

Weeks after the conclusion of the Keane Inquiry and the repetition of the Teevan Verdict, the Hanley Family received the Documents of Discovery. Where Documents of Discovery are being used, they will be identified as DD2002. The Case alleged was Fuel Starvation due to mis-selection – Pilot Error.

Pilot error is completely refuted in this case as follows:

DOCUMENTS OF DISCOVERY

AIR TRAFFIC CONTROL SHEETS

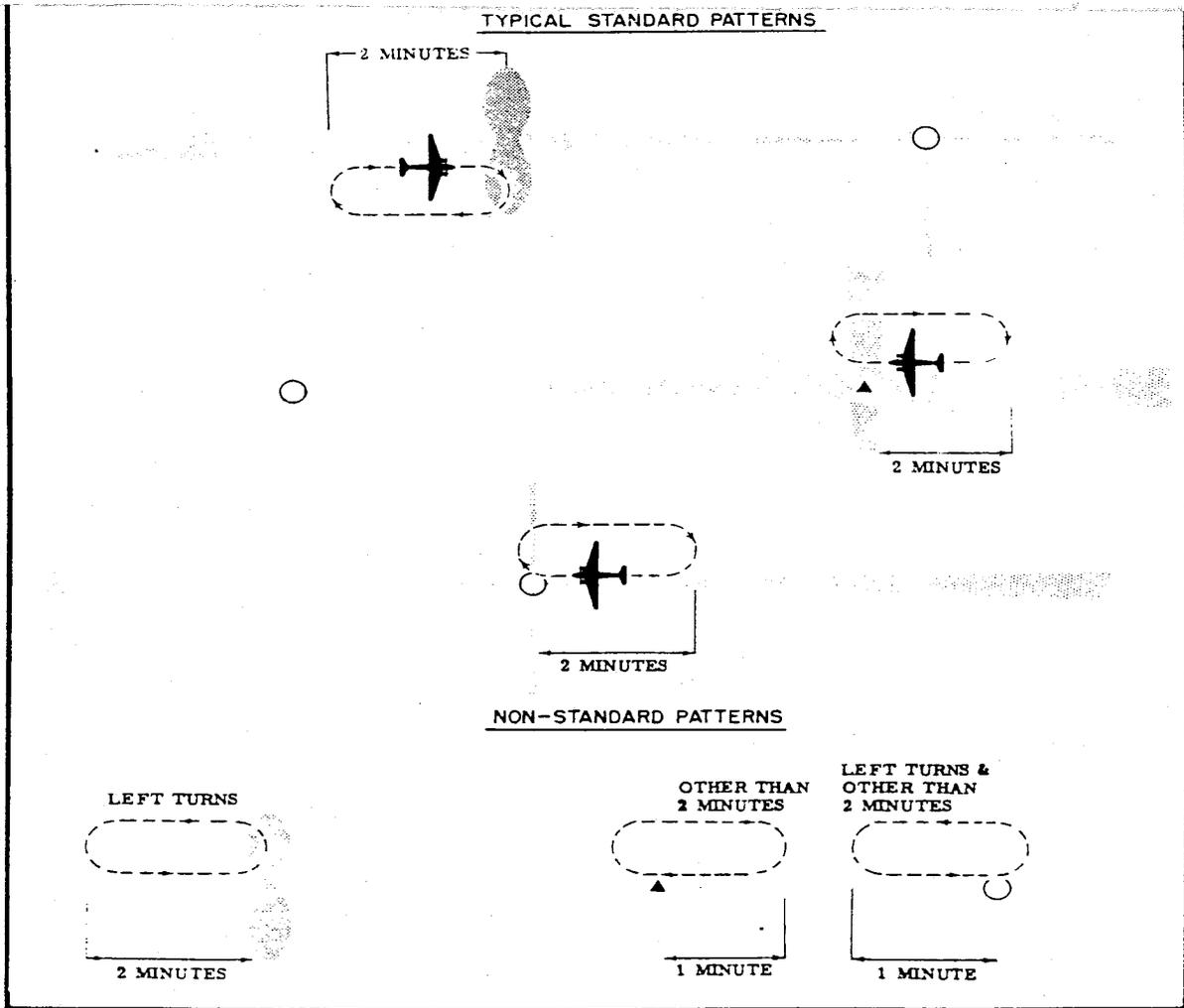
In efforts to assist the investigation of the EI-ACF Forced Landing in 1953, the Captain repeatedly told the investigators, “Listen to the Record,” and “Check the Record.”

After the conclusion of the Non-Statutory Inquiry in 2002 our solicitor forwarded the Papers of Discovery to me in Sligo, Ireland. I opened the neatly packed documents and at once found the Air Traffic Control Sheets. Reading through the record I noted that some messages I knew given and received were missing from the documentation.

I wrote a letter to England again. No sign of the actual tape has emerged yet, however the abbreviated Air Traffic Control Sheets and the Preston Record still existed. I considered the possibility of creating a log of the descent with the existing information. The Chief Air Accident Investigator in England forwarded two signed Air Traffic Control sheets and from that moment the task ahead was obvious.

On January 1st, 1953 EI-ACF and other aircraft were well monitored. (See the Preston Record example.) On that day Instrument Flying conditions existed. The flight was piloted in the most exact manner absolutely On Course.

The Chief Air Traffic Controller, Mr. Prior was faced suddenly with an almost overwhelming Emergency, a combination of factors made it so. There are procedures laid down, which would also probably have applied on January 1st, though there may be a slight USA variant.



EMERGENCY DESCENT - Upon receipt of advice that an aircraft in flight within a control area or control zone has encountered an emergency which may affect other air traffic, Air Traffic Control will act to give the aircraft encountering the emergency priority over any other aircraft involved.

Should it become necessary for an aircraft holding to make an emergency descent for a landing through other traffic, the pilot of that aircraft should so advise Air Traffic Control through appropriate communications facilities.

Upon receipt of advice that an aircraft is making an emergency descent through traffic at assigned altitudes over the airport, Air Traffic Control will immediately broadcast, or cause to be broadcast, on radio range frequency the following:

EMERGENCY TO ALL CONCERNED . . .

EMERGENCY LANDING AT AIRPORT

ALL AIRCRAFT BELOW THOUSAND FEET

WITHIN MILES OF RADIO RANGE

LEAVE COURSE(S) IMMEDIATELY

Upon receipt of such a broadcast, pilots of aircraft affected should clear specified areas in accordance with the emergency instructions. Air Traffic Control will issue further directions through appropriate communications facilities immediately following the emergency broadcast. When terrain, traffic, or other factors make it impractical for an aircraft to maintain the last assigned altitude, Air Traffic Control will issue specific directions to the aircraft.

14 AIRWAY TRAFFIC CONTROL

Aviation Manual

AIRCRAFT HOLDING - The standard holding flight path of an aircraft is to follow the specified course inbound to the holding fix, make a 180° standard rate (three degrees per second) turn to the right, fly a parallel straight course outbound from the holding fix for two minutes make another 180° standard rate turn to the right and again follow the specified course inbound. When holding at a VOR station, pilots should use the first definite indication that the aircraft has arrived over the VOR in determining when to commence the 180° turn to the outbound heading from the fix. This will involve a positive movement or fluctuation of the to-from indicator downward prior to commencing the turn. When holding at an approach control marker and instructions are received specifying the time of departure from the holding point, the pilot should adjust his flight path within the limits of the established holding pattern in order to leave the marker inbound at the exact time specified. A procedure turn need not be executed since aircraft holding in the elliptical pattern may proceed inbound on final approach directly from the holding pattern when approach clearance is received.

NOTE: All turns required in connection with entry or exit from a holding pattern should be made on the same side of the course as the pattern.

Due to the location of facilities in congested areas, terrain and other factors, non-standard holding flight paths are utilized at some locations. These non-standard holding flight paths are depicted on the ATC pages of this section. When instructed to hold at a specified holding point, the standard holding flight path should be flown, unless otherwise specified by Air Traffic Control. Whenever a non-standard holding pattern is assigned the traffic clearance will either stipulate a "non-standard pattern," or the holding instructions will be outlined in detail. If a pilot receiving a non-standard holding pattern assignment is not familiar with such pattern, he should either consult the appropriate ATC page or request detailed holding instructions from Air Traffic Control. Pilots are expected to adhere as closely as possible to the assigned holding pattern due to existence of adjacent holding patterns or flight paths of en route aircraft at the same altitude. Buffer areas are provided around all holding patterns in accordance with existing standards.

Bearing in mind the warning of conflicting traffic in the airspace in which the aircraft was flying, the Captain changed course immediately after the second engine failed, away from the Airport, as without consistent power he had no alternative. Mr. Prior depended on the Captain to take action, as he did himself, relating to existing rules. It was a textbook Emergency, perfectly executed.

No lives were lost.

In the 1953 Forced Landing First Officer Whyte was also acting as Radio Officer and using the R/T system realized that he must reduce the protocol. There was not enough time, too many words to say. He spoke essentials only, which allowed a bearing of the EI-ACF track. I compiled a Log of the Descent mostly from sworn testimony by the Chief Air Traffic Control Officer, Mr. Prior, whose testimony corroborated the statements of the crew.

In the Discovery Papers I found ATC Sheets 1 and 2, numbered 53 and 54. A third sheet, #53(a) was mentioned in 1953 to the Court by Counsel for the State, Mr. O'Keefe, who called it a 'translation.' The English language is used in all transmission sheets, and I have used only Sheets 1 and 2 which, in reply to my letter were also sent to me by the Chief Investigator at this time in England in 2002. Number 53(a) has been set aside from evidence because 53(a) shows the Declaration of Emergency

TWO FULL MINUTES BEFORE IT WAS DECLARED.

(136)

1 1st January 1953

Service VHF D/F HomerFrequency 126.9Station BirminghamCall Sign Birmingham HomerWritten Log

DD2002

| Time | To | From | Message |
|------|-----|------|------------------------------------------------------------------------------|
| 1057 | BAP | BCF | L'FLD QAM etc QTE 320 |
| 1101 | BAP | BCF | Emergency both engines giving trouble QDM 064 R clear immediate descent R |
| 03 | CF | BAP | QAH? 2000/R QDM 030 |
| | BAP | CF | 1500 Contact |
| | BH | CF | QDM? QDM 030/R 030 |
| 04 | BAP | CF | 700-600 QDM 027 |
| | AP | CF | ???? (Now unreadable) QDM 025 |
| 10 | | | Log closed pending enquiry |

Certified true copy of written log

S.T.O. (Sgd.) G. Kennedy

Sheet No. 2.

Date: 1st January, 1953.

Service Birmingham
Approach and Homer

Frequency 126.9 mcs.

Recorded Log

Call Sign Birmingham Approach
and Homer.

| Time | To | From | Message |
|--------|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1057 + | | | Maintenance check time zero nine two zero Maintenance check time one zero four two. |
| 1101 + | | | Birmingham Approach Aer Lingus Coca Foxtrot Ten fifty seven Aer Lingus Coca Foxtrot this is Birmingham Approach loud and clear. Birmingham Approach Coca Foxtrot by Lichfield at five six descending to four five. Coca Foxtrot Birmingham Approach Roger will you call overhead at four thousand five hundred feet here is the ten fifty five weather surface wind three six zero degrees fourteen knots visibility three yards cloud eight eights at eight hundred feet seven eights at six hundred feet QFE nine eight nine decimal two. Roger Coca Foxtrot will call overhead four five. Birmingham Approach Birmingham Approach Aer Lingus Coca Foxtrot. Coca Foxtrot go ahead. Birmingham Approach Coca Foxtrot Emergency both engines giving trouble may I commence immediate descent? Coca Foxtrot Birmingham Approach commence immediate descent call me two thousand five hundred feet. |
| 1103 + | | | Roger Coca Foxtrot. Coca Foxtrot Birmingham Approach Could I have your present altitude over. Coca Foxtrot two thousand feet. Roger call overhead. Birmingham Approach Coca Foxtrot now fifteen hundred feet both engines out Coca Foxtrot Queenie Dog Mike please one two three four five four three two one Coca Foxtrot. Coca Foxtrot Birmingham Homer queenie Dog Mike zero three zero over. |
| 1104 + | | | Roger now becoming contact both engines out seven hundred feet six hundred feet five hundred feet ??? One one zero four ????? |

Certified that to the best of
my ability that this is a true copy
of speech recordings.

Signed: G. Kennedy

TIMINGS AND MESSAGES FROM CREW OMITTED
FROM TRANSMISSION LOGS OF
EI-ACF, JANUARY 1, 1953.

There is available testimony in Discovery to answer the Air Traffic Control Sheets written record produced. We have constructed from the following listed documentation the sequence of the descent to the point of landing of EI-ACF.

- I. The MCA Confidential Draft.
- II. The statement of Mr. Prior, Air Traffic Controller, 1.1.'53
- III. The testimony of Mr. Prior, Air Traffic Controller, May 20, '53.
- IV I.N.A. Press Report, "Last Message from Plane."
- V Certified Air Traffic Control Sheet No.1 (53)
- VI Certified Air Traffic Control Sheet No 2. (54)
- VII Certified Preston Airways Log.

The above are all taken from the Formal Investigation, EI-ACF, 1/1/'53, First List of Documents. For ease of understanding the excluded messages are all presented in Capital letters. All communications from Coca Foxtrot were spoken by First Officer Patrick Whyte.

INTERPRETATION OF LOG

BY IALPA REPRESENTATIVE CAPT. P.V. DONOGHUE

‘ACCORDING TO THE LOG ONE ENGINE CUT AT 5,500 FEET AND THE SECOND AT 4,500 FEET. THE RECOMMENDED RATE OF DESCENT FOR ANY UNPRESSURISED PASSENGER AIRCRAFT IS 500 FEET PER MINUTE, SO 2 MINUTES WOULD HAVE ELAPSED BETWEEN ENGINE CUTS. CONSEQUENTLY THE THEORY THAT IT WAS FUEL IN THE LINE THAT KEPT THE PORT ENGINE RUNNING COULD NOT BE CORRECT. IT HAD TO BE TANK FUEL.’

10:50 G.M.T.

Duty Approach Controller, Elmdon.

II

‘I WAS INFORMED BY PRESTON AIRWAYS THAT ECF ETA ELMDON AT 11:01, REQUIRED CLEARANCE, I REQUESTED THE AIRCRAFT AT 2,500 FEET ON THE S.B.A., BUT WAS INFORMED BY THE AIRWAYS CONTROLLER THAT DUE TO CONFLICTING TRAFFIC IT COULD NOT BE CLEARED BELOW 4,500 UNTIL OVERHEAD THIS FIELD.’

The above message is not in any of the Logs.

In an anecdote the Captain related to family and friends on his return from his Forced landing that it seemed the OPS manager of the Airline did not believe an instruction from Air Traffic Control. The Captain related that Air Traffic Control instructed him “due to conflicting traffic EI-ACF could not be cleared below 4,500 feet until overhead this field.” The OPS Manager asked where would he find conflicting traffic on New Year’s Day?

LOG OF DESCENT OF EI-ACF

10:53½ G.M.T:

| | | |
|-----------------|------------------------------------------------------|-----|
| Preston Airways | Aer Lingus Coca Foxtrot. | VII |
| Coca Foxtrot | Now by Lichfield at Five Thousand Five Hundred Feet. | VII |
| Preston Airways | Roger. Coca Foxtrot clear to the S.B.A. at Elmdon. | VII |

| | | |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| | at Four Thousand Five Hundred feet no delay expected. | |
| | Contact Elmdon now. Over. | |
| Coca Foxtrot | Say again the altitude. Over. | VII |
| Preston Airways | Four Thousand Five Hundred. | VII |
| Coca Foxtrot | Now going over to Elmdon. | VII |
| Coca Foxtrot | “Birmingham Approach Aer Lingus Coca Foxtrot.” | VI |
| A.T.C | “Ten Fifty Seven Aer Lingus Coca Foxtrot this is Birmingham Approach Loud and Clear.” | VI |
| Coca Foxtrot. | “Birmingham Approach Coca Foxtrot by Litchfield At Five Six Descending to Four Five.” | VI |
| A.T.C. | Call me overhead at Four Thousand Five Hundred Feet.” | IV |
| Weather | “Here is the ten fifty five weather surface wind three six zero degrees fourteen knots visibility three yards eight eights at eight hundred feet seven eights at six hundred feet QFE nine eight nine decimal two.” | VI |
| Coca Foxtrot | “Roger Coca Foxtrot will call overhead four five.” | VI |
| <u>PRESS REPORT</u> - | “LAST MESSAGE FROM PLANE” <u>This is the only Press record of next three messages.</u> | IV |

Last Message

From Plane

**A RECORDING of the last series of radio
telephone messages from the "St. Kieran"
was run back yesterday for the benefit of**

Aer Lingus officials.

They heard First Officer Whyte

saying: "5,500 feet. Starboard engine

has cut"; then "still at 5,500 feet.

Port engine is cutting. 4,000 feet.

Both engines still cut. 3,000 feet. Engines

still cut."

There was then a pause before

the final message: "600 feet" - I.N.A.

Coca Foxtrot "FIVE THOUSAND FIVE HUNDRED FEET. 1 & IV
STARBOARD ENGINE HAS CUT."

Coca Foxtrot "STILL AT FIVE THOUSAND FIVE HUNDRED FEET." IV

Public Inquiry Transcript, Day 2, Page 81.

Mr. Reginald F. Prior, Air Traffic Controller, Elmdon, cross-examined by Mr. C. Campbell, S.C. for First Officer Patrick Whyte

Mr. Campbell Q. 810 III

**Well, did you actually realize that it was a very great
Emergency, that there was a likelihood of a crash?**

**Mr. Prior A Originally,

WHEN HE CALLED AT 4,500 FEET NO.**

Mr. Campbell Q. 811

And I suppose it was only when he called to you that both engines were giving trouble that you realized there was an emergency?

Mr. Prior

A. Yes.

Coca Foxtrot "PORT ENGINE IS CUTTING." IV

The Log continues:

Coca Foxtrot "Birmingham Approach Birmingham Approach Aer VI
Lingus Coca Foxtrot."

A.T.C. "Coca Foxtrot go ahead." VI

Coca Foxtrot "Emergency, Both engines giving trouble, may I VI
commence immediate descent?"

A.T.C. "Coca Foxtrot Birmingham Approach, commence VI
immediate descent. Call me two thousand five hundred feet."

Coca Foxtrot "Roger, Coca Foxtrot." VI

Coca Foxtrot "FOUR THOUSAND FEET. IV
BOTH ENGINES STILL CUT."

Mr. Prior "Preston requested me to check that ECF had passed II
through three thousand five hundred feet."

Coca Foxtrot "THREE THOUSAND FEET. ENGINES STILL CUT." IV

A.T.C. "Birmingham Approach. Could I have your present VI
altitude over?"

Coca Foxtrot "Two thousand feet, WITH BOTH ENGINES NOW OUT." II

A.T.C. "Roger call overhead." VI

Coca Foxtrot "Birmingham Approach Coca Foxtrot now fifteen hundred VI
feet , both engines out."

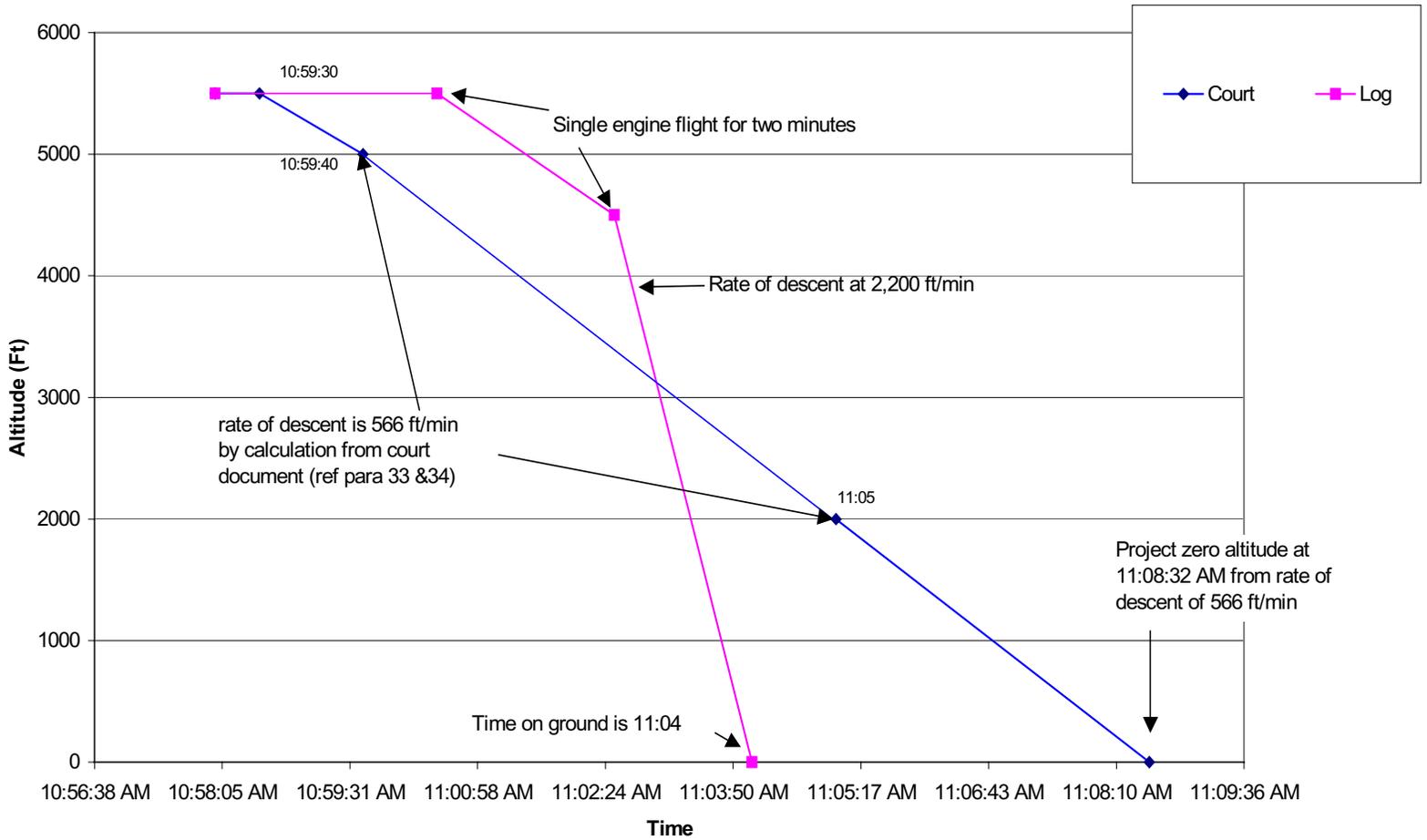
| | | |
|---------------|------------------------------------------------------------------------------|-----|
| Coca Foxtrot. | “1,500 Contact. | VI |
| A.T.C. | “Coca Foxtrot Birmingham Homer queenie dog mike zero VI three zero over.” | |
| Coca Foxtrot | “Roger now becoming contact. Both engines out. Seven Hundred Feet.” | VI |
| Coca Foxtrot | “Six Hundred Feet.” | VI |
| Coca Foxtrot | “Five Hundred Feet.” | VI |
| Coca Foxtrot | “FOUR HUNDRED FEET.” | III |
| Coca Foxtrot | “THREE HUNDRED FEET.” | III |
| Coca Foxtrot | “TWO HUNDRED FEET.” “MAKING AN EMERGENCY LANDING.” | III |
| Coca Foxtrot | “ONE HUNDRED FEET.” “CANNOT MAINTAIN ALTITUDE.” | III |
| Coca Foxtrot | “ONE ONE ZERO FOUR.” (See Verdict Report) | III |
| | End of Emergency Descent at Spernal | |



First Officer Paddy Whyte

This graph clearly indicates the difference between the pilots' actual emergency and the Court's determination.

Court vs Log



Chairman of the Board of Inquiry, Mr. Teevan, S.C. III

questions Mr. Prior:

Q. 840 The Chairman: Read out all you have there in the last paragraph.

A. Mr. Prior: Roger – Coca Foxtrot – now becoming contact. both engines out; still 700’ 600’ and 500’.“ Then five question marks – 100’. Time One One Zero Four; CANNOT MAINTAIN ALTITUDE 11-04”

Mr. C. Maguire, S.C. for Aer Lingus cross-examining Mr. Prior: III

Q. 880 Mr. Maguire: The tape is here – I see Mr. Murphy (Registrar of the Court of Inquiry) actually producing the tape. May I put it that the wireless on the aircraft worked right up to the last moment, and in fact carried on speaking commencing “100 feet” and then “Zero” and then “Altitude”?

A Mr. Prior: On the actual receiver I heard the Pilot’s last transmission –the last transmission that I got from the Pilot was “200 FEET” –“MAKING AN EMERGENCY LANDING.”

That is not recorded.

Q 882 Mr. Maguire: Is that not on the recording?

A. Mr. Prior: No.

Mr. Maguire cross-examining Mr. Prior:

Q. 898 . “These are recordings in other words?”

A. “I presume so, yes.”

Q. 899 “The Chairman: It is the master copy, I understand, - I don’t know whether it is a recording or not.”

Q. 899(a) Mr. Maguire: “Do you know by whom was that copy prepared?”

A “I don’t know.”

Q. 900 “And you don’t know the extent of the extracts taken?”

A. “No.”

Q. 901 “So that there might be more then in the original tape than is here on this tape – I suppose that is so?”

A “It could be, I suppose, but it is done by the Signals Officer. It is done by the Tele-Communications Officer of the aerodrome.”

Verdict Report:

“At 11:05 hrs Birmingham requested the aircrafts altitude to which the co-pilot replied Coca Foxtrot “now at 2,000 feet, will call you overhead.”

The Verdict Report continued ---: Coca Fox “Now 1,500 feet, both engines out,” and requested a Q.D.M.”

(Note - EI-ACF was on the ground and stopped at Sernal, 14 $\frac{3}{4}$ miles away at 11:04 a.m.)

Note: The Safety Height for Elmdon Airport was 3,000 feet.

The Above Sea Level varied, Sernal 300 feet approximately.

The actual Cloud Base on January 1st was 600 feet.

Extract from Transcript, Day 2:

Mr. Campbell, S.C., questioned Mr. Prior at the EI-ACF Public Inquiry regarding the clarity of the voice recording as follows:

Q. 801 Mr. Campbell This aircraft was in direct communication with you from about 10:57 until about 4 minutes past eleven.

A. Mr. Prior Yes.

Q. 802 And did the voice go through clearly, and come through clearly and distinctly?

A. Right until he reported contact 700 feet and then it faded.

Q. 803. Until 700 feet?

A. Yes.

Q 804. That is after you had given him what you call the Queenie Dog Mike – it still came clear and distinct?

A. Yes.

Q. 805. Does it still appear on the record, if you replayed the record – does it still come clear and distinct?

A. I haven't heard the record for a long time but I should imagine it would.

Q. 806. When you last heard it, it was perfectly clear and distinct?

A. Yes.

Mr. Prior cross-examined by Mr. Heavy:

-
- Q. 858 Does the Recorder function constantly throughout the working day?
- A. No. I am sorry, he does not keep on going. It is switched on by the actual ticking of the Transmitter and it goes off five seconds after transmission is received.
- Q. 859 What about the incoming messages?
- A. It is actuated as soon as the Pilot speaks on the R.T - it is recorded.
- Q. 860 The voice from the other end will set it going?
- A. Yes.
- Q. 861 So that actually in the case of broken conversations it would not give one the correct time between the first message and the last to play the record over?
- A. No.
-

Extract from EI-ACF Transcript:

MR. MAGUIRE cross-examining MR. PRIOR:

890. Q. Is it your recollection that the last words you said were "200 feet, making emergency landing"?
- A. Yes.
891. Q. And you heard these?
- A. Yes.

892. Q. How did it come that these words were not recorded?
- A. Well, I don't really know, but I think if you got something less than strength one, which is very very faint I don't think it starts recording – I don't know myself, but I think that is so. It is very very faint. I could just only hear it myself on the microphone.
893. Q. Perhaps if we heard the recording it might clarify the position, because I understand that the recording as made went down as far as stating "Zero Latitude" and then there was a scratching sound. I presume while the aerial was torn away? It appears to be the ordinary tape, the actual ordinary tape recorded – it is not a film recorder?
- A. Our recorder is a film recorder.
894. Q. Could I see it for a moment? (Document produced). This is not the ordinary magnetised type – it is not a film?
- A. **That is not a film that is used on the recorders. I don't know where that came from, but the film we used is possibly an inch or an inch and a half wide.**
895. Q. MR. MACK: This is purely a master copy you took from your original tape.
896. THE CHAIRMAN: We can have this cleared up later.

MR. CAMPBELL questioning MR. PRIOR, AIR TRAFFIC CONTROLLER:

808. Q. The last entry at the time apparently taken from the Homer Log Book is 11-03, and then the final one is 11-04, with only a minute in between the two?

A. Yes.

809. Q. And there had been quite a number of messages within that minute apparently?

A. Yes.

810. Q. Well, did you actually realise that it was a very great emergency, that there was a likelihood of a crash?

A. **Originally when he called at 4,500, No.**

811. Q. And I suppose it was only when he called to you that both engines were giving trouble that you realised there was an emergency?

A. Yes.

812. Q. And apparently as far as we can make out from the entry, if you look at it, apparently that would be a minute past eleven or thereabouts – some time after a minute past eleven?

A. No, he called me just after 10.57.

813. Q. **I am coming now to where he gave you the message that there was an emergency and that both engines were giving trouble. That is almost exactly in the centre of the print I have?**

A. Yes.

814. Q. **And if you go to the right you will see that it is considerably below the one minute past eleven?**

A. Yes.. I see.

Extract from Teevan Verdict – 1953.

33. “Some time between 10. 59 hrs. and 11. 00 hrs. the starboard engine cut suddenly without any previous indication or rough-running. Almost immediately (the Captain’s estimate being 6 to 7 or perhaps 10 seconds) after the loss of power on the starboard engine, the port engine cut in the same way. The altitude at that time was approximately 5000 ft.**

34. At about 11.01 hrs. Captain Hanley told the First Officer to declare an emergency, whereupon F/O Whyte gave Birmingham Approach the following message:- “Emergency, both engines giving trouble, may I commence immediate descent.” Birmingham approved an immediate descent to 2500 ft. At 11. 05 hrs. Birmingham requested the aircraft’s altitude to which the co-pilot replied:- “CF now at 2000 ft., will call you overhead.” A little later he called Birmingham:- “CF now 1500 ft both engines out” and requested a QDM (magnetic course to steer to the station in zero wind conditions) to which Birmingham Homer, who had started taking bearings as soon as the aircraft had established radio contact, answered QDM 030. F/O Whyte then continued giving the altitude until, as he states, the aircraft was just about on the ground.”

**** On the afternoon of 1.1.1953 after his forced landing, the Captain of EI-ACF was questioned for five and a half hours. Returning home on January 3rd he briefly recounted his experience. While it was a lengthy**

interrogation he said the officials did not seem hostile. Many people were exceedingly kind. Questions asked it soon transpired were not recorded. At the end he was given a sheet and a half of paper seemingly in the form of a statement and asked to sign. To avoid any possible thought of hostility on his part he signed.

Because questions were not anchored to their respective answers the testimony could be moved at will either up to 5,500 feet or down the emergency descent record, inadvertently or otherwise. The Air Traffic Control Record was the only independent confirmation pilots had at that time. The Douglas D C 3, EI-ACF had no Black Box, no Cockpit Voice Recorder nor Flight Data Recorder. However the independent sworn testimony of the Chief Air Traffic Controller showed the aircraft was in a descending mode when at 11.01 a.m. the Starboard engine was 'reported' failed at 5,500 feet.

At 4,500 feet the normal single-engine approach was continuing to Elmdon, the First Officer reported.

At 4,000 feet an Emergency was declared, the second engine having now failed.

Hence, the seconds referred to by the Captain, 6, 7 or perhaps 10 seconds could only have related to the time between the last transmission on one engine and the cutting of the second engine. The pilots' transmissions were their only independent recording of the time between the engine cuts.

* * * * *

Captain T J. Hanley questioned by Mr. O’Keefe:

Q.2451 And when the starboard engine cut were you flying on a level keel or – I should not put it that way because you were descending – but were you flying straight? You were not in the course of turning?

A. Straight – laterally level.

Q. 2452 Laterally level with some incline towards the ground?

A. Yes.

Q. 2381 And then when he (F/O Whyte) asked for permission to commence immediate descent, was that descent at the airport or merely to a lower level?

A. Well, we had cleared to **4,500** ft. and when he declared an emergency, it was merely to tell him (Mr. Prior - MPH) that, to indicate that we were in trouble and that we were trying to clear any traffic underneath out of our way because we had to come down.

Q. 2385 Can you give any idea of the rate of descent of the aircraft from the time the second engine cut.

A. Well I must say that the only observation I can recollect was of 1500 feet a minute – at what stage?

Q. 2386 At some stage.

A. At some stage.

PRESTON LOG

DD2002

1ST JANUARY, 1953

Service AIRWAYS

FREQUENCY 119300

RECORDED Log

Station PRESTON

Callsign PRESTON AIRWAYS

TIME

TO

FROM

MESSAGE

| | | | |
|------|----------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | PRESTON AIRWAYS COCA GOLF | COCA GOLF PRESTON AIRWAYS | I'd like to re-clear V F R on top do Do I understand you wish to re-clear V F R on top OVER That is correct Coca Golf we are just on top at the moment. ROGER Coca Golf you are cleared to maintain five hundred on top to Dublin OVER ROGER |
| | PRESTON AIRWAYS COCA FOXTROT PRESTON AIRWAYS | AIR LINGUS COCA FOXTROT PRESTON AIRWAYS COCA FOXTROT | OVER Go ahead En route to Birmingham I am at five thousand five hundred feet estimating Lynas at ten zero eight Wallasey at twenty seven and Whitegate at thirty five ROGER Coca Foxtrot cleared to Elmdon via Green two Red three and Lichfield maintain five thousand five hundred feet the Holyhead Q N H one zero zero one millibars the time just zero nine five eight call me at Point Lynas please OVER ROGER Coca Foxtrot cleared to Birmingham Green two Red three Lichfield to maintain five five one zero zero one Holyhead. |
| 0958 | PRESTON AIRWAYS COCA GOLF PRESTON AIRWAYS | ECHO COCA GOLF COCA GOLF | Go ahead. we are eight thousand feet at the moment V F R may we be re- cleared at eight five OVER |
| | COCA GOLF | This is PRESTON AIRWAYS | ROGER maintain eight thousand five hundred feet ???????? Golf ???? |
| 0959 | (Time injection by Controller zero nine five nine) | | |
| | | This is PRESTON AIRWAYS | Time ten hundred hours the Belfast Q N H is one zero zero nine Belfast one zero zero nine Holyhead one zero zero two Holyhead one zero zero two and Barnsley nine nine nine Barnsley nine nine nine PRESTON AIRWAYS OUT |
| 1000 | PRESTON AIRWAYS ECHO DELTA | KIM PAPA HOTEL TANGO ECHO DELTA This is PRESTON AIRWAYS | OVER |

| | | |
|------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PRESTON AIRWAYS | ECHO DELTA | was over Ottringham on the hour we estimate Oldham at one nine ten thousand five hundred feet on instruments OVER |
| ECHO DELTA | PRESTON AIRWAYS | Understand you estimate abeam of Oldham at one nine is that correct. We estimate Oldham at one nine-nine ROGER thank you Echo Delta PRESTON OUT |
| PRESTON AIRWAYS BEALINE NAN JIG | BEALINE NAN JIG PRESTON AIRWAYS BEALINE NAN JIG | go ahead from Northolt to Nutts Corner passed Daventry zero three estimate Lichfield at one six Item Fox six point five OVER ROGER thank you Nan Jig PRESTON OUT |
| PRESTON AIRWAYS | BEALINE NAN JIG | Wallasey zero four seven thousand five hundred estimating Whitegate at one two ROGER George Jig The Barnsley QNH nine nine nine OVER Nine nine nine ????? (almost unreadable) |
| ECHO DELTA | PRESTON AIRWAYS ECHO DELTA | OVER Go ahead |
| ECHO DELTA | This is PRESTON AIRWAYS | you are cleared to the Oldham Beacon at four thousand five hundred here is the latest Ringway weather the surface wind three three zero degrees at eight knots visibility two five zero zero yards the cloud six eights at two five zero zero feet OVER |
| | ECHO DELTA | Cleared to cross Oldham at four thousand five hundred feet leaving ten thousand five hundred feet now Thank you Echo Delta PRESTON OUT |
| PRESTON AIRWAYS | COCA GOLF | Point Lynas at zero four we estimate Skerries at zero eight ROGER Coca Golf call Dublin - OVER Correction that was Coca Golf Coca Golf Affirmative Coca Golf will you now call Dublin ROGER Coca Golf |
| 1007 | (Time injection by Controller one zero zero seven) | |
| ECHO DELTA | PRESTON AIRWAYS ECHO DELTA | here is a further clearance for you OVER go ahead ROGER Echo Delta you are cleared to the M F Beacon at Ringway at two thousand five hundred feet no delay expected to cross Oldham at four five OVER ROGER cleared to Manchester Beacon at two thousand five hundred feet to cross Oldham at four thousand five hundred feet no delay expected that is correct |
| PRESTON AIRWAYS | AIR LINGUS COCA FOXTROT | |

| | | | |
|------|-----------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | COCA FOXTROT | | . . . ahead |
| | | COCA FOXTROT | was by Lynas at zero nine and a half cruising five five India Foxtrot estimating Wallasey at two eight Whitegates at three seven OVER ROGER Coca Foxtrot |
| 1009 | (Time injection by Controller ONE NINE) | | |
| | KIM ECHO DELTA | This is PRESTON AIRWAYS | call Manchester Approach now on one two one decimal one OVER Changing to one two one decimal one |
| | PRESTON AIRWAYS | BEALINE GEORGE JIG | Over Whitegates at one . . . (illegible) five estimating Lichfield at (illegible) thank you George Jig Preston OFF |
| | PRESTON AIRWAYS | this is BEALINE GEORGE ABLE LOVE PETER NAN | OVER |
| | BEALINE PETER NAN | PRESTON AIRWAYS PETER NAN | Go ahead . . . is bound Liverpool from (illegible) are we cleared to three five (illegible) OVER |
| | PETER NAN | PRESTON AIRWAYS PETER NAN | ROGER you are clear to ascend and maintain three thousand five OVER ROGER climbing to three point five (illegible) Red three estimating Wallasey at four two and Speke at four six OVER thank you Peter Nan Preston Airways OUT |
| | PRESTON AIRWAYS | BEALINE NAN JIG | Lichfield one six estimate White . . (Illegible) three one height . . . (illegible) five OVER ROGER thank you Nan Jig Preston OUT |
| | PRESTON AIRWAYS | BEALINE PETER NAN | is at three point five OVER thank you Peter Nan |
| | PRESTON AIRWAYS | this is BEALINE GEORGE LOVE ITEM | OVER |
| | LOVE ITEM | PRESTON AIRWAYS | GO AHEAD |
| | PRESTON AIRWAYS | LOVE ITEM | airborne Nutts Corner bound for Ringway climbing to seven thousand five hundred feet estimating Portaferry at three three Isle of Man four seven OVER ???????? |
| | PRESTON AIRWAYS | BEALINE GEORGE JIG | Lichfield at two eight seven point five estimating Daventry four zero Thank you George Jig the Chatham setting nine nine four millibars call London Airways one two two one OVER ???????????????????? |
| | PRESTON AIRWAYS | BEALINE NAN JIG | Whitegate three zero estimating Wallasey three nine between layers six point five OVER Thank you Nan Jig Preston OUT |
| | PRESTON AIRWAYS | COCA FOXTROT | |
| | COCA FOXTROT | | Go ahead |
| | PRESTON AIRWAYS | COCA FOXTROT | was by Wallasey at three one estimating |

Whitegates at three nine
Roger?
AIR LINGUS COCA PRESTON AIRWAYS Do you read
FOXTROT COCA FOXTROT ROGER (transmission faded)
PRESTON AIRWAYS COCA FOXTROT You are fading out after your
transmission OVER
ROGER Coca Foxtrot the Barnsley
nine nine nine millibars OVER
nine nine nine Coca Foxtrot

1030 (Maintenance check of recording equipment one zero three zero)

(On intercom between Monitor and Controller - must be something wrong with
(Illegible) two – It must be something to do with your mike as it's O K on the other –
(Illegible) I'll let them know down below)

PRESTON AIRWAYS BEALINE LOVE ITEM Passed Portaferry at three two now
at seven thousand five hundred
feet OVER ROGER Love Item
Preston Airways OUT

(Faint signals heard George Sierra)
(On intercom Hello who was that? . . would it be George Sierra)

YANKEE SIERRA this is PRESTON
AIRWAYS OVER
PRESTON AIRWAYS YANKEE SIERRA by Congleton three two estimating
Lichfield at four five flying Item Fox
Roger three point five (Yankee
Sierra ??)
ROGER thank you Yankee Sierra
Advise at Lichfield
. (Yankee Sierra?)
. ?????

PRESTON AIRWAYS BEALINE PETER NAN
BEALINE PETR NAN this is PRESTON
AIRWAYS you cut out would you say again please
PETER NAN PETER NAN OVER at the Bar three point five OVER
PETER NAN PRESTON AIRWAYS ROGER maintain three thousand five
hundred feet to Wallasey will call you
back with further instructions OVER

(On intercom Hello – just a moment – could you give me a call on
this faulty mike please – just a second)

PRESTON BEALINE NAN JIG Wallasey three eight estimate Isle of Man
Radio Range at zero four six point five
OVER ROGER thank you Nan Jig the
Holyhead QNH is one zero zero two OVER
I understand Queen Nan How one zero zero
two

1038½ (Time injection by Controller one zero three eight and a half)
(On intercom – this is the faulty side that's going out now -----he'll listen to
it down below)

PRESTON AIRWAYS COCA FOXTROT Just passed Lichfield five thousand five
hundred
COCA FOXTROT this is PRESTON
AIRWAYS Do you mean Whitegate OVER
Correction Whitegates Coca Foxtrot
ROGER thank you what is your estimated
time Lichfield OVER
COCA FOXTROT is estimating Lichfield at five seven
ROGER thank you Preston OUT
OVER
BEALINE PETER NAN PRESTON

| | | | |
|-------|------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | PETER NAN | PETER NAN | OVER maintain three thousand five hundred feet to Wallasey and will you call Liverpool approach now OVER ROGER |
| 1039½ | (Time injection by Controller three nine and a half) | PETER NAN | |
| | PRESTON AIRWAYS COCA DELTA | ECHO COCA DELTA PRESTON AIRWAYS COCA DELTA | go ahead just passed Wallasey we are at the moment two five flying I F R estimating Lynas at fifty five and Skerries on the hour may we have re-clearance to four five |
| | COCA DELTA | PRESTON AIRWAYS | I will clear you to four five as soon as possible OVER |
| | COCA DELTA AER LINGUS COCA DELTA | COCA DELTA PRESTON AIRWAYS | OK ROGER Don't forget all about us anyway OVER |
| | COCA DELTA | PRESTON AIRWAYS COCA DELTA | OVER |
| | | | is cleared to climb to and maintain four thousand five hundred feet OVER going now to four five |
| 1045 | (Time injection by Controller one zero four five) | | |
| | PRESTON | SABENA WHISKY ZULU | |
| | WHISKY ZULU PRESTON AIRWAYS | PRESTON AIRWAYS WHISKY ZULU | go ahead From Manchester to Brussels flying at three thousand five hundred feet passed Congleton four five estimating Lichfield five five OVER ROGER Whisky Zulu what are your flight conditions OVER Flying I F R in cloud ROGER maintain three thousand five hundred |
| | | WHISKY ZULU | |
| | PRESTON AIRWAYS YANKEE SIERRA PRESTON AIRWAYS | WHISKY ZULU??? YANKEE SIERRA PRESTON AIRWAYS YANKEE SIERRA | go ahead At Lichfield ROGER thank you the Chatham setting nine nine four millibars becoming nine nine five one the hour call London Airways now on one two two one OVER |
| | PRESTON AIRWAYS WHISKY ZULU | WHISKY ZULU this is PRESTON AIRWAYS | Not at the moment I'll give you a climb clearance soon as possible ROGER thank you OUT |
| | PRESTON AIRWAYS | BEALINE GEORGE LOVE ITEM | Isle of Man seven five hundred we passed Isle of Man Range at four five estimating Wallasey at eleven twelve OVER Thank you Love Item the Holyhead QNH is one zero zero two OVER One zero zero two Love Item thank you |

THE NON-STATUTORY INQUIRY RE: AIR TRAFFIC CONTROL SHEETS

When the family attended the 2002 Inquiry in Dublin we had no Air Traffic Control Records. We had no inkling that the Court had three abbreviated transmission sheets and that particularly one – i.e., 53(a), was in conflict with the presentation of our Case, which included Anomaly #4, presented to the Government by us in 1998. We did not have the benefit of the Air Traffic Control sheets. We did not realize that the Keane Inquiry had three Air Traffic Control Sheets placing the pilots seemingly giving perjured testimony. We lost again in the Keane Non-Statutory Inquiry.

THE NON-STATUTORY INQUIRY RE: TRANSCRIPT

Keane Verdict – 9.3

“The second case was somewhat hampered by the fact that the transcript from the Teevan Inquiry was not complete.”

Mr. Keane did not seem to investigate this aspect of the case any further. Mr. Teevan, Chairman of the Board of the 1953 Public Inquiry, presented his own copy of the transcript to the Department having discussed the case with members of IALPA, and the additional problem for resolution of the case that no other copy of the transcript could be found. During the initial inquiry neither the pilots nor their lawyers ever had copies of the transcript. My solicitor in 1979 immediately

purchased a copy of the eleven days of the Teevan transcript from the Department noting, "The pages were consecutive," which they are. Each volume had its front page and last page already defined relating to the Public Inquiry. It was in presentation of the CONTENT that evidence was precluded.

The modus operandi varied; by changing the number of words on a page; changing the width of a page; changing, eliminating and combining question numbers and their related answers; changing spaces between lines and excluding questions and answers, i.e., four in the instance of Mr. Prior on Day Two; finally the exchanging of lawyers names between clients causing a degree of obfuscation for those who did not attend the proceedings. Rev. Andrew Morton confirmed the obvious in the recall of Sgt. A.J. Thomas by Mr. McGonigal, S.C. Counsel for Captain Hanley. (See Rev. Morton Report and the Audit Report for details.)

The transcript presented to Mr. Keane in 2002 was a copy of my purchased transcript. The copy which the Department had received from Mr. Teevan had by now disappeared. We presented our copy of the Teevan transcript to the Department in 1999 to facilitate Mr. Humphreys and the Department. The transcript was exactly as that presented to Mr. Teevan by the transcription Service of the Court – a Certified Verbatim record.

Both Inquiries were severely hampered by the editing and exclusion of sworn testimony.

The actual position in relation to the transcript was thus:

Mr. McGonigal, S.C., Counsel for the Captain complained throughout the Inquiry and again in his final submission to the fact he had no transcript. There was a delay in the Court proceedings in 1953 while a transcript was passed along the row of lawyers from Counsel acting for the Minister to where Mr. McGonigal was seated on the

opposite side of the court. The Captain was standing in the aisle beside Mr. McGonigal at the front of the Court having asked to examine a transcript. While both pilot and lawyer turned the pages in search of evidence Mr. Teevan and the Board members looked down from their dais at this pursuit of the invisible. Mr. McGonigal's repeated interventions about the transcript showed his distress about the situation, which he reiterated in his final address to the court. Hence from our experience in the Court we know with absolute certainty that two transcripts belonging to two principal officers of a Court sworn Inquiry in 1953 were issued with depleted or edited transcripts. The Captain discovered testimony missing in the transcript passed to him by Mr. O'Keefe, and I found testimony missing in the transcript of Mr. Teevan many years later. The scale of extrusion in the case of Sgt. Thomas examined by Mr. McGonigal was complete, except for his recall of Sgt. Thomas, which we identified, though it was slightly hidden away! (See Rev. Morton's Report.) The EI-ACF transcript was not a verbatim transcript in presentation. In the gathering of text - yes, we observed the difficult sessions in progress and the routine changing of stenographers.

Keane Verdict – 9-16.

“Since the transcript of day 10 is incomplete, one must rely on the Irish Times publication of 1.6.53.”

"Irish Times" Report of Public Inquiry Proceedings of May 30, 1953.

(**None** of the content of this report quoted below is reflected in the transcript of the day. M.P.H.)

“EVIDENCE CONCLUDED IN AER LINGUS CRASH INQUIRY.

Ref.

A. When the inquiry into the crash-landing of the Aer Lingus D. C. 3, St. Kieran, at Sperrall, near Birmingham, on January 1st last, with 22 passengers and a crew of three, was resumed in the Four Courts, Dublin, yesterday, Mr. G. Murnaghan, S.C., who, with Mr. C.P. Maguire, (instructed by John S. O'Connor and Co.), appears for Aer Lingus, said that his clients had prepared, for the information of the Court and for counsel, a Schedule of instances in which water had been found in petrol or was suspected of being in petrol. The Schedule was produced and copies were handed in.

The chairman, Mr. T. Teevan, S.C., said that without having considered the details in the Schedule, it appeared to him that there was no justification for the suggestions which had been made about water having been found in any serious extent.

B. Mr. Murnaghan said that the only serious instance of this had been in Liverpool. The British Criminal Investigation Department had been dealing with the matter there and, so far, Aer Lingus had not been given a report from them.

Mr. Teevan said that it seemed that what was revealed in the schedule was the very great care on the part of Aer Lingus to ensure that there was no complaint about water in the petrol. He thought it right to say that in case any wrong construction might be put on matters which had been very properly raised.

C. Before the adjournment on Saturday, a wire recorder in court

played back the conversation which took place between the St. Kieran and Birmingham airport at the time of the crash and before it.

D. On Saturday, when the inquiry resumed, Mr. R. McGonigal, S.C., who, with Mr. J.R. Heavey (instructed by Mr. George McGrath), appeared for Captain Hanley, said that a schedule handed into the Court on Friday on behalf of Aer Lingus of instances where water was found or was suspected to be in petrol, mentioned a case in Liverpool where a large quantity of water was found in an Aer Lingus plane.

E. An investigation had been carried out by Aer Lingus, said Mr. McGonigal, and by the Criminal Investigation Department in England. The schedule stated that the results of the C.I.D. investigation had not yet been released. He understood, however, that the investigation by Aer Lingus had been completed, and he would like the Court to have a copy of that report.

NOT COMPLETED.

F. Mr. G.D. Murnaghan, S.C., who, with Mr. C.P. Maguire (instructed by Messrs. John S. O'Connor and Co.), represented Aer Lingus said he understood that the Aer Lingus report had not yet been completed, and that anything done by Aer Lingus had been taken over by the investigators in England.

G. The Chairman (Mr. T. Teevan, S.C.) said that even if the Aer Lingus private inquiry had been completed, it might be unwise to promulgate it before the English police inquiries had been finished. Mr. McGonigal said a report had been made with four conclusions mentioned in it. He did not see why that should not be before the Court.

The chairman said he did not see how far it might be necessary in this case. Mr. McGonigal said that one of the conclusions reached by Aer Lingus might be of interest.

"CONCLUSIONS"

H. Mr. Murnaghan said he had only just learned what the position was from Captain Scott of Aer Lingus. The company had begun an investigation and had only got a certain distance. The police in England then came in and Aer Lingus handed over to them what they had done. The company's investigation never reached any completed stage.

H. Mr. McGonigal said that the report included a statement that "the following conclusions were established . . ." Four gallons of water were found in the plane's tanks at Liverpool. Before he (Mr. McGonigal) could state what he wanted proved, the Court would have to see whether it was relevant and that raised a difficulty because if the Court ruled it out, it would be embarrassing.

Mr. C. Campbell, S.C., who, with Mr. J.J.L. Devlin (instructed by Elyan Seligman and Co.) appeared for First Officer Whyte, said that he, too, was in a difficulty because he "could bark out now", but the matter might be ruled later as not relevant.

INTERIM REPORT.

H. Mr. Murnaghan said that he did not know what the position was except what he had been told in Court that morning. All he knew was that two investigators were sent over by Aer Lingus to Speke Airport, Liverpool, and that they had made an interim report to the company. Mr. McGonigal said it was the interim report he was anxious to have.

Mr. Murnaghan said he was anxious to assist the Court but he could not see how the interim report could be of assistance to the

Court. The Chairman said that according to strict rules, it would not be evidence. In the Liverpool case, the water was not found during or after a flight but after re-fuelling before a flight.

Mr. McGonigal said that it was conceivable that the four gallons of water found might not have been apparent until during the flight.

The Chairman said that he did not think he would call for the interim report or insist on getting it.

NO DIRECTION.

H. Mr. Murnaghan said he would ask Aer Lingus to put any information they had before him. When he had seen it and if he considered it of use to the Court, he would give it to the Court.

The Chairman said he would not make any direction on the matter at the moment.

Mr. McGonigal said that perhaps the most convenient thing might be for the court to sit privately for a few moments - five minutes would be enough - and whatever decision they came to could be announced publicly.

When Mr. A. O'Keefe, S.C., who, with Mr. B. Walsh (instructed by the Chief State Solicitor), who appeared for the State, raised the question whether the Court had power to sit in private.

| |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mr. McGonigal, having read the relevant section in the Act, dealing with the holding of the Inquiry, said it might not be safe to sit otherwise than in open Court. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

CHAIRMAN'S RULING.

The Chairman said he must rule against Mr. McGonigal. They were inquiring into a particular accident and had a large volume of evidence relating to that accident. He did not think they should now embark upon an inquiry into the Liverpool incident.

Mr. Murnaghan said he was anxious to assist the Court and to avoid long discussion. If it would assist the Court, he was prepared to give Mr. McGonigal what he wanted for what it was worth. He

(Mr.Murnaghan) had been handed a document which was merely the views expressed by a person sent over to Liverpool by Aer Lingus. It was only that person's views and he (Mr. Murnaghan) could not say whether it was the Company's views. He did not want it to be taken as anybody else's views.

The matter then ended, Mr. Murnaghan undertaking to supply Mr. McGonigal with a copy of the interim report.”

Relevant Points.

- A. A schedule – “Instances of Water in Fuel” - was handed into Court on behalf of Captain Hanley by Mr. McGonigal. It is not recorded in the "Documents And Exhibits Put In Evidence."
- B. **The Aer Lingus Report with four conclusions was dated February 9th, 1953, and signed by ALT Development Engineer Burke.**
- C. There is no record in the transcript of the coded, decoded or the voice transmissions played to the Court of EI-ACF to and from the Tower, removing corroboration of Starboard engine cutting first. Exhibits 18, 19, and 20 are reflected in the "Documents and Exhibits Put In Evidence" in the Verdict Report. Exhibit 57 (tape recording of Exhibit 20) is shown as being played in open court on June 1st, 1953. It actually was played on May 30th and the content is not recorded in the transcript of the evidence produced in court on either day.
- D. See 'A' above.
- E. See 'B' above.
- F. See 'B' above.
- G. See 'B' above.
- H. The aircraft was turning onto the runway from the perimeter track to take-off.

See below "Recommendations made to Airline Operators" issued as

part of the "Liverpool Police Report" completed and dated **March 5, 1953**, withheld from Captain Hanley, his Counsel, and the Board of Inquiry.

The Public Inquiry in Dublin did not commence until **May 19, 1953**.

● * * * * *

EI-ACL was a ground incident when a double engine failure occurred immediately before take off one month and a day after the EI-ACF double engine failure in the air.

* * * * *

APPENDIX X

SHELL-MEX AND B.P.LTD.,

Department: CRB

North Western Division,

Shell-BP House,

7 Oxford Road,

Manchester 1,

AER LINGUS TEORANTA

4th February, 1953.

I was advised at 10:45 a.m. on Tuesday, the 3rd instant, of the incident which had occurred to aircraft EI-ACL on Monday evening, and proceeded to Speke Airport, Liverpool, arriving at 11:30 a.m.

After receiving a brief report of the circumstances from Mr. S. H. Stevenson, the Shell B.P. Foreman at Speke, I made the following checks:-

(a) REFUELLER NO. 9822 Q

This was checked by dip stick, to which water-finding paste had been applied, and there was no trace of any water evident.

(b) MAIN UNDERGROUND STORAGE FOR 100 OCTANE FUEL.

This was checked with dip stick, to which water-finding paste had been applied, and here again there was no trace of water.

(c) I checked back on Mr. Stevenson's records and these clearly indicated that water dips on the fueller had been taken daily without fail, and water dips

on the main storage had also been taken daily, in line with 'Standing Instructions.' There was no evidence in these records that at any time had a substantial quantity of water been traced, either in the fueller or the storage.

(d) I dispatched to our laboratory at Dingle Bank Installation the sample of water handed to the Shell B.P. Foreman, Mr. Stevenson, by the Aer Lingus Engineer at 11:45 a.m., and 3/4 hour later the Shell B.P.

Chemist at that point telephoned me that the water, on test, had proved to be fresh, and not salt water.

As a result of the foregoing investigations, and after hearing statements by all Shell B.P. staff at Speke, I am confident that the water traced in the aircraft could not possibly have been delivered by Shell B.P. fueller on Monday evening, the 2nd instant. It should be pointed out that suction on the main storage is at a level of 140 gallons, i.e., 6" from the bottom of the tank, and in the compartment in the refueller, suction ceases whilst approximately 4 gallons are still left in the vehicle tank. Stocks in both the main storage and in the fueller tank were well above these levels at the time the operation of fuelling the aircraft was conducted.

During the enquiry it was disclosed that approximately 2 gallons of water were traced in each of the aircraft main fuel tanks, and it is considered to be extremely unlikely that at one fuelling it could be possible to introduce water, together with fuel, in such a manner that an equal distribution of water

between the two tanks would be effected. It is far more probable that all the water would have been put into one tank with only traces in the second tank fuelled. This confirms the view expressed that there was no possibility of water having being introduced into the aircraft fuel tanks at the time of fuelling on Monday evening, the 2nd instant.

for SHELL-MEX AND B.P. LIMITED,

JG (SIGNED) C. R. BOUSTED
Divisional Operations Manager.

CONCLUSIONS FROM AER LINGUS REPORT ON INVESTIGATION INTO
INCIDENT TO EI-ACL

Speke Airport, February 2, 1953

The following conclusions can be considered established:

1. The water found in the main tanks of aircraft EI-ACL on February 2, 1953 at Speke Airport was pumped in from the refuelling vehicle during the normal turn-around operation.
2. The security measures taken by the Shell company at Speke Airport are inadequate. Their refuelling vehicles are parked in the open in a relatively unfrequented part of the aerodrome.
3. The water elimination methods used on the refuelling vehicles are not entirely positive as proved by the test carried out after the incident to the Cambrian aircraft.
4. The method of measuring water content by using a water detecting paste on the dipstick is not satisfactory unless an absolutely level parking place is available for the vehicle.

The following points arise from observations made during this investigation and are included for general interest:

1. No ladder is available to the crews fuelling Aer Lingus aircraft at Speke. They accordingly mount the wing by climbing over the trailing edge – hardly good practice.
2. The checking of the fuel tank drains for water might well be included in the pre-flight check as this is the only positive method of ensuring that no water is present.

Signed: C.G. Bourke

February 9, 1953.

Recommendations made to Airline Operators: See H above.

At the outset, it appeared to me that some system of testing all aircraft fuel tank drain-cocks for water contamination, particularly after refuelling and immediately preceding take-off of the machines, was not only desirable, but essential in the interest of safety. I therefore made enquiries with a view to establishing if there were any rules that such systematic 'pre-flight' drain tests should be made to Aer Lingus or BEA machines at Speke. I learned that there was no such rule.

I pointed out to senior representatives of the organisations with whom I conferred concerning these cases, that had such a rule been in force and been complied with, Aircraft EI-ACL would never have left the Speke Customs Area, as the water in her fuel tanks would have been discovered before the engines had been started. I also pointed out that if it were made a standard practice by Aircraft operating 'pre-flight' water test done on the fuel tanks of all machines, the possibility of water reaching the fuel pipe-lines and carburettors during the actual take-off of the aircraft and the almost certain disastrous results which would ensue, would be averted entirely.

I therefore suggested to the authorities referred to at end of preceding page that instructions should be given without delay and that all aircraft should always be subject to a water drain-off test or, in the case of De Havilland

machines, to a water dip test, (a) after refuelling and (b) immediately prior to flying. This suggestion was agreed to and I understand, instructions were issued immediately for such water tests to be carried out by the BEA and ALT (Aer Lingus Teoranta) Engineers on all aircraft under their control or supervision.

* * * * *

CHANGE IN AER LINGUS OPERATIONAL PROCEDURE.

BRIEFING NOTICE TO FIRST OFFICERS

FEBRUARY 9, 1953.

A Briefing Notice was issued on the above date to First Officers making it "their duty to carry a bottle for the purpose of testing for water pending the conclusion of tests to ensure the ability of refuelling equipment to resist passage of water into aircraft tanks pump drains. Pump drains must be checked prior to every departure."

* * * * *