

'Mystery Bomber'

A Project for OMRS Convention 2020

by Chris Bacon

OMRS No 1097

The medals awarded to William Thornton are:

- The 1939-45 Star
- The Atlantic Star
- The Arctic Star
- The 1939-45 War Medal



The Arctic Star was issued to the family of William Thornton in 2015. The medal depicted is a copy included to display his full medal entitlement.

Introduction

Research on the project started in 2009 with the acquisition of the medals and ephemera of William Henry Thornton 2nd Hand of His Majesty's Trawler Chiltern. By 2015 I had sufficient research to present at the OMRS Convention 2016 in an Exhibit titled 'A SHOT IN THE DARK'.

Since then I have undertaken more research which has enabled me to resolve a number of incomplete aspects of the project, particularly on the course of events and offering an identity of the 'Mystery Bomber'.

Acknowledgments

I wish to record and thank the following who have freely given permission to use their documents for this Exhibit:

Chris Goss for his help and advice

For the use of documents from their respective archives,

Imperial War Museum

Met Office UK

The National Archives

UK Hydrographic Office whose Charts are:

'© Crown Copyright and/or database rights. Reproduced by permission of the Controller of Her Majesty's Stationery Office and the UK Hydrographic Office (<https://www.gov.uk/government/organisations/uk-hydrographic-office>).' (Pages 5, 11, 15 and 19 refer).

I also recognise and greatly appreciate the willing assistance given by:

Mrs Margaret Jefferies, daughter of the late William Thornton.

The late Mr Bill and Mrs Freda Brokenshaw of New Zealand.

Bill Brokenshaw was probably the last living witness of the events off Lamorna Cove on 28 May 1941.

My friend Jim Kemp.

Special Notice

As a condition of the licence to publish given by the Hydrographic Office UK, I am required to ensure that the images of the marine charts (Pages 5, 11, 15 and 19) are not downloaded or otherwise copied.

The co-operation of Members is earnestly enjoined to assist me in complying with this condition.

Contents

Key to Principal locations mentioned in this Exhibit

Part 1 - 'Mystery Bomber' - The course of the aerial research is explained and illustrated

Part 2 - HMT Chiltern - The events and the premises for identifying the 'Mystery Bomber' are explained

Part 3 - Meteorology - The importance of the weather data to the project is explained

Part 4 - *Armbandkompaß 39*, (Wrist Compass 39) -The wrist compass is described and illustrated

Part 5 - Dinghy Emergency Transmitters – *Notsendergerät 2*, T1333 and SCR 578 Description with photographs,
Air Ministry evaluation report of a captured NS2 transmitter dated June 1941

Postscript

Note:

For brevity and ease of expression German aircraft are referred to by its Vervandskennzeichen (unit code)

For example Junkers 88 A5 4T+KK is expressed as *4T+KK*

Key to Principal Locations Mentioned in this Exhibit

On 27 May 1947
66 Squadron RAF
intercepts two
Heinkel 111s, in
this area

HMT Chiltern's
anchorage is at
Mousehole, here

On 28 May 1941
HMT Chiltern
shoots down a
German bomber
off Lamorna Cove,
in this area, here

On 30 July 1941 the
body of Uffz Walter
Müller is found on
Tregardock beach, here

K. Fl. Gr. 606 is
based at Lannion
in Brittany, here

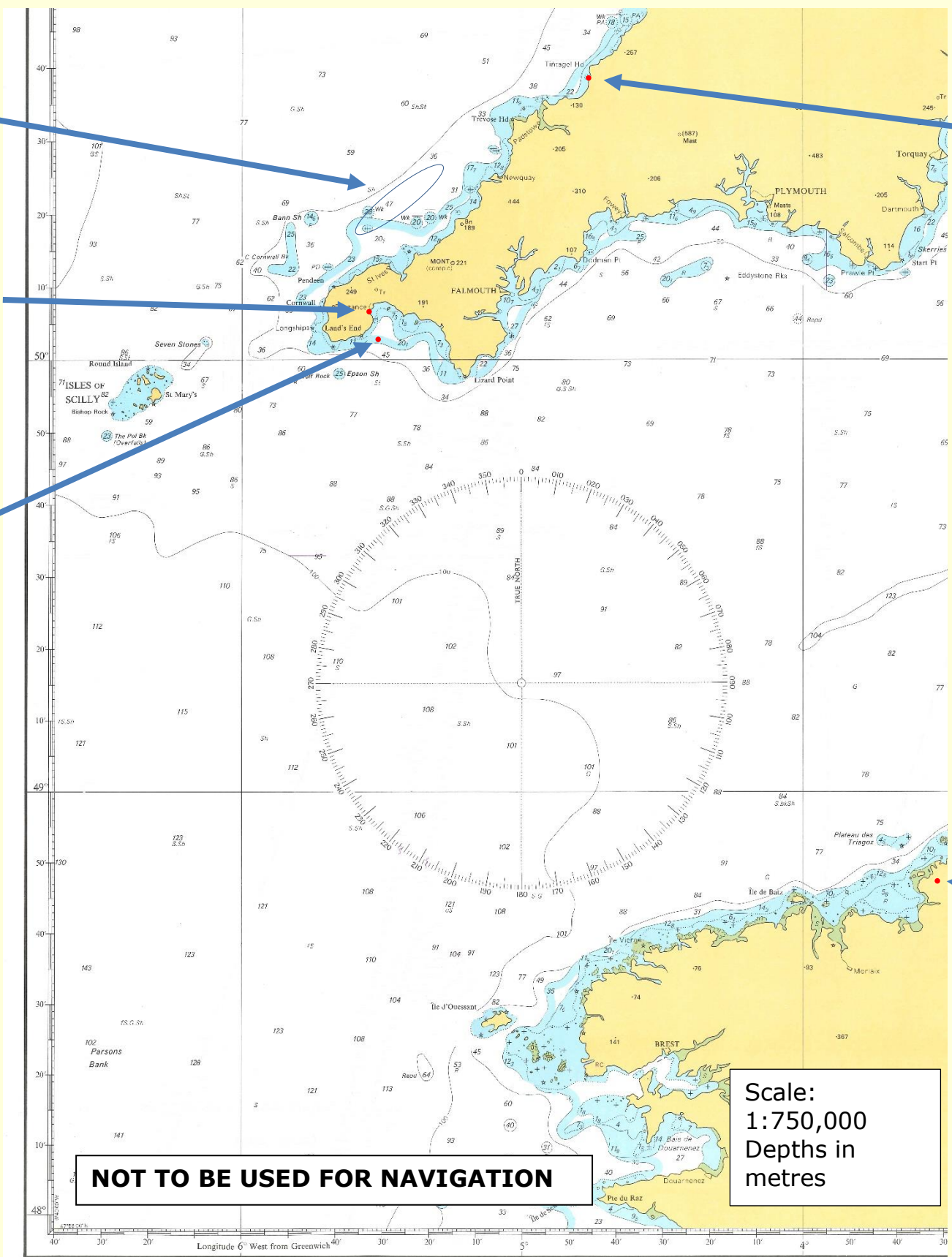


Fig. 1 Principal locations mentioned in Exhibit text

Part 1 'Mystery Bomber'

During May 1941 one of the turning points of the Battle of the Atlantic was being played out as the crippled German battleship *Bismarck*, pride of the *Kriegsmarine*, was hunted to destruction. The Germans lacked the means to assist her. The U-boats were operating too far away, and the Luftwaffe in France had been progressively drawn away to the east for the Russian offensive now less than a month away. The Luftwaffe's main presence comprised a few maritime attack, and weather reconnaissance squadrons.

One of these maritime attack units was *Küstenfliegergruppe 606*¹ (*K. Fl. Gr 606*) based at Lannion in Brittany. In May 1941 it had only about 15 or 16 aircraft on its inventory.

As May 1941 drew to a close the loss of the *Bismarck* became inevitable. In retaliation the Luftwaffe was ordered to make maximum effort to find British capital ships. The latter part of May saw a great deal of aerial activity over southern and south-west England. During these sorties there were a number of minor encounters between the opposing sides.

One such encounter occurred off Lamorna Cove in Mount's Bay, Cornwall on 28 May 1941, which concluded with HM Trawler *Chiltern* shot down an unidentified German bomber.

When I last looked at the project in 2016, I had not resolved satisfactorily the identity of this 'Mystery Bomber' so for OMRS Convention 2020 I tackled the aerial part of this air-sea project. Among my first questions were;

"What type was the aircraft?" "What was the aircraft's unit?" "Who were the crew?"

I thought it may be possible to identify the aircraft, and its unit but was doubtful that the crew could be identified

This Exhibit sets out to provide answers to these questions through the medium of the principal sources.

¹ The Unit designation *Küstenfliegergruppe 606* (*K. Fl. Gr 606*) and *Kampfgruppe 606* (*KG 606*) are interchangeable. Established initially as a Naval Flying Squadron *K. Fl. Gr 606* trained as a land based anti-merchant shipping bomber Squadron on the Naval establishment. Operationally *K. Fl. Gr 606* came under the operational control of the *Luftwaffe* in which it was known as *KG 606*. Confusingly in the *Luftwaffe* Loss Returns the *K. Fl. Gr 606* occurrences were submitted by *Flugführer Atlantik* - a naval command hence the loss is recorded as *K. Fl. Gr 606*. During 1942 the unit transferred to the Mediterranean Theatre, losing its naval connections. From then on the unit was known by its *Luftwaffe* designation, *KG 606*.

Starting Point

My starting point was the Special Order of the day issued by Commander-in-Chief Plymouth Command specially commending three members of Chiltern's crew for their actions in the encounter.

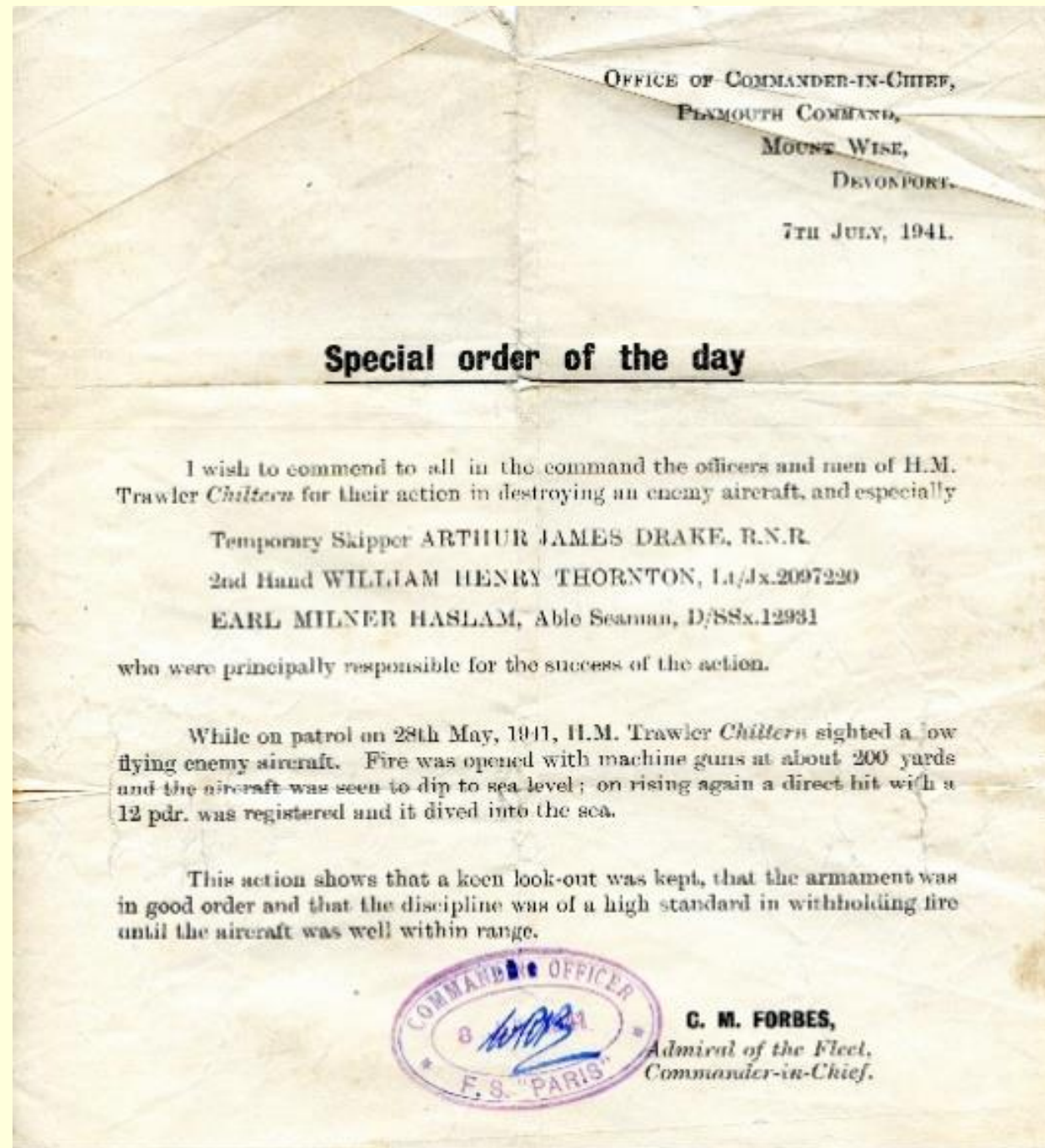


Fig. 2 The Special Order of the Day that was the starting point for the research.

I was unfamiliar with sources of aviation records so an early recourse was to look for an on-line specialist forum. The response was prompt; nobody knew of a German loss in Mount's Bay, Cornwall on 28 May 1941.

A respondent suggested that this date may be an error for 27 May when, between 22.30-23.50 hours, over St Ives Bay, Cornwall two Spitfires of 66 Squadron RAF (Red 1 Pilot Officer John Pickering and Red 2 Pilot Officer Peter Olver) intercepted two Heinkel 111 of *Kampfgeschwader 55 (KG 55)*. Red 1 shot down one Heinkel and Red 2 badly damaged the second, which from the ground was last seen wheels down losing height, making for France.

This combat is well documented in British sources. The combat reports of the Spitfires are in the National Archives.

For my purposes in Red 2's 'probable' I felt that I had a likely candidate for Chiltern's aircraft.

Imagine my surprise when on consulting the Luftwaffe's Official Loss Returns² I discovered that whilst Red 2's 'probable' had been ditched in the English Channel all the crew had been rescued.

² Imperial War Museum Document. 11928 'Microfilm copies of the Official Aircraft Loss Returns maintained by the General Staff of the Luftwaffe between September 1939-April 1945'. This report was an important working document, *Reichsmarschall* Herman Goering headed the list of addresses of the report.

66 Squadron RAF Combat Report by Pilot Officer Peter Olver (Red 2) 27 May 1941

Credit: TNA AIR 50/26

This Report records the encounter of Pilot Officer Peter Olver 66 Squadron RAF with two Heinkel 111 of KG 55. Olver's handwriting is difficult to read so a transcription is provided. Although the date of the action (27 May 1941) is different to the date of Chiltern's encounter (28 May 1941) at the start of the research this combat report was the only one identified as occurring in the relevant location and period.

Transcription of Combat report

Form "F"

SECRET

FIGHTER COMMAND COMBAT REPORT

To: _____

From: Sector Serial No: _____

- (A) Sector Serial No: _____
- (B) Serial No of Order detailing Flight or Squadron to patrol: _____
- (C) Date: 27/5/41
- (D) Flight: 'A' Flight Squadron No. 66
- (E) Number of Enemy Aircraft: Five (Two seen and attacked by me)
- (F) Type of Enemy Aircraft: Heinkle (sic) 111
- (G) Time attack was delivered: 2300 hrs approx (sic)
- (H) Place attack was delivered: Aprox (sic) 4 miles North West of St Ives Bay
- (J) Height of Enemy: Water level & up to 500ft
- (K) Enemy Casualties: One confirmed and one probable
- (L) Our casualties: - Aircraft - One bullet in starboard wing root
- (M) " " Personnel - Nil
- (N) (i) Searchlights (Did they illuminate enemy; if not were they in front or behind enemy?): _____
- (ii) Anti-aircraft guns (Did shells burst assist pilot in intercepting the enemy?): _____
- (P) Range at which fire was opened in each attack together with estimated length of burst:
 - (a.i.) opened at 200 yds closed at 20 yds 3 bursts
 - (a.ii.) 150 yds closed at 10 yds 1 burst
 - (b.) opened at 200 yds closed at 100 yds 2 bursts
 - (c.) 4 guns Browning armour piercing 2 guns DW¹, 2 of Ball;
 - (a.i.) 1000 rounds in 3 bursts of 333 rounds each
 - (a.ii.) 900 rounds in 1 burst
 - (b.) 500 rounds in 2 bursts

(R) General Report

At 22.50 hrs P/O Pickering Red 1 & myself Red 2 were approaching base on our return from a convoy patrol of 1 hr 30 duration when Red 1 led on to investigate shell bursts on ship off St Ives Bay. At the time I had 25 galls of petrol left only. On approaching the burning ship, we saw tracer bullets sweeping the deck but could not locate the EA due to poor visibility. Red 1 attacked on getting closer from the quarter astern on one of the 2 EA & on breaking away & climbing to port to draw the EA fire & I was able to come up to within 200 yds undetected until opened fire. Red 1 then left for EA No 2 & I broke to port at the same level (water level) as EA & then gained height and made a head on attack diving from 500 ft. There was no return fire from the front & none followed from the rear. I then flew level after EA No 2. I located him by his fire on Red 1 who had broken away by the time of my arrival & I was again able to get in unobserved until I opened fire. Before my attack he jettisoned his bombs & was travelling very slowly indeed. I attacked from the port quarter to astern & broke at 100 yds. The return fire was accurate & as I broke his wheels were down - not fully I think.

EA 1 meantime was seen to land in the sea & no one escaped before the aircraft partially sank. EA 2 was observed limping with wheels down from the ground.

Fig 3

(signed)
Peter Olver P/O

66 Squadron RAF

RAF Form 1151'

¹ **Exhibitor's Note:** DW = de Wilde; an incendiary ammunition invented by the Belgian Inventor but completely re-designed for British mass-production methods by Major C. Aubrey Dixon, Bedfordshire and Hertfordshire Regiment: Source - www.quarryhs.co.uk/BoB

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FORM "F" SECRET

FIGHTER COMMAND COMBAT REPORT.

To: _____

From: _____

(A) Sector Serial No. _____

(B) Serial No. of Order detailing Flight or Squadron to patrol: _____

(C) Date: 27/5/41

(D) Flight: 'A' Flight Squadron No. 66

(E) Number of Enemy Aircraft: Five (Two seen and attacked by me)

(F) Type of Enemy Aircraft: Heinkle 111

(G) Time attack was delivered: 2300 hrs approx

(H) Place attack was delivered: Aprox 4 miles North West of St Ives Bay

(J) Height of Enemy: Water level & up to 500ft

(K) Enemy Casualties: One confirmed and one probable

(L) Our Casualties - Aircraft: One bullet in starboard wing root.

(M) " " Personnel: Nil

(N) (i) Searchlights (Did they illuminate enemy; if not, were they in front or behind enemy?) _____

(ii) Anti-aircraft guns (Did shell bursts assist pilot in intercepting the enemy?) _____

(P) Range at which fire was opened in each attack on the enemy, together with estimated length of burst: (a) opened at 200 yds closed at 20 yds 3 bursts (b) opened at 150 yds closed at 10 yds 1 burst

(R) GENERAL REPORT: (a) opened at 200 yds closed at 100 yds 2 bursts

At 22.50 hrs P/O Pickering Red 1 & myself Red 2 were approaching base on our return from a convoy patrol of 1 hr 30 duration when Red 1 led on to investigate shell bursts on ship off St Ives Bay. At the time I had 25 galls of petrol left only. On approaching the burning ship we saw tracer bullets sweeping the deck but could not locate the EA due to poor visibility. Red 1 attacked on getting closer from the quarter astern on one of the 2 EA & on breaking away & climbing to port to draw the EA fire & I was able to come up to within 200 yds undetected until opened fire. Red 1 then left for EA No 2 & I broke to port at the same level (water level) as EA & then gained height and made a head on attack diving from 500 ft. There was no return fire from the front & none followed from the rear. I then flew level after EA No 2. I located him by his fire on Red 1 who had broken away by the time of my arrival & I was again able to get in unobserved until I opened fire. Before my attack he jettisoned his bombs & was travelling very slowly indeed. I attacked from the port quarter to astern & broke at 100 yds. The return fire was accurate & as I broke his wheels were down - not fully I think.

EA 1 meantime was seen to land in the sea & no one escaped before the aircraft partially sank. EA 2 was observed limping with wheels down from the ground.

(C) 4 guns Browning armour piercing, 2 guns DW¹, 2 of Ball.

(a.i) 1000 rounds in 3 bursts of 333 rounds each

(a.ii) 900 rounds in 1 burst.

(b) 500 rounds in 2 bursts

Peter Olver P/O

R.A.F. Form 1151.

W.L. 18874-1937, 400 pads 10/10 T.S. 700

catalogue Reference AIR/50/26

Fig. 3 Combat report filed by Pilot Officer Peter Olver 66 Squadron RAF (Source: National Archives)

Loss of KG 55 Heinkel G1+AM - Luftwaffe Loss Report for 28 May 1941

In this Loss report G1+AM³ was Red 1's victory with the crew being listed as 'missing' and later confirmed dead because the bodies were recovered. The entry immediately below (*Werk Nr 2978* (no aircraft identification code recorded but subsequently identified as G1+KP)) was Red 2's 'probable victory' but it was the qualifying remark for this aircraft that had taken me aback. The aircraft had made an 'emergency landing on the sea, crew rescued by the *Seenotdienst*' (Sea Rescue Service).

Datum		Ort	Ursache	Flugzeug-Muster	Werk Nr	Bruch %	Besatzung		Verbleib	
27.5.	I. / 196	F Schlachtschiff "Bismarck"	Untergang Schlachtschiff "Bismarck"	Ar 196	0123 (T3+DL)	100	Oblt. Mühling, Josef	Siegfried B	2/1	-
				Ar 196	0150 (T3+DK)	100	Ltn. Lango, Martin	B	2/1	-
				Ar 196	0110 (T3+AK)	100	Pw. Seeliger, Werner	F	2/1	-
				Ar 196	0052 (T3+IH)	100	Ltn. Hambruch, Wolf	B	2/1	-
							Pw. Andersen, Oskar	F	2/1	-
							Ltn. Ledemann, Günter	B	2/1	-
							Uffs. Lango, Ernst	F	2/1	-
Im - Befehlshaber Mitte										
28.5.	Erg. Gr./Z.G.76	F	3 ^o 30 Min. ost Notlandung auf See (Besatzung 52 ^o 45 Min. nord durch holländische Fischer gerettet.)	Hf 110 H1	3917	100				
Unmittelbar unterstellte Verbände.										
28.5.	2. / Aufkl.Gr. Ob. d. L.	F (Glasgow)	unbekannt	Ju 88 A(F)	615 (V3+KH)	100	Ltn. Gortan, Fritz	B	2/1	-
							Uffs. Niepel, Herbert	F	2/1	-
							Uffs. Lindorfer, Josef	Hf	2/1	-
							Gefr. Matthias, Heinrich	Hf	2/1	-
Luftflotte 3										
28.5.	III./K. G. 1	(H) Fl. Fl. Kitzingen	Bauchlandung	Ju 88 A6	2386	25				
28.5.	I. / K. G. 28	F Fl. Fl. Nantes	Absturz, Aufschlagbrand und Bombenexplosion	He 111 H5	3644	100	Uffs. Trons, Josef	F	1(1)	-
							Ltn. Thiemann, Wilhelm	B	1(1)	-
							Gefr. Bender, Georg	Hf	1	-
							Gefr. Petto, Rauld	Hf	1	-
25.5.	II./K. G. 70	(H) Fl. Fl. Lüneburg	Notlandung infolge Motorbrand	Do 217 H1	5089	70				
25.5.	Stab III./K.G. 53	(H) bei Osnabrück	Notlandung infolge Motorbrand	He 111 H2	3141	65				
28.5.	II./K. G. 55	F (Bristolkanal)	unbekannt	He 111 H8	3067 (G1+AM)	100	Pw. Essel, Lorenz	F	2/1	-
							Pw. Stadel, Otto	Hf	2/1	-
							Pw. Göbel, Martin	Hf	2/1	-
							Uffs. Nuklan, Kurt	Hf	2/1	-
							Gefr. Wiederer, Josef	Hf	2/1	-
28.5.	II./K. G. 55	F (Kanal)	Notlandung auf See (Besatzung durch Seenotdienst gerettet).	He 111 P4	2978	100				
28.5.	III./K. G. 27	F (Liverpool)	unbekannt	He 111 P2	1419 (1G+GR)	100	Ltn. Binicke, Helmut	F	1(1)	-
							Uffs. Hartwich, Hans	B	1	-
							Gefr. Baron, Konrad	Hf	1	-
							Uffs. Mülhahn, Hans	Hf	1	-
28.5.	K. G. 100	F bei Er st	Trkb. schuss	He 111 H 3	3332	10	Gefr. Hahn, Wilhelm	Hf	1	-
28.5.	II./K. G. 2	F Fl. Fl. Sicpe	b. im Start ausgebrochen	Hf 109 H4	711	50				



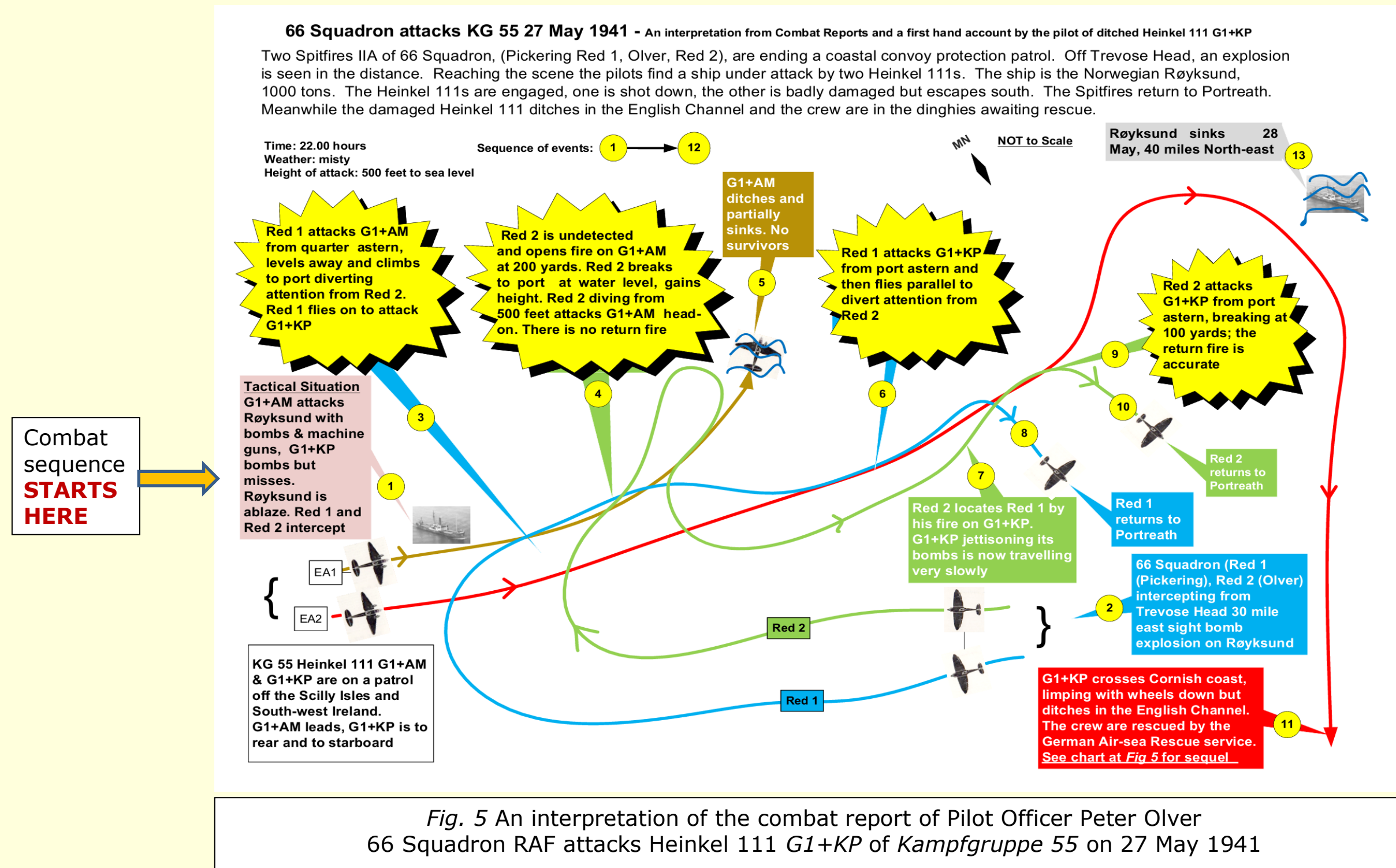
Fig. 4 The Luftwaffe Loss Report for KG 55 Heinkel G1+KP and G1+AM (source: Imperial War Museum)

Key to report entries format

Verband = Unit = II/K.G. 55. Ort (Auftrag) = Place of operation - Kanal = English Channel. Ursache = cause - emergency landing in the sea (crew rescued by Sea Rescue Service). Flugzeug-Muster = Aircraft type - He 111P4. Werk Nr = Airframe Number = 2978; Bruch % = extent of damage = 100%.

³ To identify aircraft the Germans used a numeric and alpha combination to identify the unit, and separated by+, two alphabet letters denoting the particular aircraft in the unit. In this case G1 (the *Vervandskennzeichen* (i.e. unit code)) identifies the unit as *Kampfgruppe 55* and AM is the code for this aircraft in the unit.

Needing to know more I ordered a copy of the *KG 55* unit history.⁴ Whilst awaiting the arrival of the book I amused myself by interpreting and modelling the manoeuvres of Red 2 Olver from the descriptions in the combat report (please see *Fig. 3*). The experience was instructive as an exercise in interpolation and by applying a cardinal rule of the fighter pilot of always turning to keep the opponent in sight I found that the narrative of the combat report unfolded quite easily.



⁴ 'Kampfgruppe 55 'Greif' Eine Chronik aus Dokumenten und Berichten 1937-45' (German text) by Wolfgang Dierich, Motorbuch Verlag, Stuttgart.

Kampfgeschwader 55 'Greif' includes a detailed account of the combat by the pilot of Red 2's 'probable' and reveals the Red 2's combat report was accurate. This aircraft (*Vervandskennzeichen G1+KP*) had ditched mid-Channel. As the end of the flight approached the *Bordfunker* (wireless operator) transmitted SOS calls using the aircraft's wireless. The aircraft landed without mishap on the water (Sea State 2 (Calm)). The 6 man crew took to the two life rafts. Using an emergency transmitter⁵, the *Bordfunker* sent out a homing distress signal which was acknowledged by a German wireless station in France. Soon the ditched airmen were in two-way communication using Morse code with a rescue launch of the *Seenotdienst* (Sea Rescue Service) which, with a *Luftwaffe* medical doctor on board, was speeding to the rescue. Within a few hours the crew were safely in France and celebrating the birthday of the *Luftwaffe* doctor.

The account is accompanied by photographs⁶ of the wreck of *G1+PM* floating on the sea and the crew in two inflatable dinghies.

The photographs show that the sea off the north coast of Brittany on 27 May 1941 was the lowest category in the Sea State Index, Sea State 0 – Calm - glassy).

In a later part of this story we shall see how this calm Sea State facilitated an important outcome.

So, after all, the date of Chiltern's success **was** indeed 28 May 1941 and *KG 55's* Heinkel 111 *G1+KP* was **not** Chiltern's mystery aircraft.

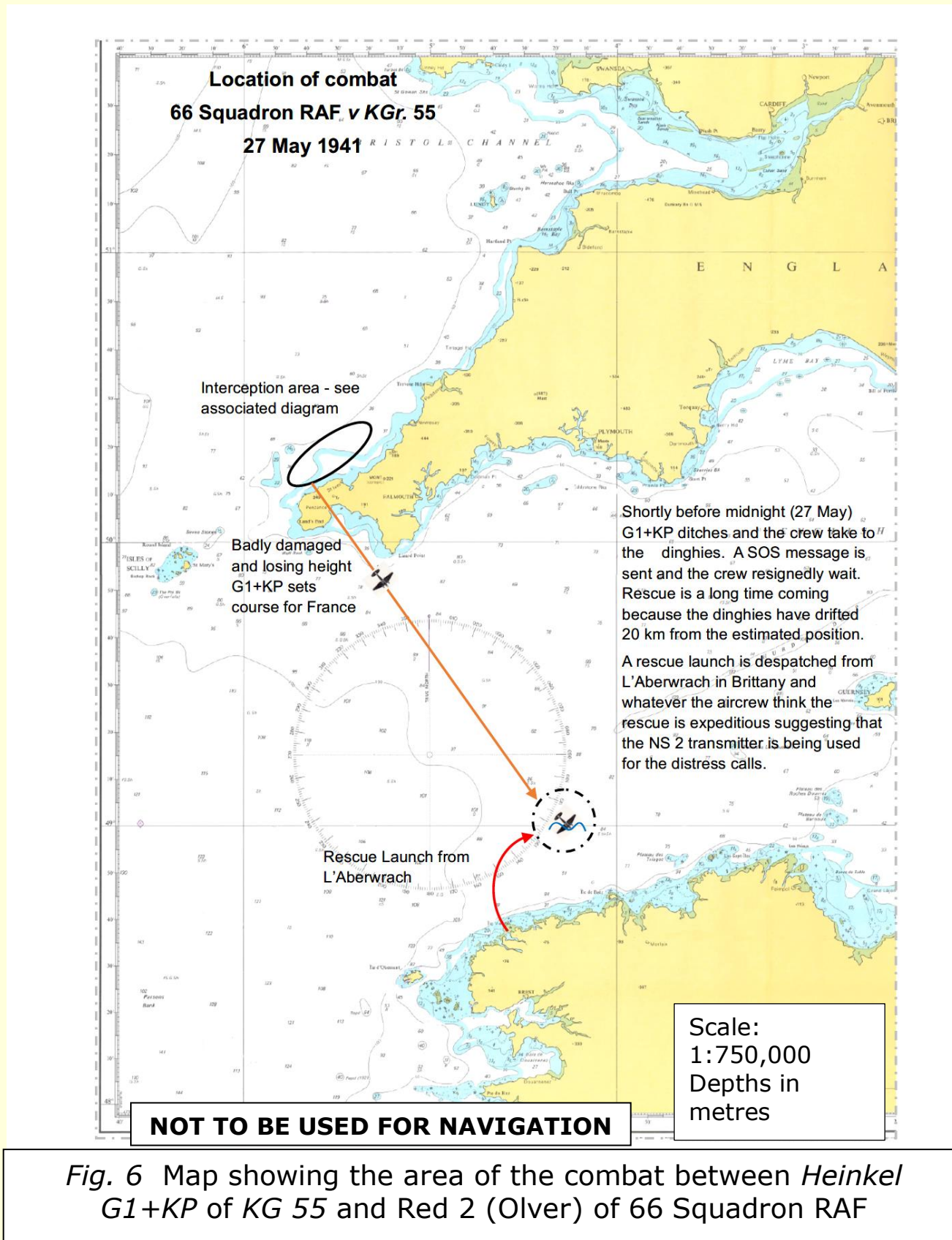


Fig. 6 Map showing the area of the combat between Heinkel G1+KP of KG 55 and Red 2 (Olver) of 66 Squadron RAF

⁵ The emergency transmitter was the NS 2, a transmitter type that features later in this Exhibit.

⁶ The publisher declined permission to use the photographs in this Exhibit.

A new beginning

I referred once more to the *Luftwaffe* Official Aircraft Loss Returns. Searching through the records and in passing I was struck by the extensive loss of aircraft and life during non-operational flying. A variety of causes were cited with pilot mishandling, fuel starvation and engine fire being frequent occurrences.

Luftwaffe losses were normally recorded on the day after the event so I was looking for aircraft lost in the *Kanal* (English Channel) area on 29 May 1941. I found four instances, each from *K. Fl. Gr. 606* based at Lannion in Brittany. The 28 May 1941 was clearly a bad night for the *Gruppe*.

The candidates were:

Aircraft No 1 Ju 88 A5 Werk Nr 8240 7T+JH K. Fl. Gr 606

This aircraft was easily discounted. This aircraft had been on a sortie in the Southampton-Portsmouth area but was stalked and shot down by a night fighter. The aircraft crashed in a disused quarry at Wellow on the Isle of Wight. All the crew were killed in the crash and had been physically accounted for. Their remains now lie in the German cemetery at Cannock Chase.

The pilot of the aircraft was Richard Manigel. The *Verbandszeichen* of Manigel's⁷ aircraft is 7T+JH.

The entry in the *Luftwaffe* Official Aircraft Loss Returns is immediately above the entry for Junkers 88 4T+KK (see Aircraft No 3 below).

Aircraft No 2 Ju 88 A5 Werk Nr 5214 K. Fl. Gr 606

This aircraft was easily discounted. The aircraft had been lost due to running out of fuel in the Rennes area. Three of the crew were killed and one injured.

⁷ The Loss report states the pilot is Manige (sic)

Aircraft No 3 Ju 88 A5 Werk Nr 5248 4T+KK 2/K. Fl. Gr 606

This aircraft was a contender as Chiltern's aircraft. The aircraft had been tasked to fly an anti-merchant shipping sortie in the area of the Scilly Isles. The aircraft was recorded as lost in the English Channel due to causes unknown. The crew were listed as missing.

The pilot was Hans-Joachim Dutz. The *Vervandskennzeichen* of the aircraft was 4T+KK; however, 4T was the code allocated to *Wettererkundungsstaffel 51 (Wekusta 51)* (weather reconnaissance squadron 51); so K. Fl. Gr. 606 was operating an aircraft that had once been on the inventory of another unit. It is possible that K. Fl. Gr. 606 was short of serviceable aircraft and under the stricture of 'maximum effort' had borrowed 4T+KK from *Wekusta 51*. Such a loan would have been ideal because the aircraft would already be fitted for extended flights over the sea.

Loss of K. Fl. Gr. 606 Junkers 88 A5 4T+KK - Luftwaffe Loss Report for 29 May 1941

Geheime Kommandoakt
H. Qu., den 31. Mai 1941

Flugzeugunfälle und Verluste bei den Verbänden

Ort	Ursache	Flugzeug-Muster	Werk-Nr. (Kenns.)	Bruch Ers. %	Dat. erf. grad.	Zu- u. Vorname	Dat. gblig. Tote	Verl.	Verm.	
1. Fliegerkorps										
St. 5. I. / J. G. 27	Bedienungsfehler	Bf 109 E7	4907	40	Er					
St. 5. IV. / E. G. 27	Fehlstart	Ho 111 P2	1414	30	Er					
St. 5. IV. / E. G. 27	Fahrwerkschaden	Ho 111 H2	5319	10						
St. 5. IV. / E. G. 27	Bruchlandung infolge techn. Mängel	Ho 111 H2	5301	15						
St. 5. III. / E. G. 55	Fahrwerkschaden	Ho 111 P2	1614	20						
St. 5. II. / E. G. 54	Unbekannt	Ju 88 A5	2351 (B5+DC)	100		Obltn. Heinrichs, Erich Obltn. Brand, Paul Ofr. Iggens, Herbert Uffz. Mandl, Herbert	F B B B		10 10 1 1	
St. 5. II. / E. G. 5	bei Alweon	Hotlandung infolge Motorschaden	Ju 88 A5	2349	45	Er	Gefr. Groß, Kurt	B	1	
St. 5. II. / E. G. 7	(Bambarnlandung)	Absturz infolge Brennstoffmangel (Besatzung abgesprungen)	Ju 88 A5	3287	100					
St. 5. II. / E. G. 11	Fl. Fl. Beauvais-Billé	Bruchlandung	Ju 88 A5	4250	75					
St. 5. III. / E. G. 26	Fl. Fl. Morlaix	Höllschaden	Bf 109 E7	7668	60					
St. 5. I. Fl. Gr. 606	(Kanal)	Unbekannt	Ju 88 A5	8240 (7T+JH)	100		Ofr. Manige, Richard Fw. Christmann, Friedr. Uffz. Wagenmeyer, Anton Uffz. Kubler, Hans	F B B B		1 1 1 1
St. 5. I. Fl. Gr. 606	(Kanal)	Unbekannt	Ju 88 A5	5248 (4T+KK)	100		Ltn. Dutz, Hans Uffz. Moller, Otto Uffz. v. Hall, Hans Uffz. Kinsiedel, Eugen	F B B B		1 1 1 1

Fig 7. Luftwaffe loss report for 7T+JH and 4T+KK (source: Imperial War Museum) For a Key to the abbreviations used, please refer to Fig. 4



Fig. 8 Lt. Hans-Joachim Dutz Pilot of 4T+KK K. Fl. Gr. 606 (source: Chris Goss)

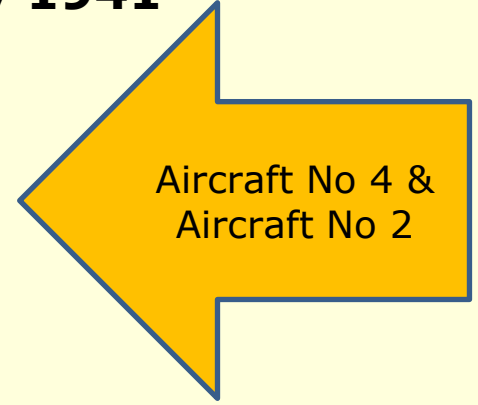
Aircraft No 1 & Aircraft No 3

Aircraft No 4 Ju 88 A5 Werk Nr 8236 7T+MH 1/K. Fl. Gr 606

This aircraft was a contender as Chiltern's aircraft. The aircraft had been tasked to fly an anti-merchant shipping sortie south-west of Ireland. Initially all the crew were posted 'missing' but the body of *Bordschütze* (air gunner) Walter Müller had been confirmed dead.⁸ This fact was inconsistent; Neither survivors nor bodies had been recovered from Chiltern's aircraft.

Loss of K. Fl. Gr. 606 Junkers 88 A5 7T+MH - Luftwaffe Loss Report for 29 May 1941

nach Luftflotte 1		- 2 -						21-5-41					
29.5.	K. Fl. Gr. 606	F (Aanl)	Unbekannt	✓ Ju 88 A5	8236 (7T+MH)	100		Ltn. Nadm, Gord	Ba	-	-	1(1)	
								Uffz. Kohn, Helmut	Bf	-	-	1	
								Uffz. Grassler, Martin	Bf	-	-	1	
								Uffz. Müller, Walter	Ba	-	-	1	
26.5.	K. Fl. Gr. 606	F bei Rennes	Absturz infolge Brennstoffmangel	✓ Ju 88 A5	5214	100		Uffz. Barth, Karl	F	1	-	1	
								Gefr. Tesche, Walter	Bf	-	-	1	
								Uffz. Schneider, Hans	Ba	-	-	1	
								Uffz. Matschorn, Hans	Ba	-	-	1	
Luftflotte 4													
27.5.	II. / I. G. 2	F (Külsches Meer)	Absturz infolge Motorschaden	✓ He 60	folgt (D1+EX)	100		Ltn. v. Pander, Sebast.	B	-	-	1	
								Pw. Wetzig, Karl	F	-	-	1	
27.5.	III. / K. G. 3	⊕ bei Krakau	Notlandung infolge Motorschaden	✓ Bf 109 E1	3586	20							
27.5.	III. / K. G. 2	F bei Gonen	Absturz infolge Explosion	✓ Do 17	3407 (U5+ET)	100		Ltn. Haberland, Rudolf	F	-	-	1(1)	
								Gefr. Kalinke, Alfred	Ba	-	-	1	
								Ogfr. Wagner, Georg	Bf	-	-	1	
								Gefr. Schiff, Helmut	Ba	-	-	1	
21.5.	I. / I. G. 2	F bei Kryani	Notlandung infolge Brennstoffmangel	✓ Do 17	3494	100							
25.5.	III. / K. G. 2	F Ostol	Bruchlandung	✓ Do 17	3488	25							
25.5.	III. / K. G. 2	⊕ Schlad	Kollisionschaden	✓ Do 17	2799	folgt							
27.5.	III. / K. G. 1	F südlich von	Flakbeschuss	✓ Ju 88	5253 (L1+EW)	100		Ltn. Freysold, Georg	F	-	-	1(1)	
								Uffz. Schmalko, Paul	B	-	-	1	
								Gefr. Schäfer, Erwin	Bf	-	-	1	
								Uffz. Kroter, Karl	Ba	-	-	1	
26.5.	II. (C) / K. G. 1	F Elensis	Fehlstart	✓ Ju 88	8231	50	Er						
27.5.	I. (C) / L. G. 1	⊕ Elensis	Techn. Störungen	✓ Ju 88	4221	30							
26.5.	II. / L. G. 26	F Argos	Bruchlandung	✓ Bf 110	4280	60							
25.5.	II. / L. G. 26	F Argos	Motorschaden	✓ Bf 110	3839	45							
20.5.	II. / L. G. 26	F bei Krotz	Notlandung auf See	✓ Bf 110	4340	100							
18.5.	II. / L. G. 26	F bei Insel Spotsand	Absturz infolge Flaktruffer (Besatzung zurückgekehrt)	✓ Bf 110	4285	100		Ltn. Knecht, Heinz	F	-	-	1(1)	
18.5.	II. / L. G. 26	F südlich von	Notlandung infolge Flakbeschuss	✓ Bf 110	3667	30							
28.5.	III. / K. G. 3	⊕ Fl. 7. Elbing	Fehlstartschaden	✓ Bf 109 E1	6588	30	Er						



Aircraft No 4 & Aircraft No 2

Fig 9. Luftwaffe loss report for Aircraft No 4 7T+MH (and Aircraft No 2 Werk Nr 5214 (lost at Rennes)) (source: Imperial War Museum)
For a Key to the abbreviations used, please refer to Fig. 4

⁸ Note: In the entry for Walter Müller, the notation under *Vermissten* has been crossed out and the entry under *Todt* has been amended. On 31 July 1941 Walter Müller's remains had been found on the beach at Tregardock. On 6 August 1941 he was buried at Lanteglos Church in the parish of St Teath. In 1962 he was re-buried in the German cemetery at Cannock Chase.

A Conundrum

I now had a conundrum to solve; which of 4T+KK and 7T+MH was shot down by Chiltern? The only difference in the information on the two aircraft was that Walter Müller's death had been confirmed by the discovery of his corpse on Tregardock beach, 10 miles east of Padstow, on 30 July 1941.

I sought corroborating information on the recovery of Walter Müller, but could only find his Death Certificate (cause of death 'War operations') and his burial in Lanteglos Church cemetery, St Teath.^{9, 10}

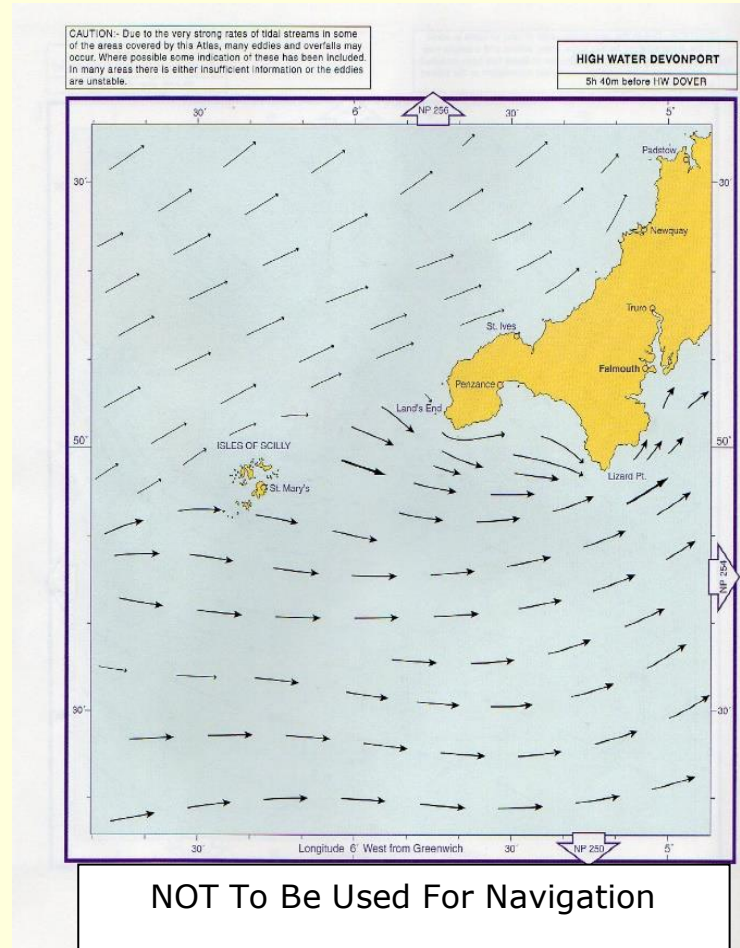


Fig. 10 Tidal Stream Falmouth to Padstow including the Isles of Scilly (tidal flow data removed)

So, the challenge was establishing whether Walter Müller's corpse could have emerged from the aircraft wreck off Lamorna Cove, floated around Land's End and up the coast to Tregardock beach in an interval of 2 months? This was a drift distance of about 90 miles plus extra distance caused by tidal ebb and flow.

A look at the flows of the sea currents was called for.

The prevailing current in the Western approaches is the Gulf Stream originating in the Gulf of Mexico. This massive Stream flows in a north-easterly direction until it reaches the coasts of south-west Ireland, south west of England and the north-west France. Encountering Ireland, the Stream is forced to the west around the Irish west coast or east and then north into St George's Channel and the Irish Sea. A stub current heads towards the Bristol Channel until the flow is turned back westwards along the coasts of Somerset, north Devon and north Cornwall. To the south, encountering Land's End, the Stream flows into the western mouth of the English Channel where it is pinched between the south coast of England and the Cotentin peninsula of France. In this part of the English Channel the current flow is extremely complex.

⁹ The police and Coroner's records have not survived.

¹⁰ Commenting on the lack of a newspaper report a local historian ventured that there was considerable anti-German feeling in the area and the funeral may have been kept low-key for fear of desecration of the grave.

From the tidal information it seemed unlikely that Müller's corpse could have originated in Mount's Bay but as a final attempt I sought local knowledge.

A contact living in Penzance¹¹ on my behalf enquired of local boatmen, about the likelihood of a body drifting from Mount's Bay on Cornwall's south coast to Tregardock beach on the north coast.

His response was,

"... I have spoken to local (Penzance) boatmen and the consensus is that the body found on the north coast is most unlikely to have originated in Mount's Bay. Bodies apparently are usually found further along the south coast to the east (sometimes months later and hundreds of miles to the east). ..."

With this informed advice I was content.

¹¹ The contact is a member of the Cornwall and Isles of Scilly Maritime Archaeology Society.

Part 2 HMT Chiltern

We can now turn our attention to events on the surface.

28 May 1941 Penzance Bay Cornwall 2325 hours After a long day on patrol, Her Majesty's Trawler Chiltern of the Royal Naval Patrol Service (RNPS) is on passage back to her anchorage at Mousehole.

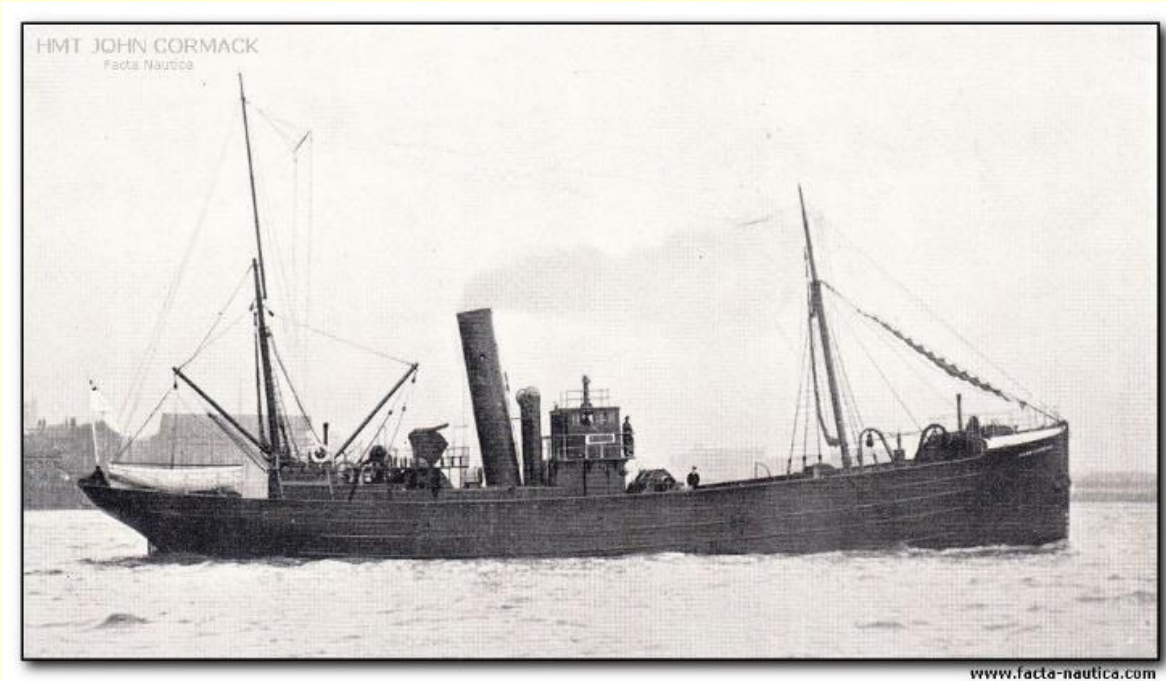


Fig. 11 HMT John Cormack c 1919, (Vessel named after John Cormack (Cormick), Bosun's Mate – HMS Victory) re-commissioned (1940) as HMT Chiltern.

(Source: Bosun's Watch)

Chiltern appears to be alone in the expanse of the bay. The air raid precaution blackout is effective. To the west, dimly visible is the mass of the coast around Lamorna Cove. To the east further away lies the coast of The Lizard peninsula. On the meteorology visibility scale, visibility is Code 8 i.e. not more than 31 miles. The sea is State 2 - calm and the wind light, the cloud base 1500 feet, just enough for the fading rays of the setting sun to relieve the gloom.

To enable the crew to savour the fine evening Chiltern is off her authorised route to Mousehole and steaming a wide 'race-track course' to delay the time of arrival. The crew know that after reporting and replenishing, the ship will be ordered to sea again.

The day just passing has been as uneventful as so many others before in the recent past. For the past three months Chiltern's task has been to patrol the coastline of Devon and

Cornwall. It has been wearisome, enlivened only by the occasional sighting of mines that have detached from their moorings and are now free floating. Forty-seven mines had been exploded usually with the ship's machine guns, which were two Hotchkiss machine guns or occasionally the 'main armament', a single shot, High Angle (for anti-aircraft) 12 pdr gun. All the weapons are obsolete and date from the First World War.

Aboard Chiltern all hands are on Watch or at Action Stations. The tranquillity belies the reality of the circumstances. At night the skies of Devon and Cornwall are the domain of marauding *Luftwaffe* bombers on seek and strike patrols against shipping. Mount's Bay is a favourite haunt for the enemy. The anchorage at Mousehole

sometimes offers shipping targets, and the distinctive coastline and town of Mount's Bay provides excellent features for obtaining a pinpoint ground position prior to setting course for airfields in northern Brittany.

Chiltern's vigilance is about to be rewarded. The time is 2325 hours. At the head of the Bay the defences around Penzance are in action as a German aircraft overflies. Unbeknown to Chiltern's crew at the time, the *Bordschütze* on German aircraft is using his machine gun indiscriminately on the houses on Penzance but without causing damage; (at least until it next rained!).

Over the ship's stern, coming from the north, Chiltern's crew see the shape of a fast approaching aircraft. The aircraft type is indistinguishable. It matters not; the gunners of the Royal Navy treat all aircraft, friend or foe equally, with deep rooted suspicion. Naval gunners shoot first and answer the questions later.

The Germans were actively looking for shipping targets and in the clear visibility the Germans have seen Chiltern. Their approach was the first stage of the well-tried tactic of a low-level machine gun attack to create confusion amongst the ship's crew as a precursor to a low-level bombing attack.

The confidence of the Germans was misplaced. The Penzance defences had drawn Chiltern's attention. The act of gratuitous aggression over Penzance a few minutes earlier was the German's undoing. The aircraft crew had also picked the wrong target for this attack tactic, Chiltern's crew was well-drilled and experienced.¹²

Still unidentified¹³, the German aircraft was heading directly for the ship. Chiltern's gunners hold fire until the range is 200 yards. "SHOOT". The machine guns spray the nose of the aircraft. The aircraft dips to the sea but is recovered. A 12 pdr shell hits the cockpit. This time there is no recovery. The aircraft hits the water surface and, although floating, is clearly settling. Chiltern, closing the wreck, her searchlight illuminates the scene. In the wreckage of the cockpit the aircraft's crew can be seen struggling to extricate themselves.

2nd Hand Petty Officer William Henry Thornton is a strong swimmer and stripping down goes over the side into the calm sea and swims to the wreck. Peering into the cockpit he sees that the pilot appears to be dead; others are either dead or wounded. There is nothing that he can do. The aircraft sinks, leaving its lifesaving dinghy pack on the surface. The dinghy pack was the only evidence of Chiltern's success. Thornton recovers the pack to Chiltern.

¹² In July 1940, the ship had fended off an attack by a German aircraft which had left the scene with smoke trailing from an engine.

¹³ The British appear to have made no effort to identify the aircraft type.

Course of the action

At 2325 hours on 28 May 1941 HMT Chiltern engages a German bomber off Lamorna Cove, Cornwall. The engagement is very brief and results in the destruction of the aircraft.

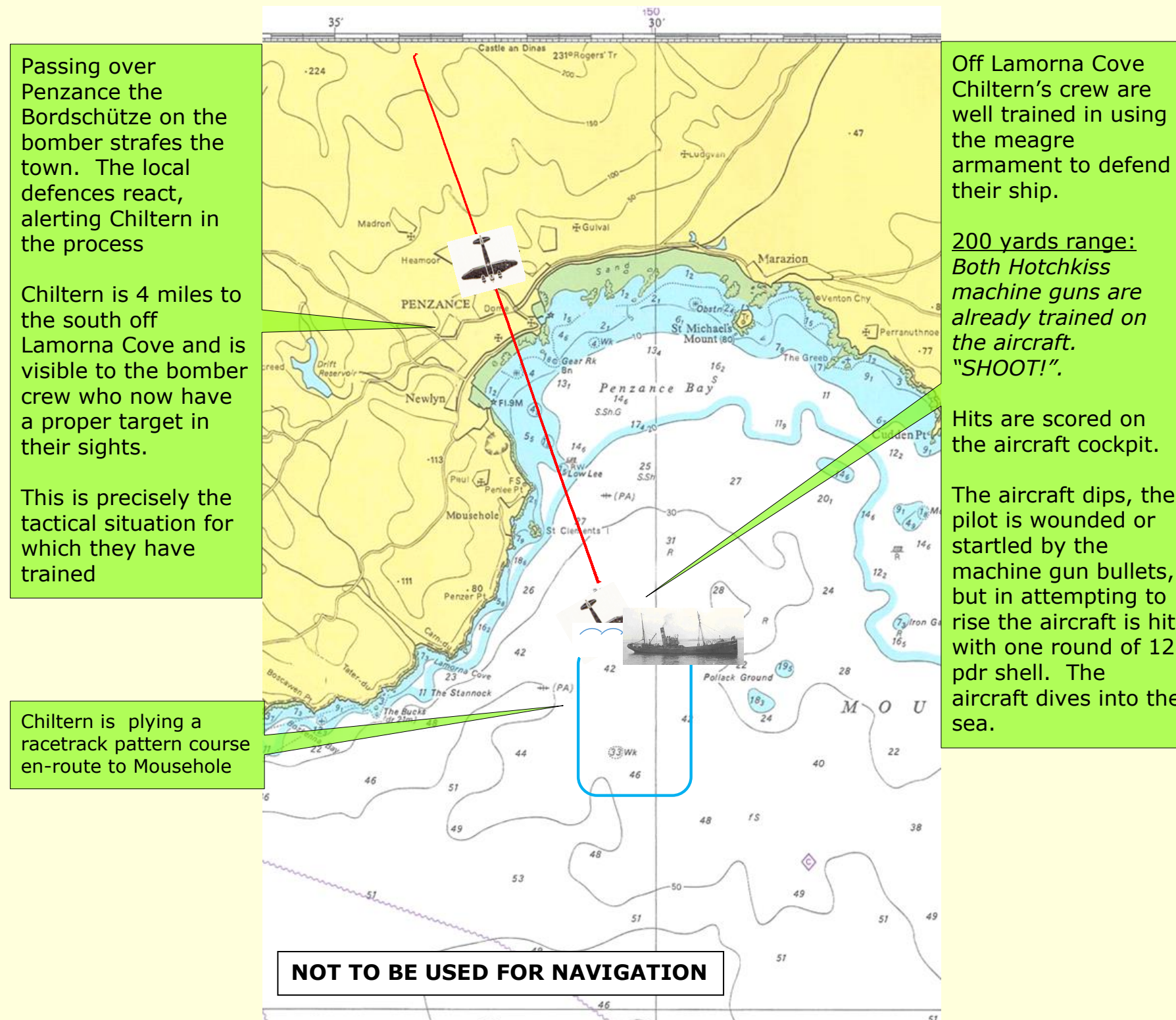


Fig. 12 The encounter between a German bomber and HMT Chiltern off Lamorna Cove on 28 May 1941

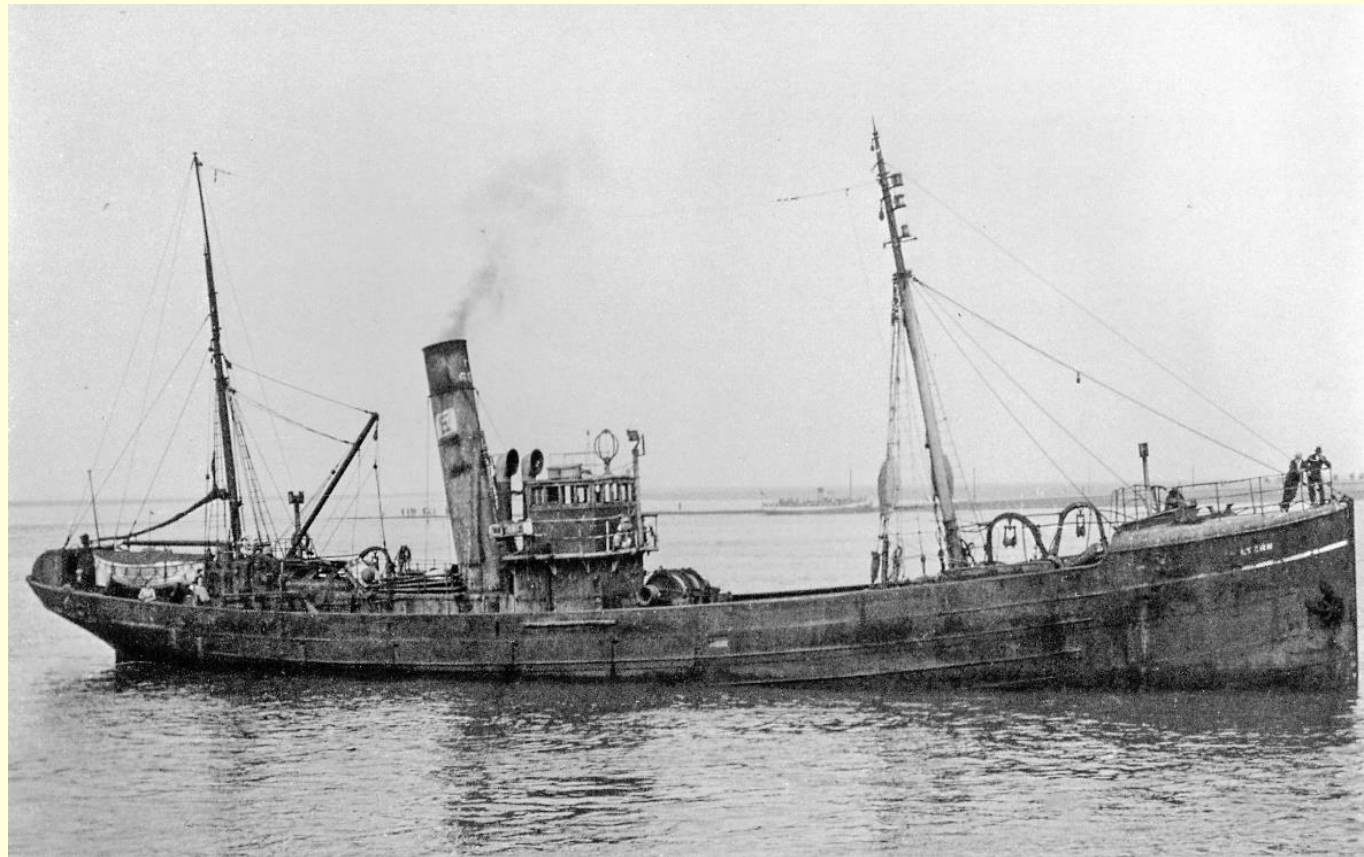


Fig. 13 HMT Chiltern.

The 12 pdr HA gun (see *Fig 14* right) was located forward of the main mast in the position of the two lifting 'A' frames

Technical Data

Admiralty Number: 3562

Official Number: 143867

Yard Number: 882

Completed: 1917

Gross Tonnage: 324

Net Tonnage: 130

Length: 138.5 ft

Breadth: 23.7 ft

Depth: 12.8 ft

Engine: 87 hp T.3-cyl and boiler by Charles D. Holmes & Co Ltd, Hull

Screw(s): Single

Built: Cochrane & Sons Ltd, Selby

Disposal: Sold (1954) for breaking to A White & Co St David's Pembrokehire



Fig. 14 Naval High-angle 12 pdr gun in the Muckleburgh Military Collection, Norfolk. HMT Chiltern had a single weapon of this type as her main armament. The gun was located forward of the main mast in the position of the two lifting 'A' frames (see *Fig 13* left)

Post-Action events

At Mousehole the dinghy pack is found to include an emergency transmitter of a new design¹⁴. The RAF take the transmitter but leave the dinghy and the remainder of its equipment with Chiltern's crew amongst whom it is distributed for souvenirs. William Thornton obtains the *Armbandkompaß*, (wrist compass).

At this point HMT Chiltern leaves our story¹⁵, but the events of 28 May 1941 were not the beginning of the war for the ship. Chiltern had already come to notice for:

- In March 1940 whilst fishing off St Kilda in company with another trawler driving off a surface attack by a U-boat (from U-boat patrol reports¹⁶ the German submarine was probably U-29).
- On 18 June 1940 under Operation Aerial (the evacuation of Allied forces and civilians from France) arriving in Plymouth from St Nazaire with 114 French men, women and children. Chiltern was the last British ship to leave before France capitulated.

Chiltern's war was to continue being arduous and full of incident.

For the remainder of 1941 the trawler plied her monotonous patrol beat. In early 1942 as a coal-burning vessel she was selected for service as a 'river boat' (i.e. communications vessel), at the British enclave in the Russian port of Murmansk. With modifications for arctic service complete Chiltern sailed for Murmansk with PQ 13 but was thwarted by weather. An attempt with PQ 14 was frustrated by grounding at Reykjavik. Chiltern arrived in Murmansk with PQ 15 in May 1942. She served at this Station for the remainder of the war.

Murmansk was an arduous commission. One event caused grim amusement for the crew. Chiltern lost her (single) screw and was tied up alongside for a considerable period. Eventually a Russian screw of vintage manufacture with the correct propeller dimensions was found. However, this screw was opposite handed to the one for which the ship had been designed. Consequently, to steam forward the ship had to be ordered to go astern, and *vice versa*.

¹⁴ The Germans have evidently only just introduced the NS 2 into service because the first example was taken by the British was from a German anchored rescue buoy (*Rettungsboje*) in the English Channel in April 1941.

¹⁵ It is a matter of speculation but had Chiltern returned earlier to Mousehole and the same events occurred then the aircraft would have crashed in shallower water closer to the coast and could have been salvaged for examination. In which case the mystery element of the Exhibit would not have arisen.

¹⁶ *Vide* Uboat.net

In 1946 Chiltern was returned to her owners and the fishing industry until 1954 when she was broken up.

Chiltern had truly been a little ship that had seen more active service than many other better known larger size Royal Navy ships.

There is an indication in the records that Skipper Drake, 2nd Hand Thornton and Able Seaman Haslam(12 pdr gunner) were recommended for awards. Such recognition would have been a great boost to the morale of the RNPS.

If recommendations were made, then they were unsuccessful. They probably had little chance of success especially when competing with the awards for the sinking of the *Bismarck*. The recommendations might have had more traction if there had been gunfire exchanges with the bomber. The crew of Chiltern (and RNPS) had to be content with the Special Order of the Day with which this Exhibit opened.

William Thornton served in Chiltern until August 1944 when he returned to Britain for Home Service. For the rest of his service he was a member of a boat crew at the Royal Navy Air Station HMS Jackdaw at Crail, Fife. He was demobilised in 1946. After the war he trained as a bricklayer. William Thornton died in Bath during October 1980 aged 80 years.



Fig. 15 The elated crew of HMT Chiltern photographed after the destruction of the German aircraft

Rear row 5th from left, William Thornton

Centre row, from left, 2nd left Earl Haslam; 3rd left, Skipper Arthur Drake; 4th left, Bill Brokenshaw

Conclusion about the identity of the 'Mystery Bomber'

I now had a sufficient concept of events and circumstances to set out premises for identifying the 'Mystery Bomber'. Key to these premises are the *Bordschützen* of the two aircraft; Walter Müller in *7T+MH* and Eugen Einseidel in *4T+KK*.

Premise 1 Under this premise Chiltern's aircraft was *4T+KK* and not *7T+MH* because:

- The mission areas of *7T+MH* and *4T+KK* were different. *7T+MH* had been tasked for the south-west of Ireland, *4T+KK* was tasked for the Scilly Isles. Except, perhaps to obtain a position fix *7T+MH* had no obvious need to be over Mount's Bay and would have had to detour to fly over it.
- The weather was good, the visibility at 240 feet (the height above sea level of the Lizard Weather station in Cornwall) was Code 8 (not exceeding 31 miles). For the trained and experienced crews of *K. Fl. Gr. 606* obtaining an abeam position fix en-route past the Scilly Isles would have been sufficient for *7T+MH* to obtain a safe and direct course for base at Lannion. Therefore detouring via Penzance was unnecessary.
- There is no evidence to suggest that *7T+MH* was anywhere near Mount's Bay.

Scenario As a result of technical mishap, fire or fuel shortage, the aircraft ditched under control in the Atlantic Ocean south-west of Ireland and Walter Müller took to the water either free-floating buoyed by his life jacket or in a life raft. If free-floating then he would have perished within a few hours; if in the life raft then he would have lingered. His remains drifted in the Gulf Stream current until washed up on Tregardock beach in late July 1941 – there are no means of knowing for how long the remains had lain on the beach before discovery.¹⁷

The view of local boatmen in Penzance is that is highly unlikely that a body from Mount's Bay would drift to the north Cornish coast.

This circumstantial evidence leads to the conclusion that Chiltern's aircraft was not *7T+MH* but *4T+KK*.

¹⁷ A crime scene investigator advised that whilst exposed flesh would have been ravaged and removed by exposure the flying overalls would have offered protection and kept the limbs and trunk together.

Premise 2 Under this premise Chiltern's aircraft was *4T+KK* and not *7T+MH* because:

The only evidence relating to Chiltern's aircraft is that there are no survivors. This is consistent with the aircraft being *4T+KK* rather than *7T+MH*.

It follows that the *Bordschütze* of *4T+KK* was trapped and contained in the wreck of the aircraft.

Scenario

After strafing Penzance, in the excellent visibility Chiltern is sighted at distance; her position may have been made more evident by a residual wake on the calm surface of the sea.

The bomber's crew remain at action stations. The aircraft had a crew of four. The *Flugzeugführer*, *Beobachter* and *Bordfunker* have fixed stations in the aircraft. Only the *Bordschütze* can move freely around the rear of the cabin, between the dorsal Stand¹⁸ and the ventral Stand in the ventral gondola.¹⁹ For an air-to-surface attack the *Bordschütze's* station is in the ventral Stand in the gondola and this is where he was when strafing Penzance, and after, as he reloaded his weapon and prepared for action against Chiltern.

When the aircraft crashed the *Bordschütze*, would have been killed instantly or trapped and drowned. His remains must lie in the wreck. Since the *Bordschütze* of *7T+MH* (Walter Müller) is accounted for the remains in the wreck of Chiltern's aircraft must be of another man.²⁰

This circumstantial evidence leads to the conclusion that Chiltern's aircraft was not *7T+MH* but *4T+KK*.

At the beginning of this Exhibit I posted the questions that I had set myself;

"What type was the aircraft?"

"What was the aircraft's unit?"

"Who were the crew?"

¹⁸ Stand (German) = gun position.

¹⁹ The ventral gondola was an insubstantial structure easily crushed on contact with a hard surface. For this reason, the gondola was unoccupied when the aircraft was taking off or landing.

²⁰ The *Bordschütze* of *4T+KK* was *Uffz Eugen Einseidel*.

I am now in a position to provide answers.

I believe, that, on the basis of the limited facts and interpreting circumstantial evidence, that the 'Mystery Bomber' was Junkers 88 A5 4T+KK of *Küstenfliegergruppe 606*. 4T+KK was crewed by:

Crew Position

- (F) Flugzeugführer (pilot)
- (Bf) Bordfunker (air wireless operator)
- (Bm) Bordmechaniker (air engineer)
- (Bs) Bordschütze (air gunner)

Mission: Attacks on merchant shipping in the area of the Scilly Isles

- Ltn Hans-Joachim Dutz (born 1918 Bremberg)
- Uffw Otto Möller (born 1918 Jzehoe/Holstein)
- Uffw Hans v Hahl (born 1914 Gelsenkirchern/Buer)
- Uffw Eugen Einseidel (born 1910 Lichtenburg)



*Fig 16 Junkers 88 of K. Fl. Gr. 606
The aircraft is 7T+M(K?) or possibly 7T+M(R?)
Source: Chris Goss*



*Fig 17 Junkers 88 of K. Fl. Gr. 606
The aircraft is 'bombed up'*



*Fig 18 Junkers 88 of KG 28 (28th Bomber Wing), KG 126
(126th Bomber Group)*

Part 3 Meteorology

Meteorology is a thread that runs through this Exhibit. The observations *metaphorically* put me on board the aircraft and on the deck of Chiltern and enabled me to draw a fuller picture of events in Mount's Bay.

In addition, for this Exhibit I undertook a piece rudimentary practical research. On 28 May 2020 the cloud and wind conditions around my home (in Wiltshire) were very similar to those reported by The Lizard weather observation station at 1 hour (i.e. 1 am) on 29 May 1941.

At 11 pm on 28 May 2020 I took myself to a nearby field to judge the light at that late hour. I was very surprised at how far I could see - at least five miles to the nearest hills. So, as Lamorna Cove is 170 miles further west and therefore sunset would be a little later I realised that Chiltern would have been aware of the bomber from the time that it was over Penzance. Equally the Chiltern's bulk could have been easily seen from the aircraft. I also realised that far from the encounter being one of chance (which had been my assumption for so long), the bomber was attacking Chiltern.

The weather records had clarified my understanding of events and paved the way to a solution to my questions.

The records that I used are the Weather Reports on the website of the Met Office, UK.²¹ The site now hosts the daily reports from 1860 to 1993. These records are recommended to any researcher studying UK events in which the weather plays a part.

The particular records that I used that in the research for this Exhibit are at *Fig 19* to *Fig 21*.

²¹ The link is: <https://www.metoffice.gov.uk/research/library-and-archive/archive-hidden-treasures/monthly-weather-reports>

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS... PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE...

VOL. 58. No. 5.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE

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MAY, 1941.—Unseasonably cold, particularly in the south.

The month was cold especially in southern districts and severe ground frosts were a notable feature of the first half of the month.

Conditions during the first ten days were mainly determined by an anticyclone, which was centred at first between Iceland and northern Norway; subsequently it moved slowly westward and on the 8th and 9th retreated south-westward.

Between the 11th and 13th a depression moved east-south-east from the north of Iceland and on the 12th minor troughs of low pressure over Scotland moving east-south-east caused slight local rain in north-Scotland and north Ireland.

A period of very unsettled weather ensued from the 22nd-27th, with heavy local rain and occasional local thunderstorms. On the 22nd a depression over Iceland and an associated trough to westward of Ireland moved south-east and on the 23rd, the centre over the Irish Sea moved north-east and subsequently north-west.

During the closing days high pressure over Iceland spread south and there was a marked rise of temperature in western and central districts of Scotland and extreme north-west England.

Pressure and Wind.—Mean pressure somewhat exceeded the average in the north of Scotland and was slightly below the average elsewhere.

Temperature.—Mean temperature was notably low, particularly in the south; the deviation from the average was as much as -4.5°F. in England, S.E. and -4.3°F. in England, E.

Over Scotland as a whole it was the coldest May since 1927 and at individual stations in the north of England, for example Wakefield and Southport, it was the coldest since 1923.

temperature for the month was very low over much of England; at Copdock, near Ipswich, 68°F. on the 21st was the lowest absolute maximum for May in the period 1902-'41.

In the west and central districts of Scotland and extreme north-west England temperature rose sharply at the end of the month and readings approaching 80°F. were recorded on the 31st.

The extremes for the month were:—(England and Wales) 78°F. at Ambleside on the 31st, 15°F. at Thetford on the 4th and 11th; (Scotland) 82°F. at Kilmarnock on the 31st, 15°F. at Fort Augustus on the 15th; (Northern Ireland) 74°F. at Aldergrove on the 31st and 27°F. at Garvagh on the 4th.

Precipitation.—The general precipitation expressed as a percentage of the average for the period 1881-1915 was 106 over England and Wales, 89 over Scotland and 90 over Northern Ireland.

The distribution was very variable and somewhat unusual. In Scotland, a large area in the west embracing the whole of the western Highlands and extending down to the Ayrshire coast had less than the average; a number of places on the east coast and in the extreme north also had less than the average.

The first part of the month was very dry and with the dry weather at the end of April numerous places experienced an absolute drought ending on one of the days from May 11th-14th.

Heavy rain fell between the 22nd and 27th. Noteworthy falls in the south of Scotland on the 23rd caused extensive flooding and serious damage to property and growing crops.

Among the heaviest falls in 24 hours were:— 22nd 2.09 in. at Douglas, Isle of Man. 23rd 4.31 in. at Preston House, near Linlithgow, 3.89 in. at Morton (Pentland Hills), 3.77 in. at Uphall, 2.33 in. at Troutbeck (Cumberland) and at Borrowdale (Cumberland) and 2.28 in. at Carlisle.

Local thunderstorms occurred on the 10th, 11th, 18th-21st, 23rd-24th and 26th-29th.

Local snow showers occurred in Scotland on the 7th, 13th, 16th and 18th. Snow or sleet was widespread in Scotland on the 14th and 15th, and in England also on the 15th.

Sunshine.—Sunshine was deficient on the whole but an excess was enjoyed locally along the western seaboard. The deficiency was marked in England, E., England, S.E. and the Midlands where the percentages of the average were only 71, 79 and 71 respectively.

Fog.—Fog occurred locally at times during the month, but chiefly from the 20th-23rd and 27th-31st. It was fairly widespread in England and south Scotland on the morning of the 31st and on the south-west coasts of England and Wales it was widespread and persistent locally on the 22nd.

Miscellaneous Phenomena.—The only observation of Aurora in Scotland was at Eskdalemuir on the night of the 15th. Solar halos were noted at Oxford on 12 days. A line squall accompanied by a heavy snow shower was reported at Bala, Merioneth, on the morning of the 15th.

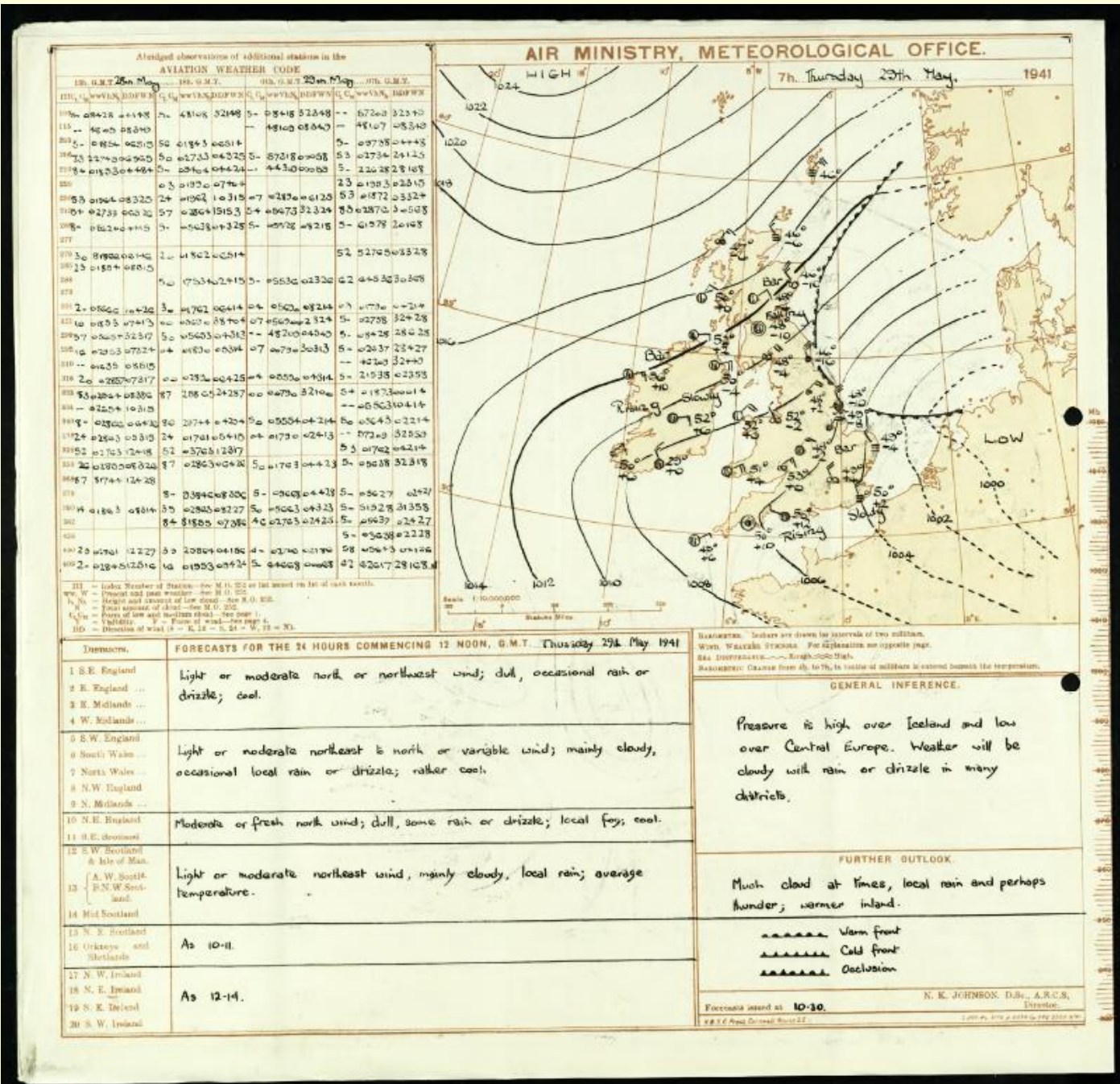


Fig. 20 Synopsis chart for the United Kingdom on 28/29 May 1941 (Information provided by the National Meteorological Library and Archive - Met Office, UK)

Fig. 19 (left) Monthly Weather Report for the United Kingdom for May 1941 - Narrative (Information provided by the National Meteorological Library and Archive - Met Office, UK)

Part 4 Armbandkompaß 39, (Wrist Compass 39)

Designed in 1939 for wear by pilots, and aircrew for use in the event of forced landings, ditching or escape and evasion situations the *Armbandkompaß 39*, (Wrist Compass 39), is worn on the wrist, like a wristwatch.



Fig. 22 Obverse of Wrist Compass

Physical Description of the compass. Diameter: 61 mm: Depth 23 mm. Moulded black Bakelite body with a clear window through which the compass rose is visible.

The compass is filled with a clear liquid and a small, carefully measured volume of air is visible as a bubble. When the compass is held horizontally the bubble just fits within the circumference of the red levelling ring. The grooved bezel can be rotated. The compass rose is marked in degrees at 10 degree intervals. The Cardinal Point North is indicated by 'N' in red, the other cardinal points are indicated in Arabic numerals in degrees from North (9, (90); 18, (180); 27 (27); intermediate points are indicated in Arabic numerals at 30 degree intervals. In the centre of the compass rose are the manufacturer's details,

'Kadlec Instrumentenfabrik Prag'.

The blackened leather wrist strap is fitted with alloy buckles and includes the extending strap that permits the compass to be worn over a bulky flying suit.

The reverse of the compass bears in engraved moulded lettering:



Fig. 23 Reverse of Wrist Compass 39

*Bauert: Kadlec
Baumuster: AK39
Werk Nr : 11070;
Anfordez.: FI 23235'*

Exhibitor's Observations In 1938 the *Reich Luftfahrt Ministerium* (RLM) (Germany's Ministry of Aviation) issues specifications for all aircraft equipment, instruments and flight accessory items and assigns a specific 'FL' - 'Fliegend/Fliegen Anforderungszeichen' (Flying/Flight, Requirement Sign)), to each type of item. The *Anforderungszeichen* for the AK 39 *Armbandkompaß* is FI 23235.

The fluid is kerosene and the quantity of fluid and the air bubble is carefully measured and inserted using a hypodermic syringe through a small hole in the body; the hole is plugged after filling.

This compass illustrated lacks the 'lubber line' seen on the few examples found on the internet, each of which bears a Werk Nr far higher (in the range 61,000-70,000), so with a Werk Nr of 11070 the illustrated compass is an early production/early war period model that is in almost mint condition: These features are consistent with the date of its capture.

Acknowledgement: Historical information from: www.germanmilitaria.com

Dinghy Emergency Transmitters – Notsendergerät 2, T1333 and SCR 578

In exploring the background to the new design emergency transmitter captured by Chiltern I glimpsed the parlous state of British air-sea rescue arrangements during the early years of the war. I also found the initial evaluation reports of the captured equipment.

The photographs in this Exhibit of the NS2 are just a few of the documents that I gathered from the National Archives. Based upon the dates of the accompanying reports the documents suggest that that some of the photographs depict the transmitter captured by Chiltern.

Britain enters hostilities with Germany with plans for air-sea rescue relying upon a handful of fast air-sea rescue launches, the Royal National Lifeboat Institute and the chance passing of merchant ships, fishing vessels. The Battle of Britain exposes the folly of this policy; many of the aircrew who land in the sea die before rescue. The aircrew lack the equipment to survive in water and even if in a dinghy they lack an emergency transmitter to communicate their plight. Not only is the loss of life grievous there is also the considerable cost and diversion of operational resources in search and rescue missions. Larger and better equipped launches are being designed but in 1941 the priority is to provide better personal survival equipment. At the forefront is the requirement for an effective emergency transmitter. The British prototype design is proving to be wholly inadequate. With a range of only 3 miles it has no future.



Fig 24 Transmitter NS2
(source: National Archives)

In contrast the Germans have a well-developed and resourced sea rescue service (*Seenotdienst*). Established in 1935 with float aircraft and fast launches, these units are now positioned in harbours along the northern coast of France. During 1940 and 1941 German sea rescue capabilities are augmented by rescue floats (*Rettungsboje*) anchored at strategic locations in the English Channel. The *Rettungsbojen* have water, food and medical supplies so that a ditched airman can survive awaiting pick-up by the *Seenotdienst*. British and German air-sea rescue services visit the *Rettungsbojen*, the former to take prisoners and the latter to recover their airmen. German aircrew have well-designed personal survival equipment and dinghies but the emergency transmitter *Notsendergerät 1* (NS1)) is far from satisfactory.

In April 1941, the British obtain a new type of emergency transmitter (the *Notsendergerät 2 (NS2)*) from a *Rettungboje*. NS2 is robust, fully buoyant and, with an aerial hoisted aloft by a kite or balloon, has a range in excess of 150 miles. The transmitter is shaped to curve inward at the centre so that an operator seated in a dinghy can hold it stationery between the thighs and turn a crank handle to drive a generator. The distress signal is produced and transmitted automatically as the crank is turned. The task is well within the capability of a cold and wet person. If a trained wireless operator is one of the survivors the transmitter can be switched so that two-way communication in Morse Code can be established.

On 28 May 1941 HMT Chiltern captures a second NS 2 set. Evaluation by Air Ministry scientists confirms that the German design is far superior to the British transmitter under development. It is decided to adopt the NS2 design and cease work on the markedly inferior British design. The British consider that the NS2 design can be improved by some modifications. The improved design enters service as Emergency Transmitter T-1333.

Britain lacks the resources to meet the RAF demand - 15,000 units. A copy transmitter is sent to the U.S. to see if that country can supply units. A U.S supplier is found and bulk production of the T-1333 is put in hand.

The U.S. military also needs an emergency transmitter and the T-1333 design is further modified by the U.S. and goes into service as the SCR 578 transmitter.

Both transmitters designs are instrumental in saving many lives during the war. The US transmitter was known colloquially as the 'Gibson Girl' in a somewhat risqué allusion to the shapely 'Gibson Girls' of the 1890s and early 1900s.²²



Fig. 25 Emergency Transmitter SCR 578 'Gibson Girl'
(source: *Wireless for the Warrior*)

²² In the 1890s Charles Dana Gibson (1867-1944) created the 'Gibson Girl', a vibrant, new feminine ideal, with an hour-glass waistline. This 'ideal' was the visual embodiment of what fashion writers of the period described as the 'New Woman'. From the 1890s until the First World War, the glamorous 'Gibson Girl' set the standard for beauty, fashion and manners.

Notsender 2 (NS2) – Images of a captured transmitter

Credit: TNA AVIA 15/837

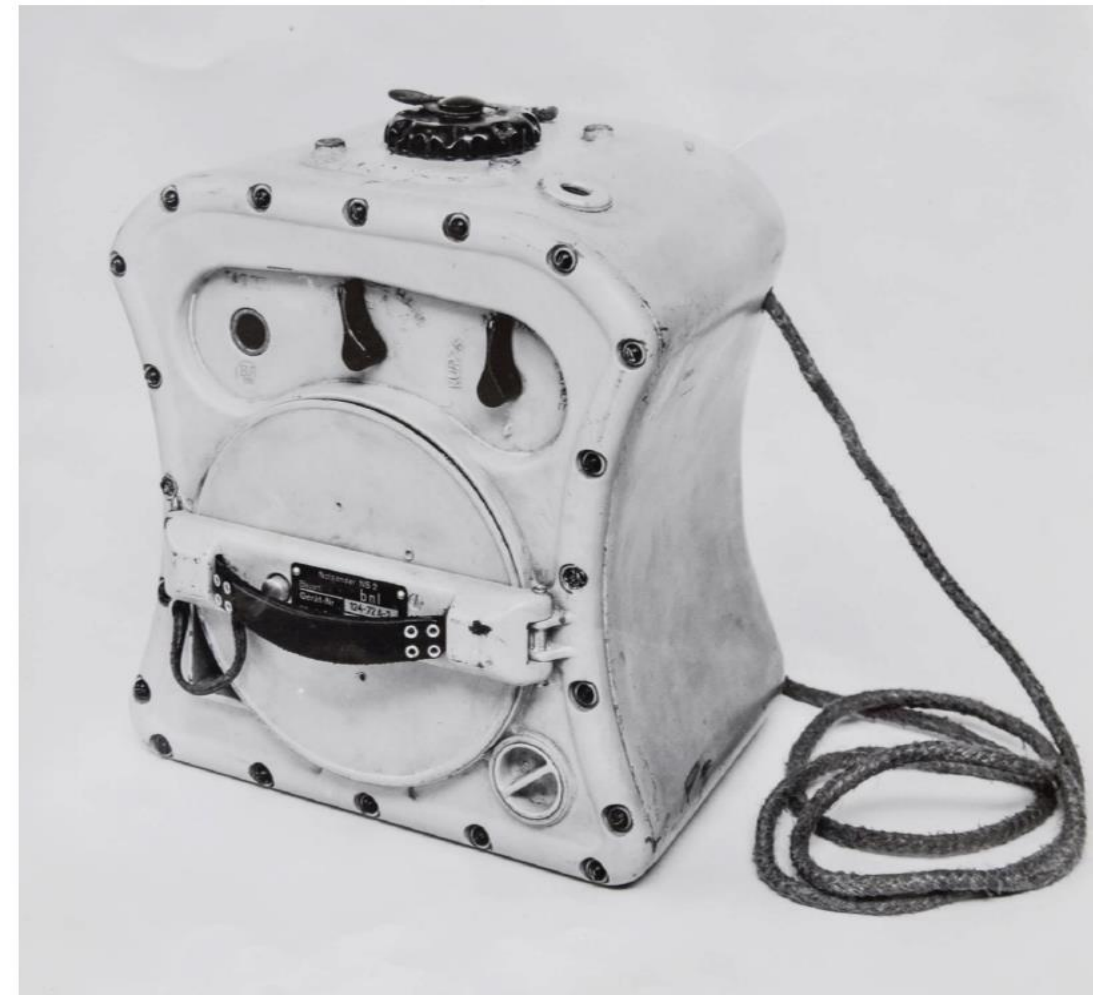
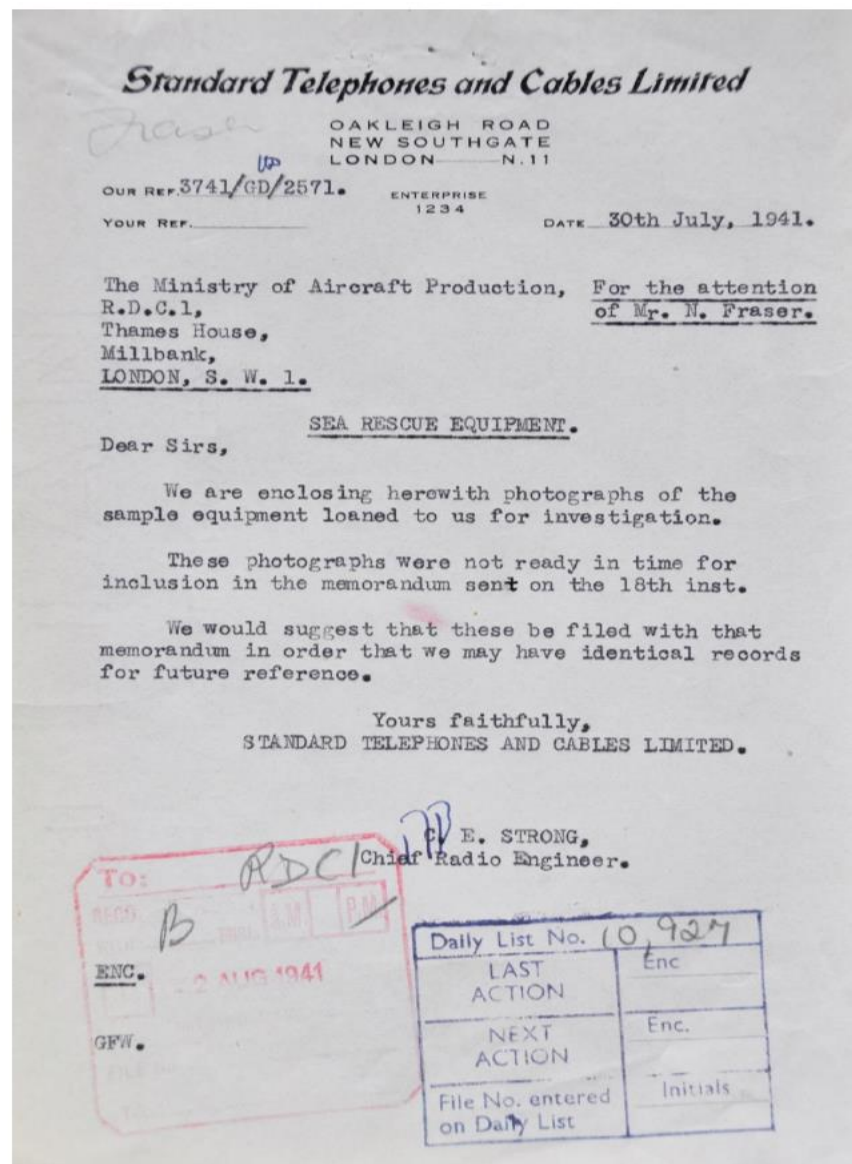


Fig. 26 Source: The National

Internal View of NS 2

NS 2 Technical Data

The transmitter was contained in two buoyant waterproof packs

Pack No 1 contains:

The transmitter and hand generator

Dimensions: approximately 11" x 10" x 7"

Weight: 15 lbs

Pack no 2 contains:

Accessories: kite, 2 x balloons 2 x hydrogen generators

Dimensions: 24" x 8" x 5"

Weight: 12 lbs

Aerial length: 200 feet (kite/balloon hoist)

Estimated range over sea: 250 miles

Estimated range over land: 120 miles

Max range over land giving good Direction Finding bearings: 120 miles but signals audible at 160 miles

The cover is removed showing the internal arrangements and the integral aerial. The crank handle is on the top.

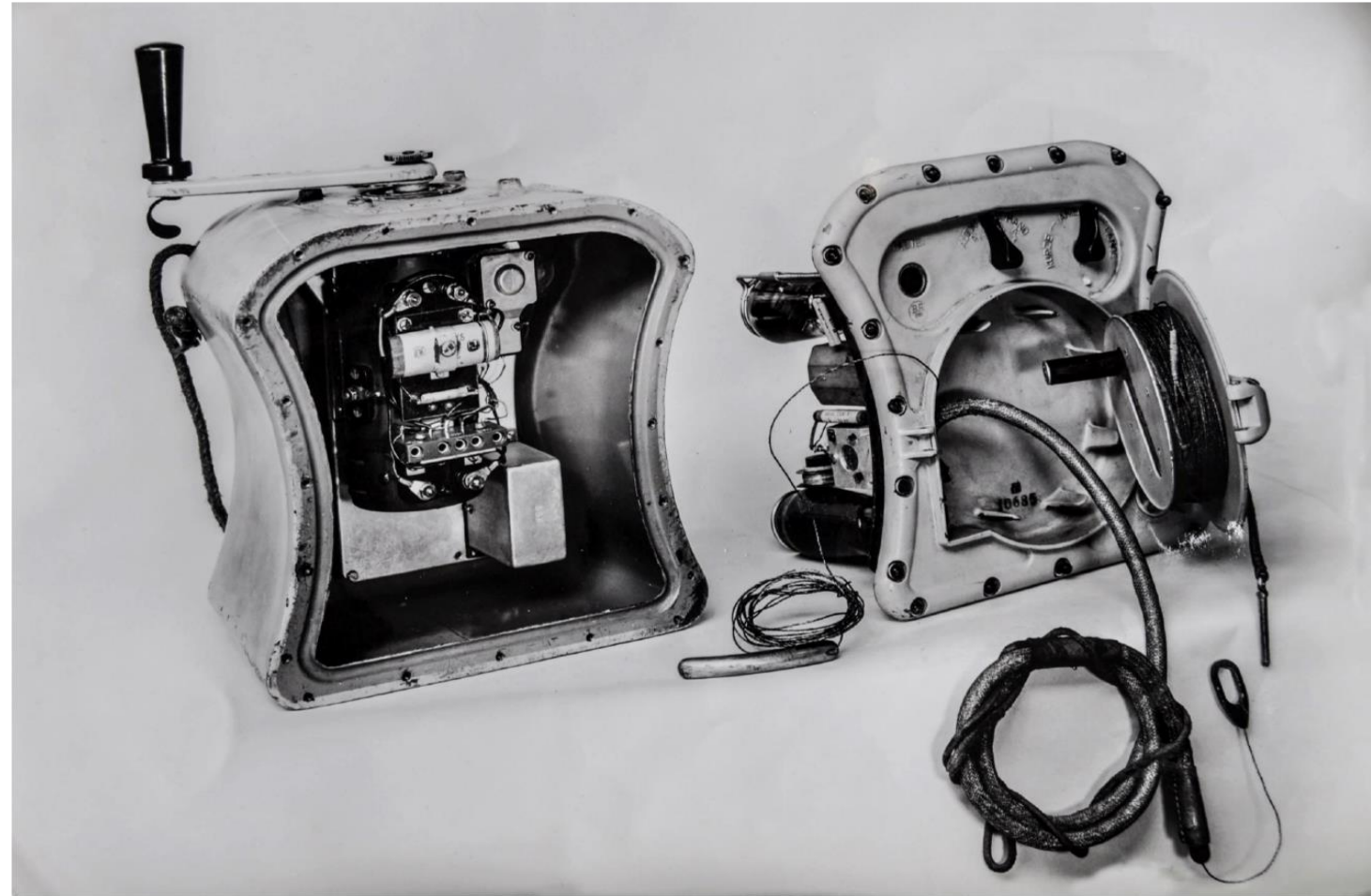


Fig. 27 Source: The National Archives

Note: Cranking the mechanism by turning a handle generated the power to send a homing signal, or the power to the transmitter/receiver for two-way communication in Morse Code. Cranking the handle was well within the capability of a cold, wet and thoroughly depressed survivor.

Internal Views of NS 2

View of reverse of cover

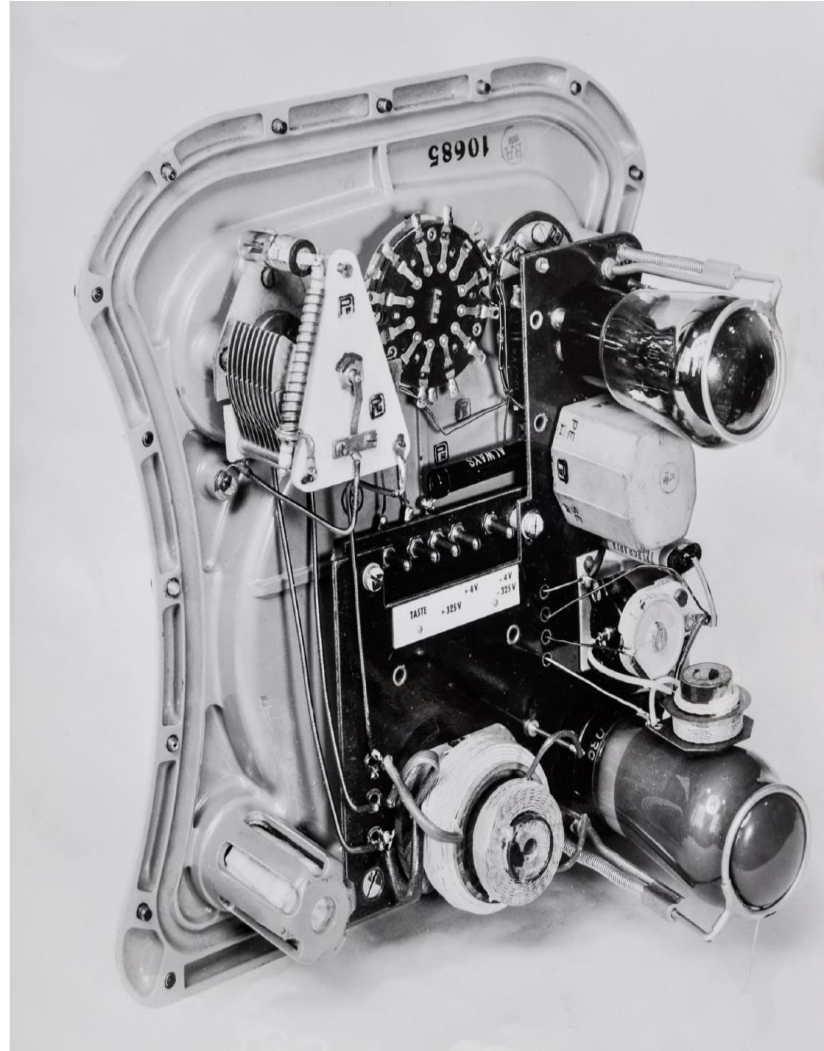


Fig. 28 Source: The National Archives

View of crank mechanism

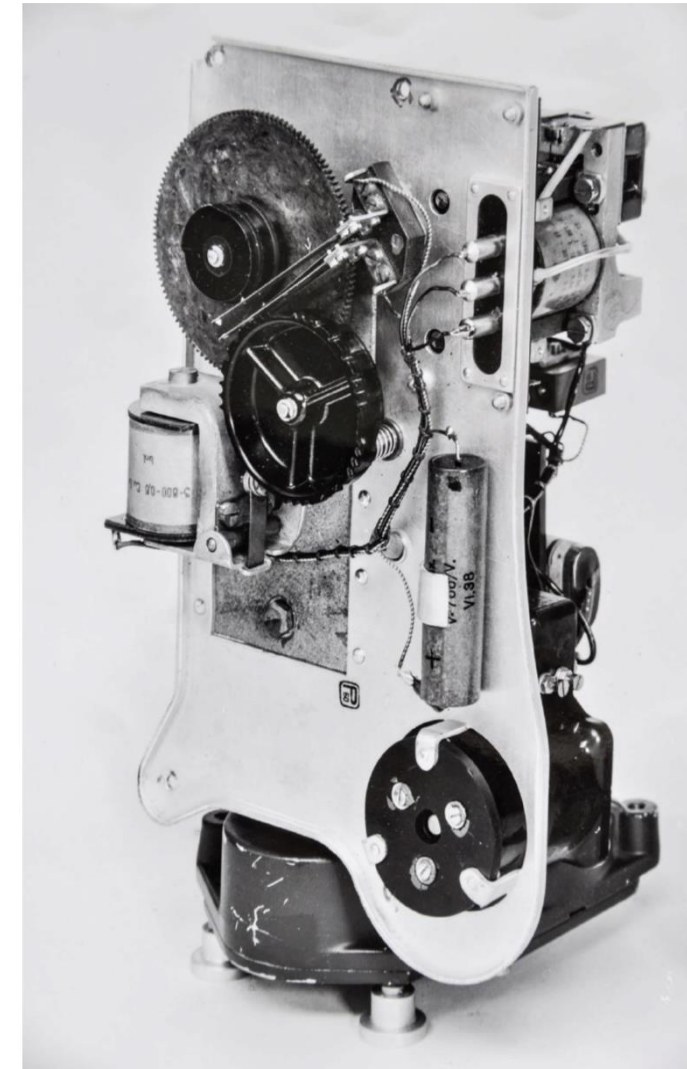


Fig. 29 Source: The National Archives

Evaluation Report on Emergency Transmitter carried on German Aircraft dated June 1941 page 1

This 3 page evaluation report dated June 1941 provides a description of the equipment, the conduct of the evaluation trials and, in the closing paragraphs, the results of the performance tests.

A note with the report explains that as at June 1941 the British had obtained only two intact NS2 transmitters, one from the *Rettungsboje*, and the other transmitter from a crashed aircraft.

Turning the crank handle of the *Rettungsboje* transmitter automatically transmits in Morse Code the identification letters 'G K'. The identification letters from the captured transmitter are 'G R'.

It is probable that in May 1941 the *Rettungsboje* transmitter had been stripped down in a laboratory workshop to discover its secrets.

The second transmitter was almost certainly Chiltern's transmitter and its capture a great boon to the British because it would have enabled evaluation trials in the field to be carried out in parallel with the laboratory evaluation of the *Rettungsboje* transmitter.

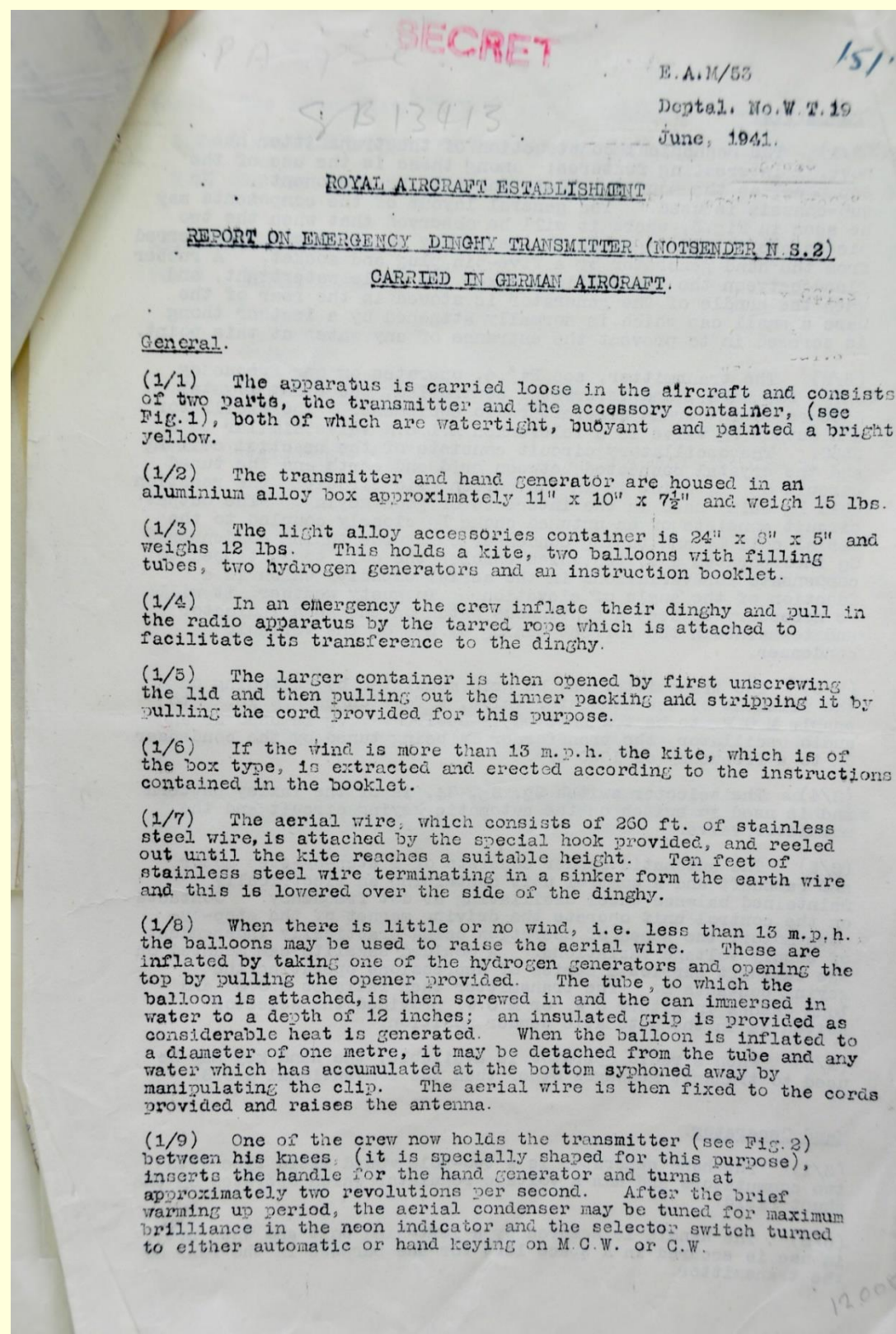


Fig. 30 Source: The National Archives

Report on Emergency Dinghy Transmitter carried on German Aircraft dated June 1941 page 2

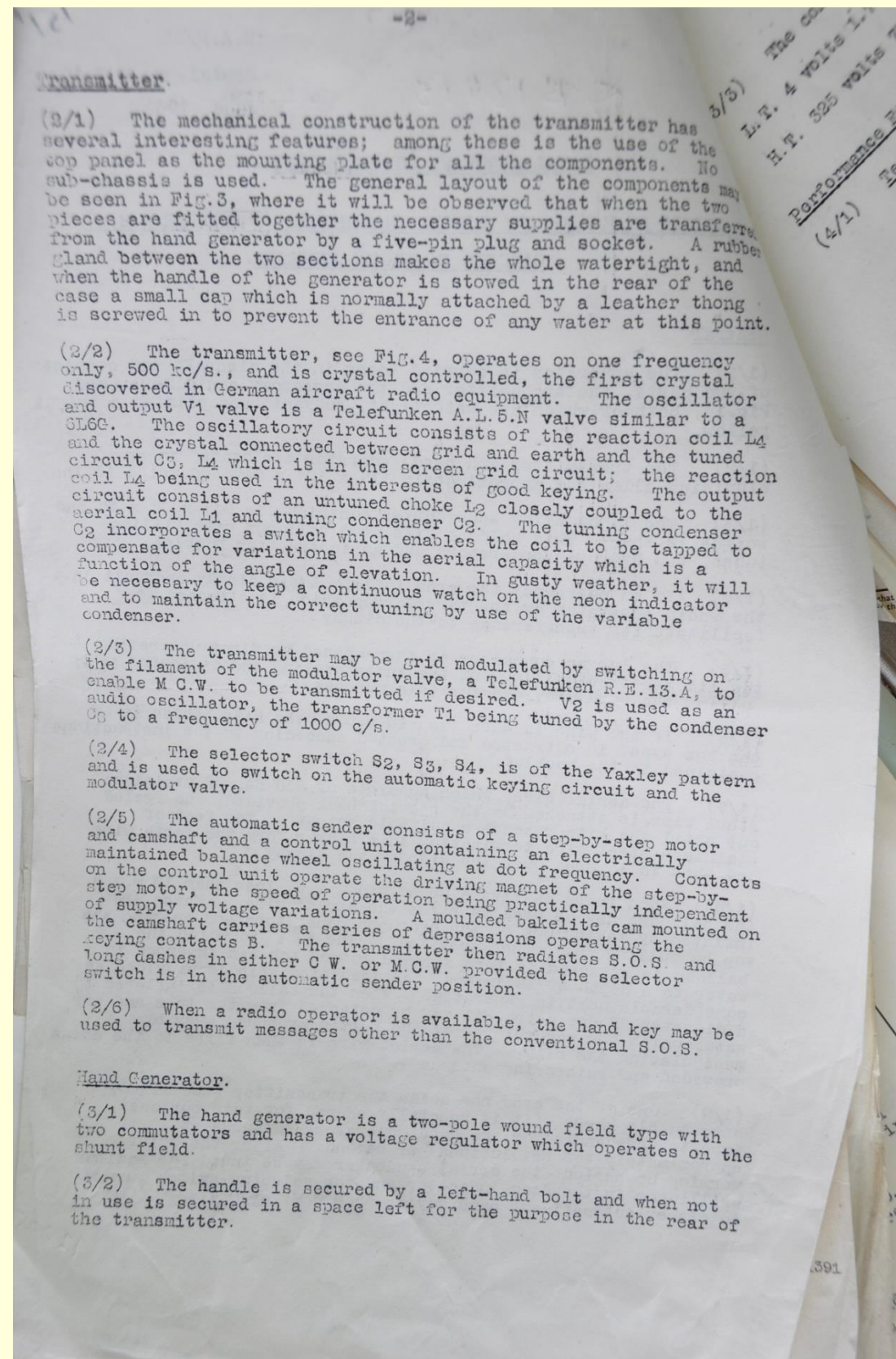


Fig. 31 Source: The National Archives

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(3/3) The consumption figures are as follows :-
L.T. 4 volts 1.7 amps. on M.C.W. and 1.55 amps. on C.W. operation
H.T. 325 volts 75 mA. on M.C.W. and 65 mA. on C.W. operation.

Performance Figures.

(4/1) Test Aerial.

Length	-	200 feet
Polarization	-	Vertical
Capacity	-	430 pF.
Effective Resistance	-	27 ohms.
Radiation Resistance	-	Approximately 4 ohms.
Aerial Efficiency	-	14.7 per cent.

(4/2) Transmitter Output.

Output into the aerial is 6.2 watts
Actual power radiated is 0.91 watts

(4/3) Estimated Range.

Estimated range over sea giving 10 microvolts per metre will be 250 miles.

Estimated range over land giving 10 microvolts per metre will be 120 miles.

(4/4) Range Test.

Maximum range over land giving good D.F. bearings was found to be 120 miles, but signals were audible as far as 160 miles.

(4/5) The aerial capacity was found to vary by as much as 20 per cent when using the kite to raise the aerial wire, but the aerial condenser and tapped coil accommodated these variations

Fig. 32 Source: The National Archives

Postscript

Thank you for taking the time to look at my Exhibit. For my part I have thoroughly enjoyed producing it.

The novel format of OMRS Convention 2020 has enabled me to update my research findings; and to display and publicise a broader range of material than was possible at OMRS Convention 2016;

I am pleased that I have been able to obtain a better understanding of the encounter. Whilst at the time the destruction of the *4T+KK* undoubtedly commanded the attention it was the recovery of the NS 2 emergency transmitter that was much more important.

It was fortuitous that two examples were acquired in close succession. It is speculation but it may be that after 1941 the British recovered few intact examples of the NS2 transmitter. As the frequency of German incursions of British airspace subsided in favour of operations in Russia, and elsewhere in Europe, the opportunities to salvage intact equipment from crashed aircraft must have dwindled commensurately.

Chiltern's success was timely. During World war 2 many lives were saved by the Allies' versions of the transmitter and it is satisfying to be able to place HMT Chiltern at the very start of this successful record.

If this Convention format is deemed to be a success perhaps it might be considered as an annual event? Not in replacement of the traditional Convention but as an optional event post-Convention. This will enable the wider membership to see the Convention Exhibits.

What do **YOU** think?