



**REPORT OF THE
INVESTIGATION INTO AN
INCIDENT RELATING TO THE
CRUISER "WINKELRIED" ON
THE LOUGH REE**

The Marine Casualty Investigation Board was established on the 25th March, 2003 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

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Published by The Marine Casualty Investigation Board
16th October 2006



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1. SYNOPSIS

- 1.1 On Sunday the 8th August 2004 shortly after 14.00 the motor cruiser "Winkelried" set out from Portaneena on the east shore of Lough Ree. The owners of the vessel, Mr. and Mrs. Walter and Ruth Borner, were on board and their intention was to have one more cruise before heading home to Switzerland.
- 1.2 A local fisherman discovered the body of Mrs. Borner near Leacarrow on the evening of the 9th August. The body of Mr. Borner was discovered on the following Friday. Both Mr. and Mrs. Borner were found to have died from hypothermia.

All times given are local

2. FACTUAL INFORMATION

2.1 CREW:

Mr. Walter Borner, a Swiss National
Mrs. Ruth Borner, a Swiss National

2.2 MOTOR CRUISER "WINKELRIED"

Length	35 Feet approximately
Beam	10' 6"
Draft	2' 6"
Structural Material:	GRP
Builder:	Harvey Eastwood Ltd., Brundall, Norwich, Norfolk, UK.
Year Built:	Circa late 1970s
Official No.	Waterways Ireland Reg. No. 1041

2.3 EQUIPMENT ON BOARD:

- 2 x Compass Security Lifejackets
- 1 x Vetus Gas Detector
- 1 x Fire Extinguisher
- 1 x Fire Blanket
- 3 x Boat Hooks
- 1 x Aqua Mark VHF,
- 2 x Realistic Portable VHF's,
- 1 x Uniden watertight Portable VHF
- 1 x Garmin GPS,
- 1 x Seafarer 501
- 1 x Ritchie (Fixed) Magnetic Compass,
- 1 x Offshore 75 Magnetic Compass
- 1 x Boat Dinghy (GRP)
- 2 x Rowlocks
- 1 x Boat Hook
- 1 x 4HP Mercury Engine

3. CIRCUMSTANCES PRIOR TO THE INCIDENT

- 3.1 Mr. and Mrs. Borner were Swiss Nationals who had been coming to the River Shannon for many years. According to local information they first came to the Lough Ree area in 1969. The Borners' purchased the "Winkelried" (see photo 1 at Appendix 7.4) in 1989.
- 3.2 The Borners were well known in the local boating community and were considered to have had a good local knowledge of the Lough Ree area.
- 3.3 The Borners set out on the "Winkelried" at approximately 14.00 hours on Sunday the 8th August. The "Winkelried" had a dinghy in tow. (See photo 2 at Appendix 7.4)
- 3.4 The Borners, according to the owner of the boatyard where the "Winkelried" was to be laid up over the winter, were to return to Switzerland on Tuesday morning the 10th and this was to be their last voyage on Lough Ree for the year.
- 3.5 The "Winkelried" had been surveyed for the purpose of insurance on the 15th April 2003. According to the conclusions of the surveyor the craft had been well maintained.
- 3.6 The Met Eireann weather report for Lough Ree on the 8th August 2004 indicated that winds to be south-to-south east Force 4 to 5 but with frequent stronger gusts. Gusts of between 25 and 36 knots were reported in their synoptic stations at Mullingar and Claremorris (See Appendix 7.1)
- 3.7 A company specialising in GPS (Global Positioning System) hardware downloaded the route followed by the vessel as stored in the memory of the GPS. This company, CharterNav (now GPS Ireland) based in Crosshaven, Co. Cork printed out the route of the vessel onto an ordnance survey map. (See Appendix 7.2)
 - 3.7.1 This printout indicates that the vessel left shortly after 14.00 hours and proceeded north up Lough Ree.
 - 3.7.2 At approximately 15.23 hours the vessel was north west of Inchmore Island when it turned south.
 - 3.7.3 At approximately 15.41 hours the vessel commenced a series of four 180 degree turns; the last turn was made at 15.47 hours approximately. (See Appendix 7.2)

4. THE INCIDENT

- 4.1 The wind was blowing from a southerly direction and its full effect would not have been noticed until the "Winkelried" turned south at approximately 15.23 hours on the 8th August 2004. At some stage on the southerly course the dinghy rope may have parted and an attempt may have been made to retrieve the dinghy. At this time one of the Borners may have fallen in to the Lough. The manouevering of the vessel may have been an attempt to recover a person who fell overboard. One can only assume that the second person ended up in the water in an attempt to save the first person.
- 4.2 At 15.55 hours the vessel started to drift, at first in an easterly direction, then west and then east again until it went lightly aground off Inchmore Island at approximately 18.47 hours. At 15.55 hours it would appear that there was nobody onboard and that the vessel was drifting helplessly.
- 4.3 A local fisherman discovered the body of Mrs. Borner at Lecarrow over twenty-four hours later at approximately 17.00 hours on Monday evening. A lifebuoy was found near the body of Mrs. Borner. At approximately midday on Tuesday the 10th August 2004 the vessel "Winkelried" was discovered near Inchmore by a Garda RIB.
- 4.4 The body of Mr. Borner was found the following Friday.

5. CONCLUSIONS

- 5.1 Mr. and Mrs. Borner both died of Hypothermia. One can only hypothesise as to how this tragic accident occurred. It is not possible to explain how Mr. and Mrs. Borner ended up in the water but the probability is that one fell in when trying to retrieve the vessels' dinghy and the other person in attempting a rescue jumped in to try to save the other.
- 5.2 There is no record of any attempt to broadcast a mayday by the Borners or alert persons ashore by any other means. The first indication that anything was wrong was when the body of Mrs. Borner was discovered.
- 5.3 The dinghy was found at a distance from the "Winkelried" near where Mrs. Borner body was discovered.
- 5.4 An inspection of the steering gear indicated that the rudder was found jammed in the hard over position. (See Appendix 7.3). This report further indicates that at some time there had been a modification to the original system.
- 5.5 The insurance report of 2003 recommended that a bathing access ladder be fitted; there was no evidence of this being done prior to the accident.
- 5.6 Neither Mr. nor Mrs. Borner were wearing lifejackets.


6. RECOMMENDATIONS

- 6.1 All voyages on inland lakes and waterways should be planned. Weather forecasts should be obtained. A person ashore should be informed regarding the time of return from a voyage and an agreed protocol should be put in place if the indicated return time is not adhered to.
- 6.2 Owners of pleasure craft should carry out practice drills under controlled conditions to determine their response to situations such as man overboard, fire, grounding etc. Owners of pleasure craft should be aware of the importance of matters such as but not limited to hull integrity, engine maintenance, steering gear, fire fighting equipment and life saving appliances. Persons working on deck should always wear some form of suitable flotation device. Simple risk analysis should be effected by the owners of pleasure craft to highlight areas of risk and appropriate precautions should be put in place to negate or lower these risks.
- 6.3 That the contents of the Maritime Safety Act, 2005, be brought to the attention of all persons using crafts of whatever type on water.
- 6.4 That the Act itself be examined by the relevant local authorities and other agencies with a view to the enforcement of same.

LIST OF APPENDICES

- 7. LIST OF APPENDICES
 - 7.1 Met Eireann Weather Report
 - 7.2 GPS Download Printout
 - 7.3 Steering Gear Examination
 - 7.4 Photographs of the "Winkelried".

Appendix 7.1 Met Eireann Weather Report



MET ÉIREANN
The Irish Meteorological Service

Glasnevin Hill, Cnoc Ghlas Naíon Tel: +353-1-806 4200
Dublin 9, Ireland. Raife Áthn Cliath 9, Éire. Fax: +353-1-806 4247
www.met.ie E-mail: met.eireann@met.ie

Weather Report for Lough Ree on the 8th August 2004.

General Situation

A deep depression in the Atlantic just west of Ireland gave a southerly airflow over Ireland.

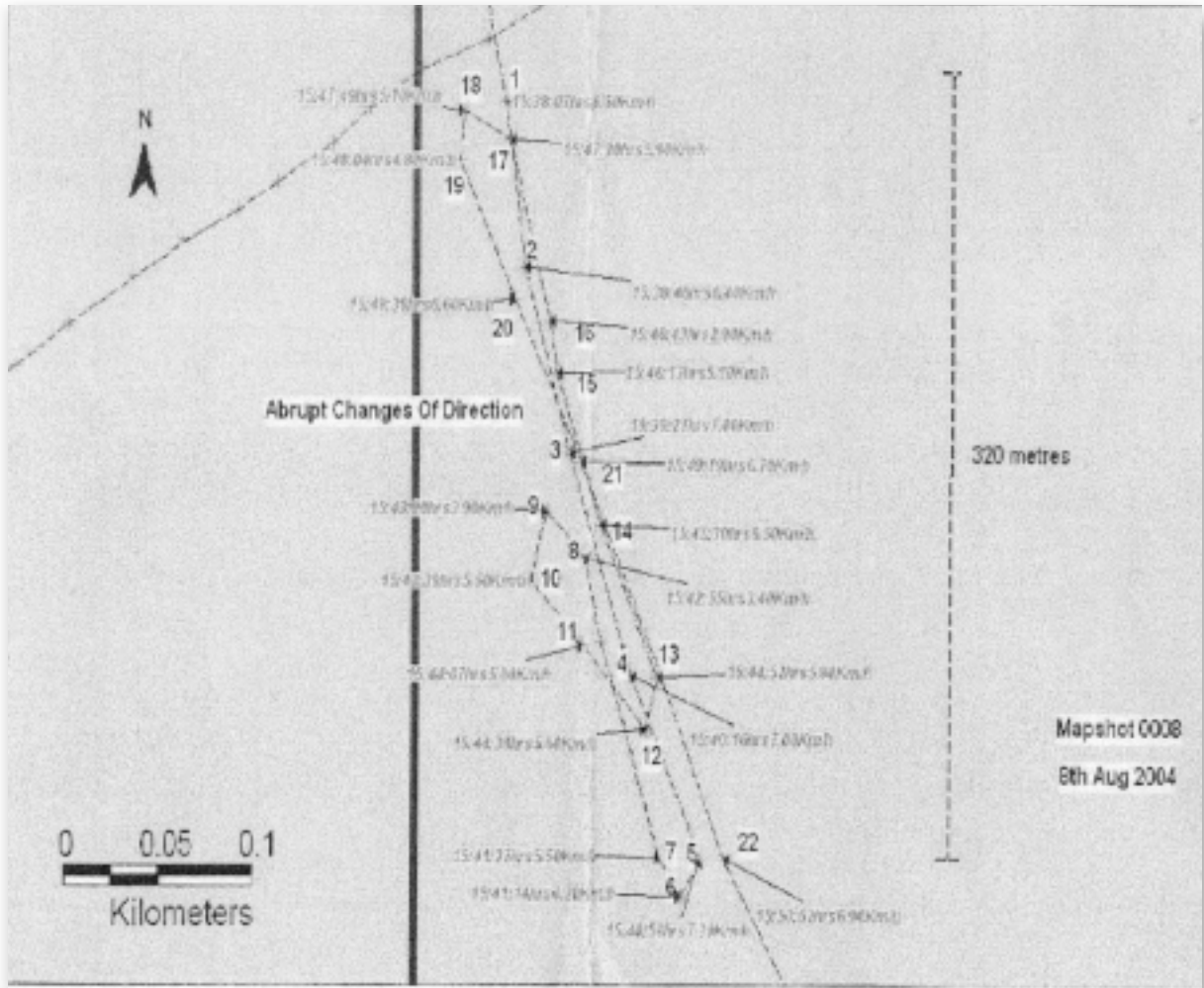
Details for Lough Ree

Winds: south to south-east Force 4 to 5 but with frequent stronger gusts.
Gusts of between 25 and 36 knots were reported in our synoptic stations of Mullingar and Claremorris.

Weather: cloudy, mainly dry, a few showers

Visibility: good


Appendix 7.2
GPS Download Printout



Appendix 7.3 Steering Gear Examination

Seol aon fhreagra chun:- An Phríomh Shuirbhéir
(Address any reply to:- The Chief Surveyor)

+353 (0) 1 874 4900/874 3325/878 8463
+353 (0) 1 872 4491
mso@dcmnr.gov.ie
www.dcmnr.gov.ie/mso



**An Roinn Cumarsáide, Mara agus Acmhain
Nádúrtha**

**Department of Communications, Marine and
Natural Resources**

Oifig an tSuirbhéara Mhuiri
(Marine Surveyor's Office)
26-27, Cé Eden
(26-27 Eden Quay)
Baile Átha Cliath, 1
(Dublin 1)

10 September 2004

Re: PLEASURE CRAFT – WINKELRIED

TO WHOM IT MAY CONCERN.

On 09/09/04, following a request from Capt. Tom O'Callaghan, an investigator with the Marine Casualty Investigation Board, I attended the above vessel at Portnaneena, Glasson, Athlone for the purpose of examining the steering gear of the vessel.

I was informed that at the time of the recovery of the vessel, the rudder was in a "hard" over to port position and that it was subsequently discovered that the rudder was jammed in this position. At the time of my inspection on 09/09/04 the rudder had been moved back to the midships position. I was informed that in order to accomplish this it had been necessary to remove the tiller arm from the rudder stock, as the tiller arm had become jammed behind the port side rudder-angle limiting device and would not move back by the normal means of operating the helm. The port side rudder-angle limiting device was seen to be broken.

1. Description of Steering Arrangement. (See photos)

The steel rudder of the vessel is attached to a steel rudderstock. The rudderstock is held on a lower bush at the end of a steel skeg and passes through an upper bush and seal arrangement in the Glass Re-enforced Plastic (GRP) hull, to the steering compartment. The upper end of the stock is fitted with a keyway and a tiller arm is efficiently connected to this by way of a key and split collar, secured with a bolt. In the midships position the tiller extends approximately aft and is connected to the steering actuator ram by a forked and bolted connection. The steering actuator is held on a pivoting hull connection to port and is connected by means of a morse cable to the helm position. Turning the helm of the vessel either pushes or pulls the morse cable and produces a corresponding movement of the actuator and tiller arm, so turning the rudderstock and therefore the rudder to the desired position.

Limitation of the movement of the rudder to port, beyond the maximum design angle, was supposed to be achieved by the tiller arm swinging and coming into contact with a steel bracket at the desired angular position. This bracket formed from steel angle bar is bolted to a plywood / GRP foundation plate which was connected to the hull under.

Limitation of the movement of the rudder to starboard, beyond the maximum design angle, is achieved by a chain, which is connected to the foundation of the actuator assembly at one end and to the tiller arm at the other. Upon turning the helm to starboard, the actuator extends and pushes the tiller away from the actuator foundation. This movement is unimpeded until the slack in the chain is taken up, at which time the chain becomes taut and prevents further movement.

Appendix 7.3
Steering Gear Examination

2. Observations.

The helm was turned both to port and starboard and the steering system operated satisfactorily, albeit with a slight tightness / resistance. The integrity of the connections of the tiller, actuator arm and mounting were tested and found to be satisfactory.

The port side rudder-limiting device was broken. The steel bracket itself was intact and still bolted down, but the foundation to which it was attached was broken and the whole assembly could be moved freely by hand. The plywood, which was designed to give the assembly the required rigidity, was seen to be rotten and the GRP applied over the plywood was in an advanced state of delamination and decay. A piece of plywood was lying in the bottom of the steering compartment having fallen off the assembly. This plywood could be broken into pieces with the fingers of the hand. Given the condition of the assembly, it would have taken very little force to break it during the operation of the vessel.

The stb'd side limiting device (chain) was intact and in fair condition. It was noted during the inspection that this device was probably installed sometime during the vessels life and that previous to its installation; limitation of the rudder angle to starboard was achieved with a bracket, as per the port side. (There was observable evidence of a position on the hull where this bracket assembly had been located and the remaining port side bracket itself appeared to have joined with it in a "horse shoe" type assembly as viewed from above). The original "as built bracket" would have had greater rigidity and strength and at the time of the removal of the starboard side foundation, the assembly would have been substantially weakened.

Subsequent deterioration of the GRP and plywood over the following years, due to poor maintenance and damp conditions, resulted in the poor condition of the bracket assembly noted at the time of this inspection.

3. Conclusion

It is known that the vessel was heading back towards Portraneena on a steady course albeit in poor weather conditions when something happened which resulted in the vessel backtracking / circling for a short time. The vessel then resumed on a steady course for another 12 minutes before backtracking / circling for a second time. After this second manoeuvre the vessel does not appear to resume an "underway" condition.

It is very unlikely that the steering gear became jammed during the first manoeuvre above, as it would have been very difficult for the crew to rectify the situation and unlikely they would have been able to continue to navigate on a steady course with the rudder jammed hard over to port.

As the vessel did not resume her course after the second manoeuvre it is possible that the tiller either broke the port side limiting bracket or continued past an already broken bracket, during a "crash" manoeuvre of the vessel of the type commonly employed if somebody were to fall overboard, and became jammed.

Alternatively, as the vessel then appears to have been adrift in windy conditions for a number of hours, the tiller arm may have become jammed after being forced into the hard over to port position by the action of the water or some object acting on the rudder at a later time.

In summary it would be my conclusion that the rudder became jammed in the hard to port position either during the second manoeuvre or sometime afterwards and in any event this occurred subsequent to some other as yet unknown occurrence onboard the vessel. As the steering actuation system was in a serviceable condition, the rudder could only have become jammed to port after somebody turned the helm hard over or after the vessel was unattended in windy / rough conditions for an extended time.

Should it be necessary for further analysis I would suggest that the vessel be re-floated and an attempt made to recreate the conditions in which the rudder became jammed in similar inclement weather conditions.

Signed.....

J. A. Snelgrove
 Engineer and Ship Surveyor.



APPENDIX 7.4

Appendix 7.4
Photographs of the "Winkelried".



8. LIST OF CORRESPONDENCE RECEIVED

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An Garda Síochána

Oifig an Choimisinéara,
An Garda Síochána,
Páirc an Fhionnuisce,
Baile Átha Cliath 8,
Éire.

Tel/Teileafón: (01) 666 0000 / 2022

Fax/Facs: (01) 666 2013

Please quote the following ref. number:



Office of the Commissioner,
Garda Headquarters,
Phoenix Park,
Dublin 8,
Ireland.

Web site: www.garda.ie

E-mail: comstaff@iol.ie

Date:

P.A. 2.1.
Your Ref: MCIB 88.

Mr. John G. O'Donnell, B.L.,
Chairman,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2.



Dear Mr. O'Donnell,

I am directed by the Commissioner to reply to your correspondence dated 13th September 2005, and to provide the following recommendations:-

1. That the contents of the Marine Safety Act, 2005 be brought to the attention of all persons using crafts of whatever type on water.
2. That the act itself be examined by the relevant local authorities and other agencies with a view to the enforcement of same.

Yours sincerely,

KEVIN DONOHOE
SUPERINTENDENT FOR
PERSONAL ASSISTANT
TO COMMISSIONER

14th October 2005.

Mission Statement:

To achieve the highest attainable level of Personal Protection, Community Commitment and State Security.

**MCIB RESPONSE TO LETTER FROM AN GARDA SIOCHANA DATED 14TH
OCTOBER, 2005**

The Maritime Safety Act, 2005 was passed by the Oireachtas on 29th June, 2005. The two points made have been added to the recommendations in the Marine Casualty Investigation Board's final Report.

We would like to thank An Garda Siochana for their correspondence.


Irish Coast Guard
GARDA CÓSTA na hÉIREANN



Mr Dick Heron
Secretary
Marine Casualty Investigation Board
Department of Communications,
Marine & Natural Resources
Leeson Lane
Dublin 2.

16th Sept 2005.

Re MCIB 88 – Deaths of Mr. & Mrs. Boner 8th Aug 2004 on L. Ree.

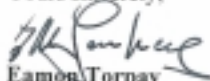
Dear Mr Heron,

The Irish Coast Guard requests that the following be included in the recommendations.

“If a person is lost overboard from a vessel, and cannot be recovered immediately by the crew of that vessel, this is a distress situation and a MAYDAY message should be immediately broadcast on Marine VHF Ch 16 or other distress alerting radio channels and systems as appropriate. Other vessels in the immediate area receiving this distress message may be able to respond and assist. On receipt of a distress message on Ch 16 the Irish Coast Guard will task available search and rescue resources to the scene and will relay the original message to other vessels.

The Coast Guard urges the boating community to look up www.safetonthewater.ie web site. The full range of safety guidelines for all types of water and boating activity can be viewed and downloaded from this site including a publication on Inland Waterways”

Yours sincerely,



Eamon Torpay
SAR Operations Manager
IRCH HQ.

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2, Ireland.
An Roinn Cumarsáide, Mara agus Acmhainní Náidúrtha, Lána Chill Mochargáin, Baile Átha Cliath 2, Éire.
Tel: +353 1 ~~678-2224~~ Fax: +353 1 ~~678-2269~~ Email: admin@irishcoastguard.ie

MCIB RESPONSE

The MCIB notes the content of this letter.



GPS Address:
WG564 - 51°43.56N 008°17.62W
GPS House, Church Bay Road, Crosshaven, Co. Cork, Ireland
Tel: 021.4832990 Fax: 021.4833665
Tel. International (+ 353.21.4832990)

GPS Ireland
GPS Consultants:- Projects & Procurement - Integration, Training, Hire, Service & Support
Reg. in Ireland No.: 271262 Val No.: B 93618071



Mr. John G. O'Donnell, B.L.
Chairman,
Marine Casualty Investigation Board,
Leeson Lane,
Dublin 2

23rd September 2005

**RE: DRAFT Report of the Investigation into the Deaths of Mr. & Mrs. Borner
on 8th August, 2004 on the Lough Ree.**

Dear Sir,

In accordance with Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000, herewith observations on the above mention Draft Report as required.

1. In the first instance it should be recorded that CharterNav GPS, the company referred to as being responsible for handling the GPS data, was reformed as GPS Ireland with the same contact address on 21st February 2005 last. It is the case however, that the individual responsible for the original GPS data handling; giving related evidence in the Coroner's Court and making this submission are the same person, Gary Delaney.
2. As general technical comments it is felt that the following should be included in the report:
 - a. The likely position accuracy of the GPS equipment onboard the Wrinkelreid at the time of the incident was +/- 15 meters.
 - b. The time zone used to store position information on the GPS and therefore, subsequently used for map display purposes, was UTC. Consequently all times displayed on the map records should have 1 hour added to them to give local time - i.e. Daylight Saving Time (DST) or GMT +1 hour.

3. In relation to the specifics of the Draft report, may I recommend the following amendments:
 - a. **Para 2.3 – Equipment on board:** - amend the GPS type to "**Garmin**" and NOT "**Carmin**" as stated.
 - b. **Para 3.7 – Suggested amendments as follows:**
 - i. for future reference purposes it may be useful to include as follows: "This company CharterNav (**now GPS Ireland**), based in Crosshaven....."
 - ii. Correct spelling and terminology as follows: currently "ordinance survey map" – replace with **Ordnance Survey of Ireland map**.
 - c. With respect to all timings listed in **Para.'s 3.1 to 4.4** which refer to GPS plotted positions, insert comment to indicate that these timings are UTC, for these purposes the same as GMT. Alternatively, 1 hour can be added to all displayed times and indicate that times are local or Daylight Saving Time.

4. As a general note, Gary Delaney is an experienced GPS Consultant and has provided GPS data log and data handling services for a wide variety of Government Organisations and on an ongoing basis for the Irish Naval Service, where such data is required for legislation enforcement.

Yours Sincerely,



Gary E. Delaney
Lt. NS (Ret'd), MSc (Nav Tech), FRIN, MNI
GPS Consultant

MCIB RESPONSE

The MCIB notes the content of this letter and have amended the Report accordingly.

