unfamiliar with the area and they followed an RT exchange to identify various reporting points [VRPs] on the map.

Belfast City ATC was concerned he had incoming traffic and requested that they expedite their crossing of Belfast Loch but Micro 2 pilot replied that his max speed is 80kt and he was eventually routed via VRP-Whitehead to VRP-Larne.

At no time had ATC requested identification or the location of the second ac in the stream included in the initial transit clearance request (Micro 1). He (the second and the reported ac) was about 1nm behind Micro 2 at take-off and decided to slow down to 60kt and initiate a LH rectangular holding pattern at VRP-Groomsport [the boundary of CAS 9.5nm ENE of the Airport and 5nm SE of the CL for RW22] pending clarification of his transit clearance.

His ac was equipped with a standard GPS and a NATS Aware GPS and was at all times cognisant of his position and was visual with the inbound traffic over 1.5nm away – the visibility being excellent. Belfast City ATC requested the other microlight (Micro 2) to turn E but there was no reply so ATC again requested the [other] ac to turn E and Micro 2 pilot reported that both his GPS and compass indicated that he was already heading E.

It was at that point that he suspected that ATC were looking at him [Micro 1] on their radar but were addressing the other microlight [2] who had already routed across the zone to the N.

He, the reported pilot, then stated on the RT "Micro 2 C/S.... South East of your zone I suspect it is this aircraft you can see on your screen and not Micro 1 C/S....".

ATC Belfast City responded with "Micro 1 C/S.... turn immediately East" which he did, although at the time of instruction he was already turning W in the aforementioned LH rectangular holding pattern.

Belfast City ATC then issued a unique squawk code for the transponder and asked why the reported pilot had not turned immediately E when requested – the reality was that the first 2 requests were given to the wrong ac, after ac verification ATC confusion was confirmed.

He felt that he fully had complied with ATC directions and can only reiterate that at all times he was cognisant of position and visual with the inbound ac but considered it expedient just to apologise to ATC on the RT rather than have a debate on the RT.

It was subsequently explained to ATC that the reported pilot was the second microlight (Micro 1) of the original transit clearance request and that the other ac (Micro 2) was designated for RT with Belfast City, but since no recognition of his ac or verification of his position was requested by ATC, he had not followed the leading Microlight (Micro 2) across the zone and had remained clear to the SE but ATC responded by stating that they would be filing an Airprox.

He then routed E - N - W to rejoin the original lead ac N of VRP-Larne, reporting going en-route when requested.

He assessed the risk as being none.

ATSI reports that the Airprox occurred at 1045:50, 4nm NE of Belfast City Airport and within the Belfast City Control Zone, Class D airspace between a DHC-8-Q400 (DHC-8) inbound IFR and an A22 Foxbat Microlight (Micro 1) that was one of two Microlight ac (Micro 1 & Micro 2) believed to have visited Newtownards Airfield as part of the airfield's 50th anniversary celebration 'Fly in' held between 3rd and 5th June 2011.

The microlight pilots planned to route from Newtownards to Fair Head, situated on the N coast of Northern Ireland, across the Irish Sea via the Mull of Kintyre and Turnberry, then S to Rossall Field, which lies to the S of Morecambe Bay. Belfast City ATSU provided details of the guidance given to pilots by Newtownards Airfield, which stated:

'<u>North</u> – route Larne towards Whitehead VRP to cross Belfast Lough to remain East of Groomsport VRP. Transit clearance may be given at 1500ft alt or below due to inbound ILS traffic for RW22 at Belfast City. Ensure RT contact is established with Belfast City Approach 130.850 before reaching Larne.'

'All aircraft are recommended to contact Belfast Approach 130.850, if there are several aircraft in close formation nominate one aircraft to do the RT with all the relevant details.'

Newtownards is situated 6.5nm ESE of Belfast City and a direct track to Fair Head would cross the RW22 final approach at a range of 5.25nm.

CAA ATSI had access to RTF recordings together with controller and pilot written reports. Radar recordings were available from the Belfast City 10cm radar and the NATS (BEL) 23cm radar. None of the radar sources initially showed any primary or SSR return for either microlight during the period of the Airprox. The Belfast City Radar recordings did not show any primary returns of the microlights due to an incorrect configuration of the recording equipment during installation.

As a result of a local investigation by the radar and display manufacturers, the radar recording showing the primary radar returns was retrieved in early October and became available to CAA ATSI. This report has been updated to reflect the radar analysis of the data available.

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Belfast City ATSU reported that the duty instructor at Newtownards spoke to one of the microlight pilots prior to their departure, stressing the requirement to contact Belfast City ATC, with two suggested routeing options:

via Groomsport (6.5nm north-northeast of Newtownards) to Whitehead or via the Belfast City overhead.

At 1037:14, the inbound DHC-8 was transferred to Belfast City Radar and the pilot reported descending to FL100 on heading 205° with information 'Hotel'. The Belfast controller instructed the DHC-8 to descend to an alt of 6000ft on QNH 1006. The DHC-8 was turned onto a heading of 300° and advised to expect vectoring for ILS RW22, number 3 in traffic with no delay; it was then instructed to stop the turn on a heading of 290°.

The Micro 1 pilot's report indicated that, 'It is agreed that Micro 2 departs first and will operate the R/T with Belfast to request transit clearance'.

At 1039:01, Micro 2 called, "Belfast Micro 2 C/S". The Belfast controller asked Micro 2 to standby and gave the DHC-8 further descent to 4000ft. Micro 2 pilot was then asked to pass message and advised, "Micro 2 C/S is a flight of two microlights erm we're coasting out at er Fairhery erm Fair Head request transit through your zone please"; the controller asked Micro 2 to report destination and the pilot replied, "Destination is Turnberry er sorry we're coasting in at Turnberry our final destination

is erm Marn Farm". The controller asked Micro 2 to standby and transmitted to two other ac establishing on the ILS for RW22.

At 1039:01, the radar recording shows the inbound DHC-8, 22.9nm NE of Belfast City, passing FL083 in the descent and also shows two primary contacts, 2nm apart to the E and SE respectively of Newtownards airfield.

[Note: From the data available, ATSI beleived that Micro 2 was the lead ac and was the more N'ly contact].

At 1040:42 the controller asked Micro 2, "Micro 2 C/S sorry just confirm you're coasting in at Turnberry" and the Micro 2 pilot reported, "Yeah we're coasting in at Turnberry final destination is Rossall Farm sorry and er we have erm a flightplan would you be able to activate that please". The controller responded, "Micro 2 C/S I'm wh — can you give me a precise location on your destination not fam familiar with that"; Micro 2 pilot asked the controller to standby.

At 1040:31, the controller instructed the DHC-8, "DHC-8 C/S descend to altitude two thousand feet when established on the localiser descend on the glidepath"; this was acknowledged by the pilot. The radar recording shows the DHC-8, 19.5nm NE of the airfield, with the two primary contacts, 7.5nm E of the airfield tracking NW and 2nm apart.

At 1040:47, the Micro 2 pilot confirmed the final destination as Rossall Field a private field 15nm NE of Blackpool. The controller replied, "Micro 2 C/S if your coasting in at Turnberry and heading to Blackpool you shouldn't really be speaking to me if you contact er freecall Scottish Information on one one niner decimal eight seven five or you can contact Prestwick Approach one two niner decimal four five"; the pilot replied, "Thank you I'd just though we'd erm er we'd give you you a call er transitting your zone to Fair point".

At 1040:59, radar recording shows Micro 2 fade from radar at a position 2nm E of Micro 1 which is observed to continue tracking NW.

At 1042:20 the controller asked Micro 2, "er just confirm you are at Turnberry going to Blackpool and wish to transit the Belfast City Zone" and the Micro 2 pilot responded, "er sorry erm I've erm I'll say again I've departed Newtownards and we are coasting out at erm Fair Head and er and request a transit of your zone."

At 1042:23, radar recording shows a primary contact (Micro 1) has entered the Belfast City CTR CAS at a position 2nm NNW of Newtownards and 5nm E of Belfast City.

The controller issued a zone transit clearance, "(Micro 2)C/S cleared to transit not above two thousand feet VFR QNH one zero zero six and is that you about two miles north of er Newtownards". Micro 2 pilot confirmed the position and the controller requested a readback of the clearance which the pilot gave as, "not above er two thousand feet one zero zero six". At 1043:07, the controller asked Micro 2 pilot if he was familiar with Bangor [on the S coastline of Belfast Lough]; the pilot confirmed "Yes" and the controller responded, "Micro 2 C/S route to hold there is inbound traffic for RW two two remain well east of final approach" and the pilot replied, "Routeing Bangor er remain well east thank you Micro 2 C/S".

At 1044:00, Micro 1 pilot called Belfast Radar and the controller replied, "Last station calling standby". The controller then transmitted to Micro 2, "Micro 2 C/S I think I have you just east of the field by about three miles I need you to turn eastbound please your heading straight to the final approach" and the pilot replied with his callsign. Shortly after the controller again transmitted to Micro 2, "Micro 2 C/S I need you to turn immediately eastbound." The Micro 2 pilot responded, "er to the east Micro 2 C/S".

At 1044:10, the radar recording shows a primary contact, 4nm ENE of the airfield tracking WNW (Micro 1).

At 1044:30, the controller advised the DHC-8 pilot, "and DH8 C/S traffic information are two microlights believed to be just east of final approach at three miles ????turning eastbound not above two thousand feet VFR"; this was acknowledged by the pilot.

At 1044:45, the radar recording shows the DHC-8, 6.5nm from touchdown passing 2000ft, with Micro 1 in its half past eleven position at a range of 3.7nm crossing from L to R. The DHC-8 was then transferred to TWR.

MATS Part 1, Section 2, Page 1, states that for IFR and VFR flights within Class D controlled airspace:

Aircraft requirements: ATC clearance before entry. Comply with ATC instructions.

Minimum Service by ATC unit: Pass traffic information to IFR flights on VFR flights and give traffic avoidance advice if requested.

The DHC-8 pilot did not report the microlights in sight and did not request avoiding action and the controller transferred the ac to TWR before the conflict was resolved.

At 1044:50, the controller advised, "Micro 2 C/S I need you to turn eastbound you're showing norbelieved to be showing northbound now" but the pilot reported a compass and GPS heading of E. Three sec later the radar recording shows Micro 1, 3.3nm NE of the airfield, making a right turn onto N and Micro 2 reappears, 4.8nm ENE of the airfield tracking E, which correlates with the pilot's earlier call indicating a compass and GPS heading of E.

At 1045:16, Micro 1 transmitted, "Belfast City Micro 1 C/S I think that's us you have ???? northbound". The controller responded, "Micro 1 C/S pass your message and er can you leave controlled airspace please eastbound". The pilot replied, "We've just left Newtownards and wish to coast down to Fair Head and request transit transit across your airspace please". The controller transmitted, "Micro 1 C/S you're believed to be heading towards the final approach can you turn eastbound immediately". Radar recording shows Micro 1 tracking northeast 2nm S of the DHC-8.

At 1045:30, radar recording shows Micro 1 turning left onto a NW track, towards the DHC-8.

At 1045:50, radar recording shows the two ac passing abeam. The DHC-8 is on a 4nm final indicating an alt of 1300ft, with Micro 1 in the DHC-8's 9 o'clock position at a range of 0.5nm. As the DHC-8 passes abeam, Micro 1 makes a L turn.

The report from the DHC-8 pilot indicated that the Micro 1 seemed to be taking avoiding action, passing behind. The DHC-8 pilot decided to delay the 35° flap setting in order to reduce the wake turbulence.

At 1046:25, the controller transmitted, "Micro 1 C/S route eastbound immediately QNH one zero zero six" and the Micro 1 pilot replied, "Eastbound one zero zero six thank you". The controller did not specify a direction of turn and radar recording shows Micro 1 turn L onto an E'ly track. (Micro 2 was shown 3nm N of Newtownards continuing to track E.)

In the subsequent transmissions the pilot of Micro 1 confirmed that the two ac had departed Newtownards together and thought that Micro 2 was obtaining the clearance for both ac. When the controller asked why, when Micro 2 was asked to leave the zone Ebound, Micro 1 had continued Nbound, Micro 1 pilot apologised and said that he had become disorientated.

At 1049:59, the Belfast City radar recording shows Micro 1, 8.25nm ENE of Belfast City airport tracking E.

At 1051:39, the NATS (BEL) radar source shows a 7000 squawk appear, on a bearing 082° from Belfast at a range of 9.6nm. This correlates with the track and bearing of the primary return shown on the Belast City radar; Mode S identified the ac callsign as that of Micro 1.

At 1052:08, the NATS (BEL) radar recording shows the SSR code of Micro 1 change to 4250 (a code allocated by Belfast City). The ac is observed to cross the coast and then turn to track N over the Irish Sea. The SSR code did not appear on the Belfast City radar recording.

The initial call from the microlight formation was not in the approved format and caused confusion and misunderstanding; CAP413, Chapter 3, Page 8, states:

'When instructed by the ATS Unit to 'Pass Your Message', the reply should contain the following information, whenever possible in the order specified:

Aircraft Callsign / Type
Departure Point and Destination
Present Position
Level
Additional details / Intention (e.g. Flight Rules, Next route point)

Micro 2 pilot called coasting out at Fair Head requesting transit through the zone. The pilot then confirmed destination as Turnberry and apologised stating that they were coasting in at Turnberry with final destination as Marn Farm.

After the initial misunderstanding, the controller issued a clearance to transit the zone and the pilot of Micro 2 confirmed his position was 2nm N of Newtownards Airfield. CAA ATSI considered that the controller, mistakenly believed that the single primary contact showing at the time the clearance was issued, represented the flight of two microlights operating in formation. The UK AIP page (4 Jun 09) ENR 1-1-4-11, states:

Civilian Formation Flights - ATC Procedures General

ATC will consider formations to be a single unit for separation purposes provided that: The formation elements are contained within 1nm laterally and longitudinally, and at the same level. Within Class F and G Airspace and subject to ATC approval, these limits may be increased to 3 nm and/or up to 1000ft vertically.

The formation, although operating outside the parameters above, has NSF approval.

The formation leader is responsible for ensuring safe separation between ac comprising the formation.

In making initial contact with the ATC unit, the formation leader shall clearly state the number of ac in the formation.

Where a flight plan is required, the identification of the formation leader and the number of ac in the formation must be shown.

All ATC instructions and clearances will be addressed to the leader.

The contact displayed on radar was in fact Micro 1 and ATSI estimated that Micro 2 was 2nm further to the E (not showing on radar). Micro 1 pilot's written report indicated that the ac was equipped with SSR; however, neither ac displayed an SSR code.

The ATC clearance to transit controlled airspace did not specify a routeing but the controller subsequently instructed Micro 2 to hold at Bangor with information about the ILS traffic. Micro 2 acknowledged this instruction and reported 'routeing Bangor to remain well east'. The controller had

an expectation that both ac would route to hold at Bangor. MATS Part1, Section 3, Chapter 4, Page 1, Paragraph 3.3 states:

'Routeing instructions may be issued which will reduce or eliminate points of conflict with other flights, such as final approach tracks and circuit areas, with a consequent reduction in the workload associated with passing extensive traffic information. VRPs may be established to assist in the definition of frequently utilised routes and the avoidance of instrument approach and departure tracks. Where controllers require VFR ac to hold at a specific point pending further clearance, this is to be explicitly stated to the pilot.'

The Micro 1 pilot's report indicated that the two Microlights were not in close formation, but that Micro 1 pilot had expected Micro 2 to obtain the transit clearance on behalf of both ac. The pilot's report states: 'It was subsequently explained to ATC that Micro 1 was the second microlight ac of the original transit clearance and that Micro 2 was designated for R/T with Belfast City, but with no recognition or verfication of position sought from ATC, Micro 1 did not follow Micro 2 across the zone and had remained in the southeast area'.

The controller passed TI to the DHC-8 pilot, in the belief that the two microlights were 3nm E of the approach and turning onto an E'ly track. At that point the DHC-8 was transferred to the TWR. However the primary contact was not following the controller's instruction to turn E and continued N. CAA ATSI considered that it would have been appropriate for the controller to have retained the DHC-8 on frequency until the conflict was resolved and also in the event that avoiding action was considered necessary or was requested by the DHC-8 pilot.

Micro 1 attempted to contact ATC but the controller was not aware of the significance of the callsign, instructing the ac to standby. It was only when Micro 1 pilot identified himself as the conflicting ac and Micro 2 reappeared on the radar tracking E, that the controller recognised the situation and instructed Micro 1 to turn immediately onto E.

At 1051:39, Micro 1 was identified using Mode S SSR at a position that correlated with the last recorded position of the primary radar return of the aircraft involved in the Airprox (Micro 1). The SSR label appeared on the NATS (BEL) radar after the incident.

The microlight pilots did not follow the guidance specified in the UK AIP, or provided by Newtownards, for formation flights. Micro 2 pilot's initial call indicated a 'flight of two microlights', however, Micro 1 pilot's written report indicated that he had not followed Micro 2 in formation. The two ac were not operating in formation and Micro 1 entered the zone separately, without a clearance, and into confliction with the DHC-8 on the ILS.

The following were considered to be contributory factors:

The microlight pilots did not follow the routeing guidance provided by Newtownards and ATC did not specify a routeing in the transit clearance. However, Micro 2 was asked to hold at Bangor and the controller had an expectation that both ac would comply.

The pilot of Micro 2 did not update ATC that he was no longer in formation with Micro 1.

It is considered that, the controller mistakenly believed that the single primary contact seen on radar 2nm N of Newtownards was Micro 2, and the formation of two microlights. This proved to be incorrect.

It is considered that, the controller's early transfer of the DHC-8 to the TWR frequency, before the conflict had been resolved, precluded any form of avoiding action being given by radar controller or requested by the DHC-8 pilot. (The pilot could have requested such action from the TWR.)

The non-standard format of the RT phraseology used by the microlight pilots, delayed the issue of a clearance and led to a misunderstanding about their current position, i.e. coasting out on the

northern coast of Ireland, or coasting in at the Scottish coast, when in fact they had just departed Newtownards.

Recommendations:

CAA ATSI recommends that the Belfast City ATSU review procedures and phraseology for the transit of formation VFR ac, with a view to obtaining the full details of the ac concerned, with specific mention of the routeing and term 'formation' as part of the clearance provided.

CAA ATSI recommends that the ATSU include this scenario in their unusual emergency (TRUCE) training programme, with elements covering, ac not identified, not displayed on radar, lost ac, tactical and avoiding action considerations.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar photographs and recordings, reports from the air traffic controller involved and reports from the appropriate ATC authority.

Members were informed that the terminology Microlight (Micro) 1 and Micro 2 did not reflect their positions in the flight; it was clear that Micro 2 was, in effect, the flight leader as he got airborne first and it was always intended that he should conduct the RT on behalf of both ac. There was apparently no intention that the ac should fly as a close formation as such, rather that Micro 1 would follow Micro 2. That said, Micro 2's description of the aircraft as a "flight of 2" may have lead the controller to believe that the ac were in a much closer trail than was the case and his misunderstanding would have been more difficult to resolve due to the intermittent radar returns from the microlights in the absence of request to squawk. Furthermore, the Microlights did not remain within 1nm of each other (as required by the UK AIP – see Part A), and therefore did not meet the requirements of a formation (this was exacerbated by Micro 1 slowing down to 60kt).

The Board was also informed by the Secretariat that both ac could be described as being red (as per the DHC-8 pilot's report).

Although in some ways a straightforward encounter with little risk attached, the Board found it difficult to analyse with any degree of certainty, due to apparently conflicting and incomplete information. The radar photograph timed at 1045:42 (circulated to Members) showed clearly that one of the two Microlights entered the CTR and flew to point just off the coast, ½nm E of the final approach to RW22, just as the DHC-8 on the ILS was passing; that being the case Members agreed that there was no risk of collision.

It was much less clear which Microlight was involved and whether or not that specific ac had been cleared to enter the CTR.

Although a confirmatory report from Newtownards was not available, the Board accepted that Micro 2 got airborne first and its pilot had intended to inform Belfast of the position of both ac, their intentions and request a clearance to fly through the CTR. It was clear (from the transcript) that the flight had intended to transit the CTR despite the advisory routeing (outside the CTR) given by the 'fly-in' organisers. Members agreed, however, that despite any other factors such as 'shortest sea transit' it is wise not to fly close to the boundaries of CAS or through the final approach track of busy airfields as this can (as this case demonstrated) present controllers with difficult and challenging scenarios.

When conducting unusual or unfamiliar flights it is essential that pilots inform ATC clearly and unambiguously of their ac identity, position and intentions - 'who are you, where are you and what you want to do' otherwise the controller will not be aware of this essential information, will not therefore be in a position to assist/clear you and might formulate an incorrect picture. In this case, although Micro 2 clearly stated that they were a "flight of two" and requested "transit through your

zone please" the other essential information i.e. position and intentions was missing, so the controller did not have the 'big picture' and became (unnecessarily) preoccupied with determining the missing bits of information by a prolonged series of (incomplete) questions and answers in a very busy period. Despite the call of "flight of two" the clearance passed by the controller (at 1042:50 on the transcript) appeared to be for one ac only (Micro 2 CS) and did not specify a routeing. When it became apparent to the Controller that this (open ended) clearance might lead to the (unidentified) Micro 2 conflicting with the inbound traffic, he changed it at 1043:20 to "route to Bangor" which is on the E edge of the CTR, rather than Groomsport VRP which is in a similar position but outside the CTR. This was in effect an amendment to the original clearance and although not given strictly in accordance with MATS Pt 1 Sect 1 Chapter 4 Para 7, its intention was understood and read back by Micro 2 pilot and it appeared to Members that he complied with it fully. In mitigation, the controller's primary responsibility at the time was to sequence the inbound traffic; he discharged this responsibility and Members considered that he had been too busy to give the Microlight flight as much attention as he would have liked. Further, it was suggested that the Controller had tried to make the incomplete information he had fit his mistaken mental air picture.

While Micro 2 held to the S of Bangor, Micro 1 had apparently misunderstood the original clearance as being for the both members of the flight, had either not heard or assimilated the amendment to the clearance, and proceeded to enter the CTR (radar photograph at 1042:23) and flown on the intended track towards the coast and the final approach; however, on seeing the inbound ac he had orbited just to the E of the approach before departing to the E as instructed by ATC.

Although observing the (formation) flight planning had been less than ideal, Members considered that this incident had resulted primarily from poor RT in a busy situation, mainly by Micro (2) pilot. Had he been clear about the composition of the flight, their location and intentions Members thought that the Controller would have been much better placed to either integrate them with his traffic plan or suggest a precise routeing to keep them clear of the inbounds.

It was noted that the Microlights had correctly filed a flight plan but Controller Members thought it unlikely that the controller involved would have seen it and, in the absence of a telephone call to ATC to discuss the Microlights' intentions, he would not have had any pre-warning of them.

Pilot Members agreed that the DHC-8 pilot had received good TI leading to him seeing the Microlight. He had displayed good awareness of the situation and, although prepared to do so, had decided that a go-around was not required as the Microlight, although in an undesirable position, was not in conflict and even if it did not change track, would pass well behind.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Microlight (1) pilot did not follow the amended clearance and flew into

conflict with the DHC-8 on the final approach.

Degree of Risk: C.