MCIB
Marine Casualty Investigation Board
Bord Imscrúdú Taismí Muirí

REPORT OF AN INVESTIGATION INTO A MARINE CASUALTY INVOLVING THE FISHING VESSEL ELLIE ADHAMH ON OR ABOUT THE 26-28 MARCH 2021 OFF THE COAST OF CO. CORK

REPORT NO. MCIB/308
(No.9 OF 2024)

The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or on board, Irish registered vessels worldwide and other vessels in Irish territorial waters and inland waterways.

The MCIB objective in investigating a marine casualty is to determine its circumstances and its causes with a view to making recommendations for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea and inland waterways.

The MCIB is a non-prosecutorial body. We do not enforce laws or carry out prosecutions. It is not the purpose of an investigation carried out by the MCIB to apportion blame or fault.

The legislative framework for the operation of the MCIB, the reporting and investigating of marine casualties and the powers of MCIB investigators is set out in the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation's Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector transposed into Irish law by the European Communities (Merchant Shipping) (Investigation of Accidents) Regulations 2011.

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Glossary of Abbreviations and Acronyms

AC	Alternating Current
ALB	All-Weather Lifeboats
BIM	Bord Iascaigh Mhara
CGR	Coast Guard Radio
CGU	Coast Guard Unit
CIL	Commissioners of Irish Lights
Contactor	A simple switching device, the primary function of a contactor is controlling the power
CPP	Controllable Pitch Propeller
DC	Direct Current
DoC	Declaration of Compliance
DSC	Digital Selective Calling
EPIRB	Emergency Position Indicating Radio Beacon
ETA	Estimated Time of Arrival
FV	Fishing Vessel
FVSC	Fishing Vessel Safety Certificate
GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System
IACS	International Association of Classification Societies
IMO	International Maritime Organisation
IRCG	Irish Coast Guard
LOA	Length Overall
MCIB	Marine Casualty Investigation Board
MN	Marine Notice
MRCC	Marine Rescue Coordination Centre
MRSC	Marine Rescue Sub Centre
MSO	Marine Survey Office
MV	Merchant Vessel
NMOC	National Maritime Operations Centre
OC	Officer Commanding
OD box	Distributes oil (the preferred hydraulic fluid) from a pressurized source to the main servo in the hub to alter the pitch of the propeller blades
OSC	On-Scene Coordinator
RNLI	Royal National Lifeboat Institution
RNW	Radio Navigation Warning

SAR	Search and Rescue
S.I.	Statutory Instrument
SITREP	Situation Report
STCW	The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UK	United Kingdom
UTC	Co-ordinated Universal Time
VHF	Very High Frequency
WECDIS	Warship Electronic Chart Display and Information System
Watertight	In relation to a structure means it is capable of preventing the passage of water through the structure in any direction under the head of water likely to occur in the intact or damaged condition
Weathertight	Means that in any wind and wave conditions which the vessel is expected to encounter water will not penetrate into the ship

Hertz	Hz
Hour	hr
kilovolt-ampere	kVA
KN	Volume space/enclosed volume of a vessel is the volume used for determining the cross curves of stability for a vessel which are used to determine vessel compliance with statutory intact stability criteria in defined operating conditions. The intact buoyancy.
Knot	kt
Litre	lt
Metre	m
Millimetre	mm
Nautical mile	NM
Tonne	t
Volt	V

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31st October 2024.

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1. SUMMARY

1.1 The fishing vessel (FV) Ellie Adhamh with seven crew onboard was trawl fishing for prawns south of the Porcupine Bank in the approximate position 51°30'N 014°00'W approximately 160 nautical miles (NM) off the west coast of Co. Cork, having started the trip on 13 March 2021.

See Appendix 7.1 – A. Photograph of FV Ellie Adhamh (taken on Friday 26 March 2021 by the Irish Coast Guard).
B. Fishing Grounds (Chart).

1.2 On Thursday 25 March 2021 at approximately 20.00 hours (hrs) the crew hauled the final trawl before returning to the vessel's home port of Castletownbere in Bantry Bay when the vessel experienced an electrical power failure affecting the vessel's main deck and wheelhouse deck lights and equipment.

1.3 The vessel's emergency battery system activated and provided power to the vessel's emergency lighting system and other essential safety equipment. However, the Skipper was unable to restore the normal mains power supply and the vessel's emergency lighting and equipment operating systems continued to be powered by the vessel's emergency 24-volt (V) direct current (DC) battery power supply arrangements. The fishing vessel's radio installation also had an emergency battery bank, but it was separate to the ship's emergency battery system and enabled a limited duration means of radio communications to the emergency services. Despite this disabling condition the fishing vessel still had propulsion power and a limited steering capability. In company with another fishing vessel, FV Ellie Adhamh made course for Castletownbere at its best speed of approximately 12 knots (kts).

1.4 At approximately 06.00 hrs on Friday 26 March, the main emergency batteries had become exhausted causing the fishing vessel's remote control for the propulsion system, controls for the controllable pitch propeller (CPP) and emergency lighting to shut down. The crew were in darkness below decks.

1.5 Some radio communications equipment and the Global Positioning System (GPS) navigation device functioned as the equipment was powered from its bespoke radio installation emergency battery system. The accompanying fishing vessel established a tow, but the towline parted shortly thereafter. By this time both vessels were approximately 55 NM from the home port of Castletownbere. However, weather and sea conditions were deteriorating. At approximately 11.00 hrs the accompanying fishing vessel continued independently for Castletownbere for its own safety while the Skipper of the FV Ellie Adhamh contacted the Owner to arrange a tug, to tow the disabled vessel to Castletownbere. The Owner had also contacted Valentia Coast Guard Radio and appraised them of the vessel's situation at 08.30 hrs that morning.

1.6 Due to the weather conditions, FV Ellie Adhamh was rolling heavily and taking water into the main deck (also called the factory deck, or the middle deck). The electrical supply to the bilge pumps in the factory deck drainage sumps was still

operative, however the crew started to encounter difficulties in keeping the factory deck clear due to the shipped seawater which was coming aboard through the vessel's overboard waste discharge chute mechanism located on the port side which was mixing with fish debris from unprocessed catch in the hopper. After 06.00 hrs on Friday 26 March the electrical supply to the bilge pumps in the factory deck drainage sumps failed and the crew were unable to pump overboard the shipped seawater. At 16.41 hrs on the Friday the Skipper activated the vessel's Emergency Position Indicating Radio Beacon (EPIRB). He sought salvage pumping equipment. A Search and Rescue (SAR) operation was commenced shortly thereafter at 16.47 hrs.

1.7 The following morning, Saturday 27 March 2021, an Irish Coast Guard (IRCG) rescue helicopter R115 provided emergency salvage pumping equipment and handheld Very High Frequency (VHF) radio sets to the vessel and shortly afterwards the naval patrol vessel LÉ George Bernard Shaw established a towline to the stricken fishing vessel and commenced towing the fishing vessel to Castletownbere.

1.8 The weather had continued to deteriorate. The Skipper managed to pump some of the water overboard with the IRCG salvage pumps. The after section of that deck was getting regularly submerged by sea swells and the rolling motion of the disabled fishing vessel. The water levels inside the vessel's main deck space were increasing and the crew were becoming anxious as to their situation. The Navy had sought to remove the crew to safety from around midday. The fishing vessel developed a significant list during the towing operation and the safety of the crew became an increasing concern for the rescuers given the very difficult weather conditions.

1.9 At 18.55 hrs on the Saturday, the crew were airlifted from the listing vessel and brought to safety, ashore. The towline to the FV Ellie Adhamh broke around 20.00 hrs, and the fishing vessel became adrift again. The following morning, Sunday 28 March 2021, tug Nomad arrived on scene but was unable to establish a tow line due to weather conditions. At 10.55 hrs, Sunday 28 March, the tug reported FV Ellie Adhamh had sunk off the Bull Rock on the west coast of Co. Cork.

Note: Times are local time = UTC + 1 (Co-ordinated Universal Time + 1 hour).

2. FACTUAL INFORMATION

2.1 Vessel Details

Name:	Ellie Adhamh.
Type:	Fishing Vessel (trawler) 15-24 metres (m).
Flag State:	Irish.
Port of Registry:	Wexford.
Registration:	WD206.
International Maritime Organisation (IMO) Number:	9299238.
Official Number:	403804.
Common Fleet Register Number:	IRL000101379.
Radio Call Sign:	EI7536.
Registered Length:	21.98 m.
Length Overall (LOA):	25 m.
Beam:	7.5 m.
Gross Tonnage:	230.
Maximum Service Displacement:	404.029 tonnes (t) at Stability Book Condition 2.
Designer:	MacDuff Ship Design, Scotland.
Owner:	R and E Fish Ltd (in liquidation)[1], Tacumshane, Co. Wexford.

1. The Department of Agriculture, Food and the Marine (who maintain the Fishing Vessel Register) have confirmed that MFV Ellie Adhamh WD206 was registered in the names of R.B. & E.B. in 2012 up to 11.04.2012. It was registered in name of R & E Fish Ltd, from 17/04/2012 up to 05.04.2023. R & E Fish Ltd (company number 507482) was incorporated on 15.12.2011. Its directors were R.B. & E.B. who were the equal shareholders. R.B. resigned as a director effective as of 1.1.2021 in accordance with CRO form B10 signed on the 23.3.2021 and D.B. was appointed. Pursuant to a resolution for a members voluntary winding up, a liquidator was appointed on the 07.09.2023.

Where the term "owner" is used in this report it is intended to refer to the owner of the vessel at the time referred to in accordance with the vessel's registration set out above.

Builder Name and Address:	Astilleros La Parilla S.A. 33130 San Esteban De Pravia, Asturias Spain. Hull No. C-187.
Builder's Electrical Outfitter:	Electro Huelva, S.L.
Build Approval:	Bureau Veritas, Class Notation BV I ✠ Hull ● Machinery.
	Fishing vessel. Unrestricted Navigation.
Marine Survey Office (MSO):	The Vessel was constructed prior to the introduction of the Merchant Shipping (15-24 Fishing Vessel) Regulations 2007.
Keel Laid:	1 January 2003.
Construction:	Steel construction. Multi-chine, transom stern trawler.
Machinery:	Main Engine – Caterpillar 3512 488kW @1600 rpm driving a CPP.
	Shaft Generator.
	Auxiliary Generator.
	Harbour Generator – Perkins three-cylinder diesel.
Fuel Quantity Onboard:	7,000.00 litres (lts) diesel fuel oil (estimated).

FV Ellie Adhamh was a fishing trawler (15-24 m) designed as a twin rig trawler and rigged for bottom trawling for prawns.

See Appendix 7.2 – A. General Arrangement Profile FV Ellie Adhamh (sourced from Marine Survey Office Approved Stability Book, for illustration).

B. General Arrangement Plan of the Main Deck – Previous to the 2012 Alteration (sourced from Marine Survey Office (MSO) Approved Stability Book, for illustration).

C. General Arrangement Plan of the Main Deck – Post 2012 Alteration, Manually Altered (marked-up) to Illustrate Change as no Drawing Available.

D. Photograph of Main Deck Showing Post 2012 Alterations.

2.2 Electrical Power Generation

2.2.1 According to the Owner, electrical systems onboard FV Ellie Adhamh were to the design of Electro Huelva S.L. and provided to the builder Astilleros La Parrilla, S.A. when the vessel was constructed in 2003. The Owner provided to the Marine Casualty Investigation Board (MCIB) a scanned copy of the Electro Huelva S.L. electrical systems manual which included schematics of electrical circuits and details of the electrical outfit and from which the following information was extracted. These drawings show that they were produced for Hull No. C-187 which is the hull number on the shipyard drawings for FV Ellie Adhamh. The same hull number is used in the MSO approved Stability Book and on the MSO plan approval letter of 25 February 2003. The drawings provided also included a load balance as required. It should be noted that the MSO have stated that Electro Huelva S.L. was not the designer of the electrical system on documents submitted to the MSO and that the electrical generation and transformer systems described do not correspond with records of the generation system fitted onboard. This is not a matter that this investigation can resolve, nor does it substantially alter the analysis as to the cause of the breaker failure and subsequent electrical system failure (blackout). It should be noted that the Owners advised the MCIB that all original vessel records were onboard when it sank.

2.2.2 The vessel had three generators, all of which generated electrical power at 380V three-phase, alternating current (AC), 50 Hertz (Hz). The larger generator was a shaft driven 630 kilovolt-ampere (kVA) generator which normally provided electrical power from the main engine while the vessel was steaming/trawl-fishing. A smaller diesel generating set with a 245 kVA capacity provided back-up and supplemented the vessel's electrical generating capacity at high power demands. The 60 kVA capacity harbour generator was used while the vessel was not steaming, i.e. while the vessel was alongside in harbour. All electrical power lines from the individual generators were cabled to the main switchboard located in the engine-room. The main switchboard was the electrical control and distribution hub as it housed the main electrical power measurement and control systems, and all electrical power was distributed from this switchboard.

See Appendix 7.3 – General Arrangement Plan of the Engine Room (situated under the main deck) - Sourced from the Marine Survey Office Approved Stability Book, for Illustration Only.

Note that door No. 14 (engine room access watertight door) is marked on port side, and location of cabin escape watertight hatch "I" which exits into Main Deck above.

Electro Huelva S.L. – Electrical Manual Title Block.

Main Switchboard Panel Arrangement - Manual Page 0103/CP.

2.2.3 A portion of the generated 380V supply was stepped down to 220V, three phase AC by means of two 380V/220V transformers and the switchboard had a

changeover switch to allow switching to use either one transformer or the other. The 220V was supplied through circuit breakers (safety protection devices) mounted in the main switchboard to subordinate distribution boards located outside the engine room. According to the Electro Huelva, S.L. manual there were two distribution boards outside the engine room; one distribution board in the wheelhouse fed by circuit 51 through its dedicated 220V circuit breaker No. 51 and one in the accommodation alleyway fed by circuit 52 through its dedicated main switchboard 220V circuit breaker No. 52, both circuit breakers being located in the main switchboard. Generally, marine electrical circuit breakers are manufactured in various shapes and sizes and terminal arrangements but may be typified as being of a modular design thereby enabling ease of rapid change-out if the breaker fails during operation.

See Appendix 7.4 – 380V Systems Main Switchboard - Manual Page 0103/02.

380V/220V Systems Main Switchboard - Manual Page 0103/05.

220V Alleyway Distribution Board - Manual Page 0103/29.

220V Alleyway Distribution Board – Manual Page 0103/30.

220V Wheelhouse Distribution Board - Manual Page 0103/31.

220V Wheelhouse Distribution Board - Manual Page 0103/32.

Two Typical Marine Modular Circuit Breaker/Switches.

2.2.4 The Wheelhouse Distribution Board supplied power, by its circuit 51 main switchboard 220V circuit breaker, to the following equipment and in particular that highlighted:

- Chart lights
- Wheelhouse lights
- Aft gantry floodlights
- Fwd wheelhouse floodlights
- Aft wheelhouse floodlights
- Upper deck lights
- Searchlights
- Wheelhouse heater
- Compass instrument lights
- Computers socket

- Wheelhouse sockets
- Rapp/TV/CD socket
- **Emergency batteries charger**
- Wipers

2.2.5 The Alleyway Distribution Board supplied power, by its circuit 52 main switchboard 220V circuit breaker, to the following equipment and in particular that highlighted:

- Dry locker sockets
- Skippers cabin sockets
- Skippers cabin berth light/sockets
- Galley sockets ring main
- Galley range
- Kettle
- Mess sockets
- Galley lights
- Mess/fwd store lights
- Dry locker/desalination plant/wc lights
- Freezer
- Skippers cabin/alleyway/wc lights
- **Starboard shelter area lights (main deck lighting)**
- **Port shelter area lights (main deck lighting)**
- Hydraulic Machinery room lights
- Electric shower 1
- Electric shower 2
- Walk-in freezer
- Toilet fan No. 1
- Toilet fan No. 2
- Aft cabin sockets

2.2.6 The vessel propulsion gearbox was fitted with an integrated hydraulic system for control of engaging and disengaging the clutch and for controlling the propeller blade pitch. This unit was operated by 24V supply from the wheelhouse panel. If the 24V system fails, the clutch is disengaged and the indicator in the wheelhouse when it lost power would show the pitch of the propeller full astern. The clutch can be manually engaged if the pitch is in neutral, but the gearbox manual does not state how to actuate the propeller pitch system to bring the pitch to neutral. The gearbox was renewed in 2018 and the vessel was fitted with gearbox 500HS manufactured by ME Production of Denmark. This gearbox had an integrated OD box and controls for the CPP. All CPP systems have a local control to enable the pitch to be controlled manually from the engine room.

2.2.7 A 380V three phase electrical supply from individual contact breakers at the main switchboard provided power to the factory deck bilge pumps and to the four hydraulic pumps for operating the trawl winches. This 380V supply was not disrupted and the power supply to these pumps remained enabled when the 220V factory deck power supply to the Wheelhouse and Alleyway Distribution Boards failed (which caused all of the lighting in this deck to fail).

See Appendix 7.4 - 380V Systems Main Switchboard - Manual Page 0103/02.

380V/220V Systems Main Switchboard - Manual Page 0103/05.

See Appendix 7.5 - Main Deck Cabin Escape Hatch Marked “I”. Port Aft Deck Bilge Pump and Overboard Waste Discharge Chute (Photograph provided by Owner).

2.3 Bilge Pumping Arrangements and Alterations

2.3.1 According to the design and plans provided by the vessel’s designer, Mc Duff Ship Design Ltd, Scotland, FV Ellie Adhamh had two sets of independent bilge pumps. The first set was located in the engine room to pump out water from the engine room bilges. The second set of five bilge pumps (primarily known as “deck pumps”) were located on the main deck (also known as the factory deck or middle deck) drawing from sumps or wells set into the deck and designed to pump waste wash water used for fish factory processing activities, directly overboard.

See Appendix 7.5 - Main Deck Cabin Escape Hatch marked “I”. Port Aft Deck Bilge Pump and Overboard Waste Discharge Chute (Photograph provided by Owner).

2.3.2 The vessel’s GA Plan drawings of the main deck and the Electro Huelva S.L. electrical manual (provided by the Owner to the MCIB) show there were five of these pumps fitted when the vessel was constructed. The design drawings show optional waste discharge chutes in two locations, as built, there was only one. The MSO Stability Book drawings are from the design drawings not the “as built” drawings. Each pump is shown as 1.5 kW on the electrical drawings. There were three pumps on the starboard side as originally the fish processing equipment (including the conveyor for the fish processing and the waste discharge chute) was

on the starboard side and more water would accumulate starboard during the processing of the catch. The vessel pumping system was originally designed for starboard side fish processing. There was only one pump on the port side aft and one just off the centreline port mid.

2.3.3 The MCIB learned from the Owner that the position of the original fish processing unit, including the overboard waste discharge chute, was altered on the factory deck in 2012. The Skipper recounted that one of the deck pumps on the starboard side forward had been made redundant during the vessel modifications and this bilge pump was blocked off. It was also reported that the second pump on the mid starboard side was cross connected to the pump mid port side. Therefore, on the factory deck, there were two deck bilge pumps operating aft, one port and one starboard and also the two pumps amidships that were cross connected.

2.4 Further 2012 Alterations

2.4.1 In 2012 the waste discharge chute part of the fish processing unit was moved from the starboard side to the port side. This included a shortening of the conveyor and a new waste chute with hull penetration was made and fitted port aft with the original chute on the starboard side being left in place.

See Appendix 7.2 – B. General Arrangement Plan of the Main Deck – Previous to the 2012 Alteration (sourced from Marine Survey Office Approved Stability Book, for illustration).

C. General Arrangement Plan of the Main Deck – Post 2012 Alteration, Manually Altered (marked-up) to Illustrate Change as no Drawing Available.

2.4.2 It appears the alterations were done without regard to the pre-existing exemption provided for in the Stability Book. There were two issues with the stability of the vessel. One, a 2009 letter within the Stability Book provided an exemption so that the main deck was assigned a minimum freeboard of 250 millimetre (mm) rather than 300 mm under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 Statutory Instrument (S.I.) No. 640/2007. The reduced freeboard meant that the original waste chute was nearer the water line. The consequence of that was that in heavy seas, the waste chute cover and flap come under greater pressure. Moving the fish processing production area and equipment in 2012 from forward starboard to aft port would not have substantially altered the original water line location.

2.4.3 When the vessel was built, the Irish MSO approval specified stability to comply with the Torremolinos Protocol[2]. Whilst there is a requirement in the Torremolinos Protocol for a maximum permissible operating draught, there are no freeboard requirements stated. The minimum freeboard requirement was introduced with the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640/2007, hence the need to issue an exemption as the bulkheads were water tight to the main deck and not the weather deck.

2.4.4 The second stability issue was that the approved Stability Book shows standard loading conditions whereby the loading has the vessel trimmed by the bow relative to the baseline. Whilst the vessel may have a keel trim by the stern, the water accumulating on the main deck would have a tendency to flood forward. This is relevant in considering the other source of water ingress into the accommodation area.

2.4.5 The waste chute cover was fitted "back to front" in that the face intended to take the pressure, being external water from outside the vessel, was facing into the main deck whereas the pressure was coming from the outside. As the chute cover (or lid) was secured from the inside, the loading force (the water surging up the chute) exerted considerable force on to it. This raised the issue of the weathertight nature of the factory deck. The structure above the main deck was designed to be weathertight and the structure below was designed to be watertight. The difference between weathertight and watertight is that a weathertight fitting must withstand water pressure from the outside (be watertight from outside only), while a watertight fitting must withstand water pressure from both sides.

2.4.6 The new chute was not design approved or surveyed. Design drawings show hand wheel type arrangement which likely uses a four dog (rotating lugs mechanically linked to the hand wheel) closing mechanism to achieve watertight closure of the hatch. A hand wheel type closure would provide better resistance to external sea water pressure. The closing mechanism illustrated in photographs provided as representing the equipment after the 2012 changes show a much different hatch cover arrangement. The Owner asserts that the waste chutes were of the same design, but no records have been provided to corroborate this.

2.4.7 It was accepted by the Skipper and Owner that starting at some time during the trip there was a defect with the overboard waste discharge chute which proved to be a source of some of the water that ultimately flooded the vessel. The Skipper states that he only observed the water entering the factory deck via the missing bushing for the first time on Saturday 27 March 2021. The Owner stated

2. The Torremolinos International Convention for the Safety of Fishing Vessels 1977, referred to as the 'Torremolinos Protocol' was adopted on 2 April 1993; applied to fishing vessel over 45 m in length.

COUNCIL DIRECTIVE 97/70/EC of 11 December 1997 set up a harmonised safety regime for fishing vessels of 24 metres in length and over, reduced the length for new vessels to 24 m. The European Communities (Fishing Vessel Safety) Regulations 1998 S.I. No. 549 of 1998) implemented EC Directive 97/70/EC and was then replaced by S.I. No. 417/2002 - European Communities (Safety of Fishing Vessels) Regulations 2002.

that the Skipper was not concerned by this level of ingress as it was of an insufficient amount. The flap on the outboard end of the chute was displaced as the bushing was missing. The Skipper stated that the leakage was similar to a garden hose. This missing bush meant that the flap was not positioned to provide any damping on the surging forces, induced by the vessel roll, on the secured waste chute cover so that the cover would experience higher loads than normal.

2.5 Vessel Classification and Safety Information

2.5.1 FV Ellie Adhamh was constructed in 2003 in the Astilleros La Parilla Shipyard, Asturias, Spain. The vessel was constructed according to the Hull Rules of Bureau Veritas Marine and Offshore SAS ("Bureau Veritas"). The machinery was not surveyed by Bureau Veritas during its construction but was to be type approved. The MSO specified that the vessel had to comply with the following:

International collision regulations: COLREGS.

Radio installations:	S.I. No. 544 of 1998.
Lifesaving appliances:	S.I. No. 100 of 1967 and S.I. No. 586 of 2001.
Fire appliances:	S.I. No. 101 of 1967.
Medical treatment:	S.I. No. 506 of 2001.
Safety, health and welfare:	S.I. No. 325 of 1999.
Structural fire protection:	Torremolinos Protocol.
Stability:	Torremolinos Protocol.
Watertight integrity:	Torremolinos Protocol.

2.5.2 Bureau Veritas is a Classification Society specialising in the testing, inspection, and certification in marine offshore industries. Bureau Veritas is a member society of the International Association of Classification Societies (IACS). IACS is a technically based non-governmental organisation which as of 1 November 2023 consisted of 12 member marine Classification Societies, including Bureau Veritas. IACS provides a forum within which the member societies can discuss, research, and adopt unified technical criteria that enhance maritime safety in the global context.

2.5.3 Marine classification is a system for promoting the safety of life, property, and the environment primarily through the establishment and verification of compliance with technical and engineering standards for the design, construction and life-cycle maintenance of ships, offshore units and other marine related facilities. These standards are contained in rules established by

each Classification Society within the IACS membership of Societies.

2.5.4 Ship owners and operators engage with marine Classification Societies to ensure:

- Their ships are constructed to accepted international standards.
- Owners and operators are enabled to secure operating licences and insurances.
- Owners and operators are enabled to control and reduce safety and security risks.
- Owners and operators' ships comply with stringent national and international regulations.
- Owners and operators can improve their ships efficiency and environmental performance.

2.5.5 Bureau Veritas publishes a set of General Conditions setting out the Society's terms and conditions. The following inclusions in these General Conditions are relevant in the context of this investigation:

Clause 1.2 states *"The operations of the Society in providing its Services are exclusively conducted by way of random inspections and do not in any circumstances, involve monitoring or exhaustive verification".*

Clause 2.3 defines "Classification" as *"an appraisement given by the Society to the Client, at a certain date, following surveys by its surveyors on the level of compliance of the Unit to the Societies Rules and/or to the Applicable Referential for the Services provided".*

Clause 2.13 defines "Society" as meaning *"the classification society 'Bureau Veritas Marine and Offshore SAS'".*

Clause 3.1 states *"Subject to the Services requested and always by reference to the Rules, and/or to the Applicable Referential, the Society shall:*

- *Review the construction arrangements of the Unit as shown on the documents provided by the Client;*
- *conduct the Unit surveys at the place of the Unit construction;*
- *class the Unit and enter the Unit's class in the Societies Register;*
- *survey the Unit periodically in service to note whether the requirements for the maintenance of class are met. The Client shall inform the Society without delay of any circumstances which may cause any changes on the conducted surveys or Services."*

Clause 4.1 states *"The Client shall always: (i) maintain the Unit in good condition after surveys; (ii) present the Unit for surveys; and (iii) inform the Society in due*

time of any circumstances that may affect the given appraisement of the Unit or cause to modify the scope of the Services."

Clause 4.3 states: *"The Society has entire control over the Certificates issued and may at any time withdraw a Certificate at its entire discretion including, but not limited to, in the following situations: where the Client fails to comply in due time with instructions of the Society or where the Client fails to pay in accordance with clause 6.2 hereunder."*

See Appendix 7.6 - Bureau Veritas Marine and Offshore General Conditions – January 2021 Version.

2.5.6 In accordance with IACS Procedural Requirement Clause B.1.1.1. of PR1D (Procedure for Class Entry of Ships not subject to PR1A or PR1B) *"In cases where the vessel has been previously classed by the Society, the submission of plans may be specially considered subject to confirmation of no alteration/modification to the vessel."* This means a full plan review is not required to be carried out before reinstating the Class, if owners confirm there have been no alteration/modification to the vessel.

2.5.7 FV Ellie Adhamh was constructed according to Bureau Veritas (Hull) Classification Rules (Class Notation BV I ✠ Hull ● Machinery) and approval for testing, inspection and certification purposes. Changes to a vessel's construction requires Classification Society approval. The Classification Society approval means that the changes to the vessel comply with the Society's Rules regarding verification of compliance with technical, safety and engineering standards for the design, construction, and life-cycle maintenance of ships. Bureau Veritas requires vessel owners to inform them of any changes made to their vessels.

2.5.8 The fishing vessel was maintained in Class with Bureau Veritas by the vessel's Owner (the Client as defined above) from the time of its construction in 2003 (receiving its first certification on 10 March 2004) to 2005 when Class was suspended. Class was withdrawn by Bureau Veritas between 2006 and 2008 and was suspended again from 11 January 2016.

2.5.9 The FV Ellie Adhamh Class Certification was suspended by Bureau Veritas on 11 January 2016 because the vessel had not undergone its annual surveys within the allotted periodic survey window. Bureau Veritas's periodic survey window ended on 10 January 2016 and the vessel's Class was suspended the following day. The vessel's Class was withdrawn by Bureau Veritas on 12 July 2016 after the vessel had been suspended for six months. The Owners advised that this was due to major refurbishment works being carried out with an engine overhaul (costing €195,000) and also refurbishment at the shipyard in Spain where it was built (costing another €156,000). As a result of withdrawal from Class there is no continuous monitoring of the structural condition of the vessel by the Classification Society. This may also affect the validity of the vessels Hull and Machinery insurance. The vessel was re-assigned to Class on 5 October 2016. The Owners state that "all works" were "reviewed" by Bureau Veritas when re-instating classification.

2.5.10 Renewal surveys was carried out by Bureau Veritas (and the MSO) starting on 3 January 2019 and completed on 15 February 2019, where the vessel was surveyed to the standard of a Renewal Survey in Dry Dock at Bere Island, Co. Cork, during Class reinstatement docking, as the vessel has been out of service for several months for engine/gear box repairs. A class certificate issued on 19 February 2019 (to expire on 10 October 2023). No evidence has been supplied by Bureau Veritas to confirm exactly what was surveyed as asserted by the Owner.

2.5.11 FV Ellie Adhamh Class Certification was again suspended by Bureau Veritas on 11 January 2020 because the vessel had not undergone its annual surveys within the allotted periodic survey window. Bureau Veritas's periodic survey window ended on 10 January 2020 and the vessel's Class was suspended the following day. The vessel's Class was withdrawn again by Bureau Veritas on 12 July 2020 after the vessel had been suspended from Class for six months. The Owner stated that they were unable to arrange a survey to check one unidentified item due to precautionary measures taken by them during the Covid 19 pandemic.

2.5.12 The vessel was not in Class at the time of its sinking on 28 March 2021. The MSO were advised by Bureau Veritas on every occasion when Class was suspended and again when Class was withdrawn.

2.5.13 Bureau Veritas advised the MCIB that the alteration to the location of the fish processing unit including the construction of a new overboard waste discharge chute in 2012 was not advised to, or reviewed, by Bureau Veritas.

2.5.14 The Owner of the FV Ellie Adhamh was unable to provide records relating to the alterations to, or maintenance of, the vessel's fish processing unit including the overboard waste discharge chute. The Owner has stated that all records were onboard the vessel when it sank. To keep the only copy of records of this nature in this way is not common practise. The Owner was unable to provide any notification to Bureau Veritas "Class" or approval from the latter for changes made to the fish processing unit including the overboard waste discharge chute in 2012.

2.6 Marine Survey Office

2.6.1 The MSO of the Department of Transport is the State's marine transport regulator for safety, security, environmental protection and living and working conditions for vessels and ports in Ireland and Irish registered ships abroad. FV Ellie Adhamh was an Irish registered fishing vessel with a registered length of 21.98 m (15-24 m). In accordance with Regulation 7 of the Merchant Shipping (Safety of Fishing Vessels) Regulations S.I. No. 640/2007 fishing vessels of between 15 m and 24 m are required to be surveyed by the MSO and undergo statutory surveys and safety inspections in order to be issued with a Fishing Vessel Safety Certificate (FVSC) (15-24 m). A FVSC means a certificate granted under Regulation 9(1).

2.6.2 Regulation 7(1) (b) of S.I. No. 640/2007 sets out a requirement for periodical

surveys at four and two years depending on the subject matter of the survey[3]. Regulation 7(1) (b)(i) provides for four-year surveys as follows:

"(i) 4 years with regard to the structure, including the outside of the vessel's hull, and machinery of the vessel referred to in Parts 2, 3, 4, 5 and 6. As provided for in Regulation 11 the period may be extended for one year subject to the vessel being surveyed internally or externally as far as it is reasonable and practicable."

Regulation 7(2) of S.I. No. 640/2007 provides for the nature or scope of the periodic surveys (which includes intermediate surveys):

"Periodical surveys shall ensure that the appropriate items referred to in paragraph (1)(a) fully comply with the applicable requirements of these Regulations, that the equipment is in good working order and that the stability information is readily available on board."

In addition to the periodical survey, intermediate surveys to the structure and machinery of the vessel at intervals of two years are required by Regulation 7(3), the object and scope of which is described as *"The survey shall ensure that alterations, which would adversely affect the safety of the vessel or the crew, have not been made".*

2.6.3 The purpose of intermediate surveys of the structure and machinery of the vessel at intervals of two years is to ensure that alterations, which would adversely affect the safety of the vessel or crew, have not been made. Under S.I. No. 640/2007 Regulation 7(6) any survey of a vessel shall be carried out by an authorised officer, who under Regulation 7(7):

"(a) shall survey a vessel, after such plans, drawings, specifications, documents and other information, as the authorised officer may require, have been provided by the owner of the vessel,

(b) in order to ascertain whether a vessel complies with the requirements of these Regulations as apply to it, may require the vessel and any of its machinery, fittings and equipment to be submitted to such tests as he or she considers necessary, and

(c) if satisfied, after a periodical survey or intermediate survey, that the vessel complies with the relevant requirements of these Regulations, shall endorse a record of the survey in the space provided on a Fishing Vessel Safety Certificate and shall certify that the vessel was found to comply with the relevant requirements of these Regulations."

2.6.4 The survey regime set out in S.I. No. 640/2007 Regulation 7 is mandatory and imposes an obligation on owners and skippers to ensure that the initial and periodical surveys are carried out; Regulation 7 (4) provides *"The owner and*

3. There are in addition, surveys required under Part 3 of S.I. No. 640/2007

skipper of a vessel, the subject of a survey under paragraph (1), shall ensure that the survey is carried out of the vessel."

2.6.5 Further to the obligation on the owner and skipper to ensure that the required surveys are carried out, there is an obligation under S.I. No. 640/2007 Regulation 7 (10) to maintain the vessel in a fit and safe state, and it is prohibited to effect changes to the structural arrangements, machinery and other items covered by the survey, without MSO approval:

"7(10) (a) The condition of the vessel and its equipment shall be maintained to conform with these Regulations to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons on board.

(b) After any survey of the vessel under this Regulation has been completed, no change Shall be made to the structural arrangements, machinery, equipment and other items covered by the survey, without the approval of the Minister."

2.6.6 The following sets out the survey history from 2012 as advised:

- The vessel was issued with an FVSC by the MSO in December 2012.
- The MCIB was provided with a report of an inspection dated 28 October 2015 which noted among other defects "Bilge pump for main deck missing (note vessel does not have scuppers)". This was graded as code 30 meaning the defect was grounds for detention. It appears from this that the surveyor must have been aware of the 2012 alterations, however no documents have been provided except the report and the release note.
- The vessel was issued with an FVSC by the MSO on 8 March 2017 with a certificate expiry date of 17 December 2020.
- There should have been an Intermediate Survey in March 2018, but none took place as the vessel was laid up due to gearbox and engine issues.
- The MCIB learned from the MSO that an incident involving the factory deck flooding in Cornwall, United Kingdom (UK) occurred in April 2018 when the vessel sat on the bottom alongside. She had been detained by the UK in respect of fisheries issues. It is confirmed that at the time water entered into the factory deck through the starboard side waste discharge chute. This fact was reported by the Owner in a report he issued after the incident. There was so much water that the local lifeboat had to assist and engage its pumps. This incident was reported in the press and the MSO sought and obtained a report from the Owner.
- A renewal survey was carried out between 4 January and 15 January 2019 by Bureau Veritas and MSO where the vessel was inspected in Dry Dock at Bere Island during Class reinstatement docking, as the vessel had been out of service for several months for engine/gear box repairs. This was treated as the survey that should have taken place earlier but for the vessel being out of commission.

- The 2017 FVSC expired on 17 December 2020 (a three-month extension having been granted) and a survey carried out by an MSO surveyor on 7 January 2021 was conducted within the terms of an Intermediate Survey using the last Bureau Veritas dry docking date. Twelve deficiencies were noted and described on the survey report of 7 January 2021. The deficiencies were coded based on when they were required to be complied with (see below).
- An Interim FVSC was granted on 26 January 2021.
- The Interim FVSC certificate was due to expire approximately four months later, on 31 May 2021. The MSO required docking by May 2021 as this was due and a hull survey was required before a full FVSC could issue for the vessel.

See Appendix 7.7 - Marine Survey Office Report of 28 October 2015.

2.6.7 The safety survey conducted on 7 January 2021 was conducted within the terms of an Intermediate Survey. The MSO advised that they took into account that the vessel had recently been in Class. The MSO survey was conducted within the terms of an Intermediate Survey taking last Class docking as the bottom date and accepting Class survey at that time as confirming compliance to Part 2 and 4 of Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 so as to allow a short term FVSC be issued to May 2021, when a full MSO docking was due. The MSO also advised that COVID restrictions were still in place at the time of this survey and surveyors had instructions to minimise contact onboard and limit survey activities inside the vessel.

2.6.8 The vessel's Class had been withdrawn by Bureau Veritas on 12 July 2020 after the vessel had been suspended from Class for the previous six months and so was out of Class at the time of its MSO safety survey on 7 January 2021.

2.6.9 The MSO explained that in relation to surveys of vessels that have been withdrawn from Class and in assessing where changes may have been made, the MSO surveyors have access to the Rules of those Classification Societies which are approved Recognised Organisations which facilitates checking of previous Class requirements during such surveys. The attending MSO surveyor indicated that the normal practice for vessels in Class is to examine the openings in the primary KN volume space(s), concentrating on openings which cannot rapidly be closed watertight, and which would commence to immerse at an angle of flooding Θ ['theta'] f or 40 degrees whichever is less.

2.6.10 The MSO advised that it had issued a statement that due to Covid-19 all certificates were to be extended for three months from expiry and advised the IMO accordingly (with a request that the IMO circulate this to all members to avoid Irish vessels being held up in foreign ports). Marine Notice (MN) No. 15 of 2020 stated fishing vessels were to be dealt with on case-by-case basis. On 4 January 2021 MSO surveyors were issued with a note re-introducing the Phase 1 Covid Measures which limited survey of fishing vessels with accommodation spaces (such as the FV Ellie Adhamh) to external hull only with social distancing.

The note was issued to MSO surveyors shortly before the January 2021 FVSC survey of FV Ellie Adhamh when the areas designated for inspection were the Decks, Safety Equipment and Navigation Equipment.

2.6.11 Resulting from the survey of 7 January 2021 (restricted in scope by the the Phase 1 Covid Measures), twelve (12) deficiencies were noted and described on the survey report of 7 January 2021 as follows:

Item No.	Nature of Deficiency	Legislation Reference (if detained)	Action Taken
1	Please supply a copy of current safety plan for vessel (scan or clear photograph is sufficient)		17
2	Please confirm the location of fire extinguishers and that a minimum size of 5kg CO2 / Dry Powder and 9L AFFF (Foam) are carried onboard		17
3	Repair of fire dampers x 6 to be completed including all lugs /toggles		17
4	Emergency air horn to repair		17
5	Power driven emergency fire pump to be demonstrated, if a surveyor cannot attend due to COVID restrictions, please video this test and submit same.		17
6	Bilge alarm (main) in engine room to test , if a surveyor cannot attend due to COVID restrictions, please video this test and submit same.		17
7	Bilge pumping test to carry out, bilges in each compartment to be pumped with other compartment valves open to prove NR valves - to be submitted by video if surveyor cannot attend		17
8	Lifting appliances to be load tested and certificate to submit		16
9	Safety Certificate to be displayed in public area e.g. bridge or mess		16
10	Confirm correct medical kit carried and the vessel is no less than 175 nautical miles from the nearest port with adequate medical equipment and which remain continuously within range of the helicopter rescue services		17
11	Remaining down flooding doors and hatches to hose test once shore contractors wiring / gas hoses removed		17
12	Please arrange with your PO to have fishers work agreements / medical fitness certificates / insurance etc. onboard vessel before departure		17

00	No Action Taken	18	ISM Non Conformities: rectify before departure
10	Deficiency Rectified	19	ISM Non-Conformities: rectify within 3 months
12	All Deficiencies Rectified	30	Grounds for Detention
15	Rectify Deficiency at Next Port	35	Ship allowed to sail after detention
16	Rectify Deficiency within 14 days	70	Classification Society informed
17	Master instructed to rectify deficiency before departure	99	Other (Specify in Clear Text)

This report must be retained on board for a period of two years and must be available for consultation by a Department of Transport, Tourism & Sport Surveyor at all times. This inspection is based on random samples and therefore deficiencies may exist which may not have been identified.

Note - meaning of MSO terminology:
Action to be taken "16": Rectify deficiency within 14 days.
Action to be taken "17": Master instructed to rectify deficiency before departure.

2.6.12 As stated on the report the inspections are based on random samples and therefore deficiencies may exist which may not have been identified. The MSO advised that Code 17 ("Master instructed to rectify deficiencies before departure") does not means that the master/owner is required to inform the MSO of having carried out the change, however where photograph/video evidence of repair/test is requested, this must be supplied to the MSO. The MSO advised that subsequent to the 7 January 2021 Intermediate Survey, the vessel's Skipper/Owner supplied photograph/video evidence of repair/test for the deficiencies requiring Code 17 action (being for items 1,5,6, and 7 per the report), and having attended on the vessel, they issued the Interim FVSC on 26 January 2021.

See Appendix 7.8 - Marine Survey Office Intermediate Safety Survey Report 7 January 2021.

Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021.

2.6.13 The approval letter for the Stability Book issued by MSO required a lightship survey (being a survey required under Part 3 of S.I. No. 640/2007) to be completed by 2018 and this had not been completed at the time of this incident. This type of survey involves a walk around with a general plan to identify and mark all changes and would therefore have identified the 2012 changes which should have led to an inspection and assessment of the capacity of the changes to ensure the factory deck was watertight. The MSO advised they were aware of this overdue item and that it was to be dealt with at the next docking and renewal survey in May 2021.

2.6.14 It was ascertained that at some time during the voyage there was a defect with the overboard waste discharge chute which proved to be a source of some of the water that ultimately flooded the vessel. The Skipper states that he only observed the water entering the factory deck via the missing bushing for the first time on Saturday 27 March 2021. The overboard waste discharge chute was not mentioned in the MSO survey report list of deficiencies, and it is not known if this particular item was surveyed or tested, but previous surveys carried out since the 2012 modifications did not identify the modifications. The Owner and Skipper state that they inspected the vessel in January 2021 and that the bushing was not missing. No documentary evidence has been provided to evidence this or any other aspect of their survey.

2.6.15 According to S.I. No. 640/2007 Regulation 7.10 (b) no changes to the vessels hull, equipment or electrical systems affecting the vessels overall safety condition can be made after any survey without ministerial permission. The owner is therefore obliged to seek permission from the Minister (through the MSO) for the alterations/changes made to the vessel's hull by re positioning the fish processing unit and creating a new hull opening for a new overboard waste discharge chute.

2.6.16 The Owner of FV Ellie Adhamh was unable to provide any records of maintenance, repairs or tests for the vessel's modified fish processing unit including the overboard waste discharge chute and the modified bilge pumps.

The Owner was unable to provide details, information, or written records as to whether any of the modifications were Class surveyed by Bureau Veritas, although they assert that they were. The Owner was unable to provide details, information, or records as to whether the modifications were presented to the MSO for approval during any MSO surveys or at any other time. The Owners assert that both MSO and Bureau Veritas did carry out surveys of the chute but have not provided records to verify this. Both the MSO and Bureau Veritas have confirmed that these changes were not notified to them.

2.6.17 Regulation 12 provides for a variety of circumstances where the Minister may cancel a FV Safety /Exemption certificate. The penalties for non-compliance with the Regulations focus on the fishing vessel only as follows:

*"**Cancellation of certificates and cesser.***

12. (1) The Minister may cancel a Fishing Vessel Safety Certificate or a Fishing Vessel Exemption Certificate if he or she is satisfied that—

(a) any declaration of survey on which the certificate was founded has been in any particular manner made fraudulently or erroneously,

(b) the certificate has been issued upon false or erroneous information, or

(c) since the making of the declaration, the hull, equipment or machinery has sustained any damage or are otherwise inadequate for their intended service,

(d) the certificate being extended under Regulation 11 is not endorsed in the manner set out in Regulation 11(5),

(e) the vessel has ceased to be entered in the Register of Fishing Boats, or

(f) corrective action has not been taken under Regulation 7(9)(b) or has not been taken to the satisfaction of an authorised officer.

(2) Where the holder of a Fishing Vessel Safety or Exemption Certificate is notified of the cancellation of the certificate, he or she shall surrender the certificate to the Minister."

2.7 MSO and Bureau Veritas Arrangements with Regard to Surveys

2.7.1 The survey activities of Recognised Organisations are set out in the Merchant Shipping (Safety of Fishing Vessels) Regulations S.I. No. 640/2007. Under Regulation 7(8) the MSO permits surveyors of the Recognised Organisation[4] where the vessel is classed to carry out surveys to ensure compliance with Parts 2 and 4 of the Regulations. Under Regulation 7(8) where a vessel is:

"classed with a recognised organisation, a surveyor appointed by that recognised organisation may survey the vessel in order to ascertain whether the vessel complies with such requirements of Parts 2 [construction, watertight integrity and equipment] *and 4* [machinery and electrical installations] *to it and for that purpose the surveyor may require the vessel and any of its machinery, fittings and equipment to be submitted to such tests as he or she considers necessary."*

2.7.2 The MSO's procedure for intermediate surveys (referenced above) required by Regulation 7(1)(b)(ii) at intervals of two years, is to check that a vessel remains in compliance with the Classification survey requirements of Recognised Organisations. The MSO advise that their survey records indicate these periodical surveys for FV Ellie Adhamh were undertaken by the MSO in 2015 and 2019. The MSO renewal surveys were also carried out every four years. The scope and extent of both types of surveys was based on the vessel being Classed by Bureau Veritas.

2.7.3 The MSO advised the MCIB that in 2012 (when the Owner stated the change to the location of the fish processing unit and the installation of a new overboard waste discharge chute occurred) the vessel was in Class with the Recognised Organisation, Bureau Veritas. Accordingly, the MSO could rely on Bureau Veritas, to carry out the survey covering items relevant to Part 2 and Part 4 of the Regulations. The MSO also are of the view such a survey could be taken to mean that there were no breaches of Regulation 7.10 of S.I. No. 640/2007 which required that (a) the condition of the vessel and its equipment be maintained to conform with the Regulations to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons onboard and (b) prohibited any change that might affect the safety of the crew or vessel that has not been authorised by the Minister. In effect the monitoring of the statutory obligations is effectively transferred to Bureau Veritas as its Recognised Organisation, so that any survey carried out by the Recognised Organisation after a change could be relied on by the MSO as evidence of compliance with the regulations.

4. Regulation 3 of S.I. No. 640 of 2007 defines a "Recognised Organisation" as an *"Organisation or other private body carrying out safety assessment work on behalf of the Minister and recognised in conformity with the European Communities (Ship Inspection and Survey Organisations) Regulations 2003 (S.I. No. 301 of 2003)".*

S.I. No. 301 of 2003 was revoked and replaced by the European Communities (Ship Inspection and Survey Organisations) Regulations 2011 S.I. No. 275 of 2011. A formal agreement between Ireland and Bureau Veritas is currently in place pursuant to S.I. No. 275/2011.

2.7.4 While the use of agents to conduct surveys is common in the international shipping industry, the scope of the functions of Recognised Organisation is defined in the Regulations as limited to *"carrying out safety assessment work on behalf of the Minister"*. There is no express provision in the Regulations that allows the assigned statutory survey to be deemed to also mean that there were no breaches of Regulation 7. 10 of S.I. No. 640/2007.

2.7.5 In respect of the full surveys carried out in December 2012 and March 2017 (and the inspections in October 2015 and January 2019), no records have been provided by the MSO to show any report to them by the Owners of the 2012 changes. The MCIB understands that the bilge pump was removed in 2012 at the same time as the fish processing conversion, so that surveyor must have been aware of the changes. Bureau Veritas have also confirmed to the MCIB that they have no records to show that any modifications were presented for approval. The Owners and Skipper have also not provided any records of any notification. In summary, it appears that because there was no notification of any changes by the Owner that no actual surveys were carried out by Bureau Veritas to reinstate class after 2012 because their rules allowed them to rely on the Owner's confirmation there have been no alteration/modification to the vessel so that a full plan review is not required to be carried out before reinstating the Class. Whatever the nature of their reviews, after the later 2016 work (when class was reassigned by Bureau Veritas further to surveys carried out) it does not appear to have raised any alerts about the 2012 changes. In turn the MSO relied in part at least on the fact of classification. This therefore illustrates the importance of owners complying with the 2007 regulations and in particular Regulation 7 (10) to ensure alterations that might affect the safety of the crew or vessel are independently evaluated. This was particularly relevant here given the freeboard exemption.

2.8 Crew Details

2.8.1 FV Ellie Adhamh had seven crew onboard at the time of the incident.

Skipper: The Skipper had been appointed aboard FV Ellie Adhamh since January 2021. At the time of the incident the Skipper possessed the following certificates registered with Bord Iascaigh Mhara (BIM) (being training/certificates required by the MSO):

- Elementary First Aid Onboard Ship – STCW-95
- Fire Prevention and Safety Awareness
- Personal Survival Techniques STCW-95
- Enhanced Safety Training Scheme (under 15 m) Basic Safety Training Card (Sept 2019)

- Global Maritime Distress and Safety System (GMDSS) General Operators Certificate
- Electronic Navigation Systems (Fishing)
- Medical First Aid 2020
- Fire Prevention and Fire Fighting (3 day) STCW-95.

2.8.2 Crewmember A: EU national (Poland). Experienced fisher and vessels Top Deck Chargehand. English speaker and employed onboard the vessel for approximately nine years. Crewmember A has no certificates recorded on the BIM information system.

The MCIB were provided with Polish certificates for this Crewmember and Crewmember B subsequent to the issuance of the draft report under Section 36. These provided as follows:

- Certificate of Basic Safety Training in Personal Survival Techniques issued 19 September 2014
- Certificate of Basic Safety Training in Fire Prevention and Fire Fighting issued 19 September 2014
- Certificate of Basic Safety Training in Elementary First Aid issued 14 July 2021 (after the casualty)
- Certificate of Basic Safety Training in personal Safety and Social responsibilities issued 16 July 2021 (after the casualty).

2.8.3 Crewmember B: EU national (Poland).

Experienced fisher and vessels Factory Deck Chargehand. English speaker and employed onboard the vessel for approximately nine years. Crewmember B has no certificates recorded on the BIM information system. Later provided certification was as follows:

- Certificate of Basic Safety Training in Fire Prevention and Fire Fighting issued 30 April 2021 (after the casualty)
- Certificate of Basic Safety Training in Elementary First Aid issued 04 November 2016
- Certificate of Basic Safety Training in personal Safety and Social responsibilities issued 04 November 2016.

2.8.4 Crewmember C: EU national (Poland).

No fluency in English language.

Crewmember C had no certificates recorded on the BIM information system.

The Owner advised that Crewmember C had the following training:

Certificate of Basic Safety Training in Personal Survival Techniques

Certificate of Basic Training in Fire Prevention and Fire Fighting

Certificate of Basic Training in Elementary First Aid

Certificate of Basic Safety Training in Personal Safety and Social Responsibilities.

2.8.5 Crewmember D: EU national (Poland).

No fluency in English language. Crewmember D had no certificates recorded on the BIM information system. No certificates provided.

Owner advises he has Basic Safety Training.

2.8.6 Crewmember E: Non-EU national (Egypt).

No fluency in English language. Crewmember E had no certificates recorded on the BIM information system. No certificates provided.

The Owner advises there was some issue over training card.

2.8.7 Crewmember F: Non-EU national (Egypt).

No fluency in English language. Crewmember F had no certificates recorded on the BIM information system. No certificates provided.

The Owner advised Crewmember F had some sea safety training in Italy but had no record of same.

The Owner advised that Crewmembers A, B, C and D had safety training issued under The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) Convention 1978 as amended, under the authority of the Government of the Republic of Poland by the Maritime Office in Slupsk. The Owner asserted that Crewmembers C and D had a good command of

English, however the Skipper advised that communications with the entire crew were difficult due to their limited language.

2.8.8 The absence of the fishers' work agreements onboard the vessel was a deficiency noted (No. 12) on the deficiency list issued following the 7 January 2021 survey (for the interim FVSC issued on 26 January 2021). The requirement was for rectification by the Master prior to departure. At the time of the survey the MSO advised that the Owner indicated at least one person worked under a contract of employment or in an employment relationship onboard the vessel. The Owner stated that this crewmember was not onboard during this trip. Following the incident all crew indicated to the MSO they were employed on a share basis. No contracts were provided to the MCIB even though after circulation of the draft report the Owners asserted that *"crew agreements were completed the end of January 2021"*. No information was provided in respect of previous contracts.

2.8.9 The MCIB investigator interviewed the Skipper, Crewmember B, a former Crewmember, and Crewmember E with a translator (Crewmembers C and D had left Ireland, Crewmembers A and F could not be traced). The information set out about crew that were not interviewed was sourced from the Skipper and other crewmembers.

2.9 Fishing Vessel's Crew Organisation and Training

2.9.1 Since 1 September 1989, fishing vessels between 16.5 m and 24 m length required at the time of this marine casualty a certified skipper, with a minimum level of qualification of Second Hand Special Certificate of Competency.[5]

2.9.2 The Skipper did not have the required Second Hand Special Certificate of Competency. To acquire this and be qualified to skipper a vessel of this type (less than 24 m in length), a Second Hand Limited Certificate of Competency is required, or a Second Hand Unlimited Certificate of Competency. After the first certificate has been held for 12 months of service at sea as a watchkeeping deck officer in fishing vessels of 12 m or more in length (i.e. working with a qualified skipper), application can be made for a Second Hand (Special) Skipper Certificate of Competency subject to the provisions of the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2023 S.I. No. 313 of 2023 which post-date the date of this marine casualty.[6] The period of working at sea under

5. The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations, 1988 S.I. No. 289 of 1988 (as amended) were revoked and replaced by the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2023 S.I. No. 313 of 2023. The new Regulations apply to fishers aboard fishing vessels that are 15m in length overall and over and came into operation on 1 July 2023.The Regulations provide that certificates of competency for the deck officer qualification of "Second Hand (Special)" would no longer be issued except for those fishers who have already commenced a period of training for that qualification (all of which training, including sea service, must be completed before 1 July 2026).

6. See the Department of Transport, Tourism and Sport Certificates of Competency for Fishing Vessels Deck Officer Requirements as then applied: The 'Exam Directions' (effective from 1st December 2016). These are issued under the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations, 1988 S.I. No. 289 of 1988 made under Sections 3 and 8 of the Merchant Shipping (Certification of Seamen) Act, 1979, as amended by S.I. No. 192 of 2000, which specify the standards of competency and the conditions to be satisfied before a certificate of competency under those Regulations will be issued.

a qualified skipper is an essential and important part of the necessary training. The Skipper was responsible for the operation of the ship and the fishing operations. He was the Owners' appointed Skipper onboard the FV Ellie Adhamh despite not having the required certification of a Second Hand Special Certificate of Competency.

2.9.3 The Skipper stated that during 2020 he had studied for the written examination element for a Second Hand Limited Certificate of Competency before re-joining the vessel in January 2021 when he was appointed to the Skipper's position. He recounted that he was the vessel's onboard engineer for approximately six years and trainee Skipper for two years prior to his appointment as Skipper. He did not have any engineering qualifications. He advised that he was familiar with the operation and maintenance of the marine engineering equipment and systems onboard FV Ellie Adhamh having worked onboard the vessel as the person in charge of the engine room. There was no regulatory requirement for a certified engineering officer on this type of vessel. Later events do not support the assertion of familiarisation with the engineering features of the vessel.

2.9.4 The Skipper's work interaction with the crew was through the Top Deck Chargehand, Crewmember A, and the Factory Deck Chargehand, Crewmember B. The chargehands spoke English, and Polish was their native language. The remaining crewmembers (two Polish and two Egyptian nationals) were not fluent English speakers. The Skipper passed his instructions and work requirements to the chargehands who relayed these instructions and work requirements to the other members of the crew. Communication with Crewmembers E and F (Egyptians with no or very limited English and no Polish) was by a mixture of key words gesticulations and mime, this was confirmed by Crewmember E to the MCIB who confirmed that they had no training, documented or otherwise, in Ireland. The Owner does not agree with the information provided to the MCIB investigator as to language proficiency.

2.9.5 According to the Owners, Crewmembers A and B were responsible for the quality of the catch and ensuring packing weights were correct. They worked on the factory deck, processed and stored the fish catch which was manned by the two Egyptian Crewmembers (E and F).

2.9.6 All fishing vessel crewmembers are required to undergo Basic Safety Training as per the Fishing Vessel (Basic Safety Training) Regulations S.I. No. 587 of 2001 before going to sea for the first time on a fishing boat[7]. Regulation 4 states:

"Basic Safety Training.

(1) Every crew member of a fishing vessel shall undertake basic safety training as set out in this legislation.

(2) Basic safety training shall consist of the following 3 training units-

7. The Regulations also required all serving crewmembers to undertake Basic Safety Training on a phased basis between 2003 and 2008

(a) personal survival techniques, including man overboard techniques,

(b) elementary first aid, and

(c) fire prevention, health and safety training, and shall be held in such establishments, to such standards, under such conditions and for such duration as BIM may approve and determine.

(3) The dates by which basic safety training must have been completed by each crew member are specified in the Table of this Regulation.

(4) A crew member who has not successfully completed basic safety training by the date specified in the Table shall not work onboard a fishing vessel."

The crews' qualifications and certifications are set out in paragraph 2.8. The certificates listed for Crewmembers A and B were only produced to the MCIB after a draft of the report was circulated. The MSO have stated that no breaches of the Fishing Vessel (Basic Safety Training) Regulations, 2001 had been detected by them.

2.9.7 The applicable regulations at the time in respect of manning were the Fishing Vessel (Certification of Deck Officers and Engineer Officers) Regulations 1988 S.I. No. 289 of 1988[8].

2.9.8 In order to be issued with a Safe Manning Document, a fishing vessel owner must apply in writing to the MSO outlining proposals as to the numbers and qualifications of deck officers, engineer officers and any such other personnel the owner considers should be carried onboard the fishing vessel to ensure the vessel is sufficiently and safely manned for its safe navigation and operation, whilst providing appropriate work and living conditions for personnel onboard. The MSO consider the vessel's operations, machinery, and maintenance before issuing the Safe Manning Document. It is against the law for a fishing vessel to go to sea without a Safe Manning Document onboard, or for the vessel to be operated below the level set out in the Safe Manning Document.

2.9.9 The FV Ellie Adhamh was not required to have a Safe Manning Document at the time due to the staggered application of the Regulations which aligned with regulatory surveys. In relation to fishing vessels of 15-24 m in LOA, the fishing vessel Owner was required to ensure that there was a valid Safe Manning Document in place on the date of completion of the next survey for grant or renewal of a fishing vessel safety certificate or the date of completion of the next Intermediate Survey, whichever occurs later.[9]

8. S.I. No. 289 of 1988 was amended by the Fishing Vessels (Certification of Deck Officers and Engineer Officers) (Amendment) Regulations 2019 S.I. No. 673 of 2019 and then revoked and replaced by the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2023 S.I. No. 313 of 2023.

The new regulations apply to fishers aboard fishing vessels that are 15m in length overall and over and came into operation on 1 July 2023.

9. As required by the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007.

2.9.10 FV Ellie Adhamh was constructed before the 19 December 2019 and is 15-24 m LOA. The FV was due an MSO safety survey in December 2020 for renewal of its FVSC. This survey was conducted within the terms of an Intermediate Survey and the vessel was granted an Interim FVSC. There was no Safe Manning Document in place for this vessel at the time of the MSO's FVSC/Intermediate Safety Survey and it was not required at the time of that survey.

2.9.11 While the FV Ellie Adhamh did not require a Safe Manning Document at the time of this incident, it is pertinent to note the important Regulations that now apply to what is required before a Safe Manning Document can issue.

2.10 Vessel's Fishing Gear and Fish Processing Method

2.10.1 FV Ellie Adhamh was rigged as a trawler (15-24 m), designed as a twin rig trawler and fished for prawns, cuttlefish, and scallops. On this fishing trip the vessel was fishing specifically for prawns using a Nephrops trawl. This trawl net is specifically designed to catch Nephrops (Nephrops Norvegicus) which is a high value catch.

2.10.2 The Nephrops trawl (also known as the prawn net) is a long winged low demersal trawl net with lightweight ground gear for towing over soft, muddy areas along, but not on, the seabed, where Nephrops are found, with the mouth held open by a pair of otter boards (trawl doors). The Nephrops (prawns) and other fish (bycatch) are swept into and down to the very end of the trawl net. When the trawl is recovered the cod end is opened and the trawl contents spill out into a hopper constructed in the vessel's stern. The hopper funnels the catch into the vessel's main or factory deck (middle deck/fishing deck) and onto a conveyor belt. The conveyor belt enables the crew to sort and process the catch while the conveyor belt transports debris and waste to the factory deck's overboard waste discharge chute. The overboard waste discard chute onboard the FV Ellie Adhamh was situated on the port aft quarter of the vessel. The catch of prawns was collected in baskets, processed and packed into boxes. The boxed prawns were then handed down via a small hatch in the main fish hold hatch into the fish hold freezer room where they were frozen, and boxes stacked ready for off-loading in port.

See Appendix 7.2 – C. General Arrangement Plan of the Main Deck – Post 2012 Alteration, Manually Altered (marked-up) to Illustrate Change as no Drawing Available.

2.10.3 The overboard waste discharge chute was originally fitted to the vessel's starboard side on the main deck as part of the fish processing unit. According to the Owner the location of the processing was moved within the factory deck which involved the overboard waste discharge chute being relocated to the port side, aft section of that deck in 2012. This would also have shortened the conveyor arrangements. The vessel was never recovered so an inspection of the vessel was not possible for the MCIB investigation. No documents were provided

by the Owners showing any modification or maintenance as the only copies were all apparently on the vessel when it sank. After a draft of the report was provided to the Owners, the MCIB was advised that a new waste discharge chute was fitted port aft and the original one on the starboard side was still in place in 2012 when the entire fish processing unit was relocated.

2.10.4 The function of the overboard waste discharge chute was to facilitate clearing away (from the prawn sorting process) all unwanted waste and debris by conveying it to the end of the belt and allowing the waste to fall through the overboard chute and discharge directly into the sea. The chute passed through the vessel's port side hull and its side opening was close to, but above, the vessel's normal waterline. The actual height is not known as no drawings of this modification have been provided.

2.10.5 The waste discharge chute cover was fitted "back to front" in that the face intended to take the pressure, being the external water from outside the vessel, was facing into the main deck whereas the pressure was coming from the outside. As the chute cover (or lid) was secured from the inside, the loading force - the water surging up the chute - exerted considerable force on to it. This raised the issue of the watertight nature of the factory deck. The structure above the main/factory deck was designed to be weathertight and the structure below was designed to be watertight. The difference between weathertight and watertight is that a weathertight fitting must withstand water pressure from the outside (be watertight from outside only) while a watertight fitting must withstand water pressure from both sides.

See Appendix 7.9 - Main Deck: Conveyor, Hopper, and Overboard Waste Discharge Chute.

2.10.6 To stop ingress of water when the conveyor belt was not in operation the chute was fitted with a hinged lid or hatch on its upper surface (directly under the end of the conveyor belt) which could be secured and made watertight by tightening down the lid's two butterfly nuts on the inboard side. According to the Skipper, the chute was also fitted with an inside flap which could be moved by hand, operating a lever attached to the flap's spindle. It is a requirement to have a non-return flap fitted to prevent water entering when the top lid is open. The lever spindle passed through the side of the chute via a bushing arrangement and at the time of the incident the bushing was missing, and the bush orifice was open allowing water to enter the deck space when the chute was submerged in the sea as the vessel rolled. The missing bushing would also prevent the flap from sealing as designed due to misalignment.

2.10.7 Having departed on 13 March 2021, the FV Ellie Adhamh had been working the fishing grounds south of the Porcupine Bank, approximately 160 NM from Castletownbere. The vessel had a large quantity of prawns stowed away in the fish hold. The Skipper reported that the vessel was carrying nearly a full load and the vessel was deep in the water.

2.10.8 On Thursday 25 March at approximately 19.00 hrs-20.00 hrs the crew hauled the final trawl before the return trip to the vessel's home port of Castletownbere in Bantry Bay. The contents of the final trawl catch had been emptied into the factory deck hopper located at the stern of the vessel but had not been sorted and processed when the 220V electrical power failed in the factory main deck and wheelhouse deck. The emergency lighting was used up by around 06.00 hrs the following morning. The power failure affected the vessel's lighting in the factory deck and contributed to preventing the crew from processing and emptying the hopper of its contents, which in turn combined with water ingress to lead to unmanageable flooding.

2.11 Marine Casualty

This was a very serious marine casualty as defined by the European Communities (Merchant Shipping) (Investigation of Accidents) Regulations 2011 S.I. No. 276 of 2011 resulting in the total loss of a fishing vessel, and the potential loss of life or injury to the crew and to the persons involved in the rescue.

2.12 Weather and Sea Conditions

2.12.1 The Skipper recalled that weather conditions in the fishing area at the time of the vessel's electrical power failure in the evening of 25 March 2021 were rough. He expected weather conditions to deteriorate to gales throughout the following days. The naval vessel's anemometer recorded winds gusting at 60 kts at 15.42 hrs on 27 March (equivalent to Beaufort 11 "violent storm").

2.12.2 The Met Éireann weather report estimated weather and sea state conditions for the fishing area approximately 85 NM southwest of Mizen Head (about 100 NM from the actual vessel position at the time) was as follows:

Meteorological Synopsis: A depression south of Iceland (975 hPa) deepened on 25 March 2021 and steered a strengthening south-westerly airflow over the area. The associated active weather front moved eastwards across the area between 18.00 hrs and 24.00 hrs that day.

Wind: Winds were fresh Beaufort Force 5 (mean speed 16-22 knots) at first and for most daylight hours. Winds increased in the evening as the weather front crossed: strong to near gale and gusty Beaufort Force 6 or 7 (mean speed 22-33 knots). Wind direction was south westerly for most of the day and veered westerly by late evening. Gusts were strongest with the passage of the front with maximum gusts of up to 40 knots occurred between 8pm and 10pm.

Visibility: Visibility was moderate or poor (1-4 nm) in rain and heavy showers. Otherwise, visibility was good (greater than 5 NM).

Sea State: The sea state in the area was rough with significant total wave height of 3 to 4 meters from a westerly direction with a west-north westerly swell. The maximum individual wave height (at M3 (Irish Marine Data Buoy)) positioned 51° 13'N 010° 33'W during the period in question was 5.7 m. Marine data from M3 buoy is the most relevant as being in closest proximity to the area of this incident.

Weather: Scattered outbreaks of rain in the morning and forenoon. A period of fair weather with dry and sunny spells for a few hours in the afternoon before clouding over with rain in the evening followed by blustery showers. Showers in the late evening were heavy and possibly hail and thunder.

Temperature: Air temperature of 9 to 11 degrees Celsius.

Sea temperature: 10 to 11 degrees Celsius.

See Appendix 7.10 – Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021.

2.12.3 Met Éireann issued sea area forecasts for 24 hours ahead with an outlook for the following 24 hours. These Sea Area Forecasts are issued by the duty forecaster at Met Éireann four times a day; at midnight, 06.00 hrs, 12.00 hrs and 18.00 hrs with relevant gale warnings for that period. Sea Area Forecasts and marine warnings cover Irish Coastal Waters out to 30 NM off the coast including the Irish Sea. These forecasts include coastal reports giving real-time data of conditions at the fixed coastal position locations around the coast and from Irish Marine Data Buoys at sea. Marine data from M3 buoy positioned 51° 13'N 010° 33'W, is the most relevant as being in closest proximity during the course of this incident being 50-85 NM from the relevant location.

See Appendix 7.11 - Met Éireann: 24-hour Sea Area Forecasts 00.00 hrs on 25, 26, 27 and 28 March 2021.

A synopsis of data from four 24-hour Sea Area Forecasts issued at 00.00 hrs, between Thursday 25 March 2021 to Sunday 28 March 2021 is set out in the following sub paragraphs. The increasing difficult weather conditions can be tracked over the period with a gale warning in operation on the Friday morning.

2.12.4 Sea Area Forecast issued at 00.00 hrs Thursday, 25 March 2021 until 00.00 hrs Friday, 26 March 2021:

Gale warning: Nil

Meteorological situation at 21.00 hrs: A moderate to strong west to southwest airflow covers Ireland with trailing occluded fronts associated with a weakening wave depression of 997hPa positioned to the northeast of Scotland clearing

eastwards over the country. A deepening depression of 985hPa positioned east of southern Greenland will track eastwards during Thursday, generating an increasingly unstable west to southwest airflow over the country, with frontal troughs embedded in the flow.

Forecast for Irish coastal waters from Mizen Head to Erris Head to Malin Head:

Wind: West to southwest F4 or F5 and gusty. Soon increasing F5 to F7 and gusty. Later increasing 6 or 7 and gusty, with gale F8 possible locally in the northwest. Veering southwest to west and decreasing F5 to 7 and gusty on Thursday night.

Warning of Heavy Swell: Nil

Outlook for a further 24 hours until 00.00 hrs Saturday 27 March: Strong to gale force westerly winds, with strong gale possible locally in western sea areas during Friday.

M3 buoy. West-southwest (wind direction), 16 Knots (wind speed). Wave height: 3.0 m (wave trough to following peak), 1018hPa, steady (pressure in hectopascals (millibars)), steady (pressure tendency over past 3 hours).

2.12.5 Sea Area Forecast issued at 00.00 hrs Friday, 26 March 2021 until 00.00 hrs Saturday, 27 March 2021:

Gale warning: In operation. Westerly winds will reach gale force 8 at times tomorrow (Friday) on Irish coastal waters from Wicklow Head to Loop Head to Malin Head and on the south Irish Sea.

Meteorological situation at 21.00 hrs: Ireland lies in a strong southwest airflow generated by a depression of 977hPa centred south of Iceland. The airflow will become unstable tonight as an associated cold front move eastward across Ireland.

Forecast for Irish coastal waters from Roches Point to Slyne Head to Malin Head:

Wind: West force 6 or 7 and gusty imminent, soon increasing southwest to west force 7 or gale force 8 and gusty. Later veering west to northwest and decreasing force 6 or 7 by the end of the period, occasionally reaching gale force 8 in the northwest.

Warning of Heavy Swell: On Atlantic coasts Friday evening and night.

Outlook for a further 24 hours until 00.00 hrs Sunday 28 March: Strong to near gale force westerly winds, easing fresh to strong overnight Friday. Veering southwest and gradually increasing near gale force to gale force through Saturday.

M1 buoy. Report not available.

M3 buoy. West - Southwest, 21 Knots. Wave height: 3.6 m, 1003hPa falling.

2.12.6 Sea Area Forecast issued at 00.00 hrs Saturday, 27 March 2021 until 00.00 hrs Sunday, 28 March 2021:

Gale warning: In operation. Westerly winds will occasionally reach gale force 8 for a time tonight on Irish coastal waters from Bloody Foreland to Malin Head to Fair Head and also on the Irish Sea.

Meteorological situation at 21.00 hrs: A depression of 972hPa centred to the southeast of Iceland, generates a strong to gale force unstable westerly airflow over the area. A ridge is building from the southwest overnight.

Forecast for Irish coastal waters from Mizen Head to Slyne Head to Bloody Foreland:

Wind: West force 5 to 7 imminently decreasing force 4 or 5. Soon backing south and increasing force 7 to gale force 8 and gusty, touching strong gale force 9 at times in the northwest later.

Warning of Heavy Swell: On western and northern coasts tonight and on Saturday.

Outlook for a further 24 hours until 00.00 hrs Monday 29 March: Strong to gale force and gusty southwest winds, decreasing fresh to near gale force on Saturday night but increasing strong to gale force southwest again on Sunday.

M3 buoy. West – Northwest, 23 Knots. Wave height: 6.7 m, 1018hPa Rising slowly.

2.12.7 Sea Area Forecast issued at 00.00 hrs Sunday, 28 March 2021 until 00.00 hrs Monday, 29 March 2021:

Gale warning: In operation. Southwest winds will continue to reach gale force for a time on Saturday night on Irish coastal waters from Strangford Lough to Roches Point to Malin Head and on the Irish sea.

Meteorological situation at 21.00 hrs: Ireland lies in a strong to gale force southwest airflow, generated by a mature low of 948hPa positioned to the southwest of Iceland. Its associated weather fronts are moving over Ireland.

Forecast for Irish coastal waters from Mizen Head to Slyne Head to Malin Head:

Wind: Southwest force 6 to gale force 8 and gusty, imminently decreasing force 5 of 6. Soon increasing southwest force 6 to gale force 8 and gusty and later increasing force 7 to gale force 8 and gusty.

Warning of Heavy Swell: developing on western areas on Saturday night and extending to north-western areas.

Outlook for a further 24 hours until 00.00 hrs Tuesday 30 March 2021: Strong to gale force and gusty southwest winds, soon easing southwest fresh to near gale force.

M3 buoy. West- Southwest, 25 Knots. Wave height 6.4 m, 1012hPa Rising slowly.

2.13 Voyage

2.13.1 The FV Ellie Adhamh departed its home port of Castletownbere, Co. Cork on 13 March 2021 for a fishing trip to trawl for prawns. The Skipper of the fishing vessel intended to return to its home port on or about 30 March.

2.13.2 On 25 March the fishing vessel was trawling on the fishing grounds approximately 160 NM west of the coast of Co. Cork. The Skipper became aware the weather was forecast to deteriorate to gale force, and decided to return to port early, starting back the evening of Thursday 25 March, to the port of Castletownbere.

2.13.3 On the evening of Thursday 25 March, around 19.00 hrs-20.00 hrs, the vessel's crew finished the last trawl. As the trawl was being brought aboard the vessel experienced a 220V electrical power supply failure to the main deck (also known as the middle deck or factory deck) and the wheelhouse, immediately affecting the deck lighting, and wheelhouse equipment. Realising the serious nature of the power supply defect and his inability to make repairs, the Skipper knew the emergency batteries power supply would not last long and the vessel would then require a tow to complete its return voyage to port. The Skipper determined to make course at best speed to return the vessel to Castletownbere.

2.13.4 The emergency electricity supply was exhausted around 06.00 hrs on the following morning. Valentia Coast Guard was contacted by the Owners at 08.30 hrs to advise them of the situation. The Owners arranged a tug which was enroute by 09.00 hrs. FV Ellie Adhamh was in company with another fishing vessel, the FV Monica 2. FV Monica 2 also intended to return to port, and its skipper agreed to accompany the partly disabled vessel on the start of its return trip. On Friday 26 March, FV Monica 2 established a tow to the stricken vessel, but the tow line parted a few hours later due to the heavy weather. At 11.02 hrs FV Monica 2 advised that the weather was very poor and departed the scene making for Castletownbere for its own safety reasons.

2.13.5 IRCG issued a situation report (SITREP) requesting assistance to tow the disabled fishing vessel. The tug Ocean Bank was called out to assist but by 12.09 hrs advised that its windows were damaged by huge waves breaking over the vessel as she departed from Castletownbere. It was unable to assist and returned to Castletownbere.

2.13.6 At 16.41 hrs on Friday afternoon FV Ellie Adhamh's EPIRB was activated and transmitted the vessel's position at 51° 33'N 011° 42'W. Rescue helicopter R115 was tasked to attend from Castletownbere. The Navy's assistance was also requested. On Saturday 27 March a tow was eventually established. The crew were airlifted off the vessel by about 19.00 hrs that evening. The tow broke shortly after, so the vessel was adrift.

2.13.7 The next morning, Sunday 28 March 2021, a salvage and recovery operation commenced. At 09.08 hrs the tug Nomad reported the casualty vessel had a 30-degree list to the port side. The vessel's position was: 51° 27.29'N 010° 39.07'W and the weather on scene was: South-westerly wind force 7 (Beaufort Force 7, near Gale). At 10.25 hrs the tug Nomad reported the casualty vessel was listing 30 – 40 degrees and there was a smell of diesel in the area. At 10.55 hrs the tug Nomad reported that the FV Ellie Adhamh had sunk in position 51° 37.20'N 010° 23.02'W.

Appendix 7.12 - Marine Rescue Sub Centre Valentia SITREP1/UIIN0469/21 26 0936Z Mar 21 – FV Ellie Adhamh Broken Down.

Marine Rescue Sub Centre Valentia SITREP2/UIIN0469/21 26 1258Z Mar 21 – FV Ellie Adhamh Reported Position and Chart.

National Maritime Operations Centre Dublin SITREP 1/UIINO476/21 26 1832Z Mar 21 – Emergency Position Indicating Radio Beacon Activation.

2.14 Environmental Pollution

2.14.1 FV Ellie Adhamh was reported as having had onboard approximately 7000 lts of diesel fuel when departing on 13 March 2021. The Skipper reported that by the afternoon of Saturday 27 March 2021, there was little fuel left. Being a fishing vessel there was also likely to be present a quantity of hydraulic oil, lubrication oil, greases, fishing gear and trawls, fish boxes and various plastic containers. The quantities of these pollutants are unknown.

2.14.2 The fishing gear was brought onboard immediately prior to the incident. Therefore, it is deemed unlikely that the gear poses a significant hazard to wildlife as it was stowed on the trawl net reels.

2.14.3 While no oil slicks were reported it is likely that oil from a sunk fishing vessel will leach out of the wreck rising through the water column and disperse slowly on the surface due to the action of corrosion of the hull, prevailing weather and the tides. Oils and plastics remaining onboard the sunken vessel were likely to be released over time and pose a risk of environmental pollution.

2.15 Events from 20.00 hrs Thursday 25 March 2021 and Emergency Services Response

2.15.1 A series of incident SITREPs were issued from three IRCG Centres, the IRCG's National Maritime Operations Centre (NMOC), the Marine Rescue Coordination Centre (MRCC) and Marine Rescue Sub Centre (MRSC) were involved in this incident.[10] SITREPs continued over two days and are referenced here in chronological order. The SITREPs used in this report give an account of the sequence of events during the incident from the time of the involvement of the emergency services from Friday 26 March and leading up to the sinking of FV Ellie

Adhamh on the morning of Sunday 28 March 2021. The first IRCG SITREP made available to the MCIB was from MRSC Valentia to MRSC Valentia SITREP Group, on 26 March at 09.36 hrs. A synopsis and timeline of the incident events, including from the SITREPs, is as follows:

2.15.2 **Thursday 25 March**

Around 19.00 hrs-20.00 hrs approximately, FV Ellie Adhamh finished the last trawl and experienced an electrical power supply failure which affected its upper decks lights and reduced the vessel's operating systems and communications to its emergency batteries power supply only. The vessel had two independent emergency battery banks; one for the vessel's emergency lighting/principle operating systems and one battery bank bespoke to its radio communications equipment. Due to this main switchboard failure and mindful of the forecasted deterioration in weather conditions, the FV Ellie Adhamh proceeded at best speed and course for Castletownbere accompanied by FV Monica 2.

2.15.3 **Friday 26 March**

At around 05.30 hrs-06.00 hrs approximately (some evidence indicates this could have been somewhat earlier at approximately 04.00hrs), propulsion operating systems, navigation aids and emergency lighting fail onboard FV Ellie Adhamh. The vessel became adrift, and the emergency lights were extinguished onboard as emergency batteries were drained.

The Owner was informed at 06.30 hrs that there was no power left to steam and the FV Monica was attempting to tow the FV Ellie Adhamh. Between 07.40 hrs and 08.08 hrs the Owner contacted a towing company to arrange a tow. At about this time the Owner also contacted the Coast Guard as a precautionary measure and gave them the position of the FV.

FV Monica 2 established a tow and commenced towing the disabled vessel to its home port. The tow line parts some hours later and FV Ellie Adhamh becomes adrift.

MRSC Valentia issued the first of its SITREPs, UIIN0469/21 26 0936Z Mar 21.

The weather on scene was Westerly, Beaufort Force 7 with very rough sea and moderate waves.

08.00 hrs FV Ellie Adhamh Broken down, FV Monica attempting tow.

09.05 hrs Naval Operations advise LÉ George Bernard Shaw will assist estimated time of arrival (ETA) 6 hrs.

10. Each Centre issues SITREPs giving information and information updates being identified by their originating centre, the Centres unique incident number and chronological entry date (Day Time Group). The standard Day Time Group is explained as follows: e.g. the first SITREP in this report was on 26 March 2021 at 09.36 hours ZULU (time zone UTC) in 2021. This is identified and represented as **26 0936Z Mar 21** for this particular SITREP. All other SITREPs use this unique identifier format.

09.12 hrs Tug Ocean Bank will assist, LÉ George Bernard Shaw advised.

At 12.58 hrs MRSC Valentia issued its second SITREP UIINO469 21 1258Z Mar 21.

The weather on scene was Westerly, Beaufort Force 8 (Gale force) with a high sea swell but low waves.

11.02 hrs FV Monica 2 advises weather is poor and the vessel is returning to shore.

12.00 hrs FV Ellie Adhamh advise weather is very poor.

12.09 hrs Tug Ocean Bank reports it has damage to windows, is unable to assist and returning to Castletownbere.

12.14 hrs MRSC Valentia requested naval operations to task the Naval Patrol Vessel LÉ George Bernard Shaw to assist.

12.58 hrs Coast Guard MRSC Valentia report FV Ellie Adhamh broken down in position 51° 37'N 011° 54.30'W (approximately 70 NM from Castletownbere). The weather on scene was reported to be Westerly 7, Beaufort Force 8 (Gale force) with a high sea swell but low waves.

13.06 hrs naval patrol vessel LÉ George Bernard Shaw was proceeding to the fishing vessel's position, ETA in 6 hours. FV Ellie Adhamh advised by radio.

13.26 hrs IRCG rescue helicopter R115 was airborne and at 14.44 hrs was at the fishing vessel's position. At 14.52 hrs, R115 was in communications with the vessel's crew who noted that the latter were not requesting evacuation and were happy to stay onboard the vessel. R115 was released to return to Castletownbere helipad.

14.53 hrs Naval patrol vessel LÉ George Bernard Shaw advised MRSC Valentia that when they arrive to the stricken vessel the ship would be unable to tow the fishing vessel due to the weather conditions.

FV Ellie Adhamh's chart position is shown at Appendix 7.12 as according to MRSC Valentia SITREP2/UIINO469/21 26 1258Z Mar 21 - FV Ellie Adhamh Reported Position and Chart.

At 16.40 hrs the vessel's EPIRB was activated by FV Ellie Adhamh. The EPIRB was retained onboard to ensure the FV's position was monitored, and its information provided to the NMOC in Dublin. NMOC passed on this information to MRCC Dublin SITREP Group designating MRSC Valentia/MRCC Dublin for co-ordinating instructions. This information is contained in NMOC Dublin SITREP1/UIINO476/21 26 1832Z Mar 21 (see Appendix 7.12).

16.41 hrs NMOC had advised the vessel's EPIRB was activated and transmitted the vessel's position at 51° 33'N 011° 42'W. Rescue helicopter R115 was tasked to attend from Castletownbere (see Appendix 7.12).

MRSC Valentia issued an updated SITREP in SITREP3/UIINO469/21 26 1647Z Mar 21. The weather on scene was reported to be Westerly, Beaufort Force 8 (Gale force) with a high sea swell and moderate waves.

16.43 hrs Naval patrol vessel LÉ George Bernard Shaw advised their ETA to the casualty's position was now 23.00 hrs due to weather conditions.

16.52 hrs Digital Selective Calling (DSC), MAYDAY Relay.

16.57 hrs Naval patrol LÉ George Bernard Shaw was appointed On-Scene Coordinator (OSC).

17.07 hrs Rescue helicopter R115 was airborne again and enroute to the EPIRB position.

17.26 hrs NMOC tasked rescue helicopter R117 to route to Castletownbere.

17.31 hrs Rescue helicopter R115 on scene and in communications with the casualty vessel and informed that the EPIRB was activated onboard in order to give the vessel's position. Skipper advised that the crew were staying onboard and that a towing bridle had been made ready.

18.04 hrs Rescue helicopter R117 airborne and enroute to Castletownbere, ETA 1 hour.

18.33 hrs Rescue helicopter R115 advises that the helicopter was returning to Castletownbere due to fuel constraints and that the casualty's position was 51° 34'N 011° 31'W. LÉ George Bernard Shaw was advised of the casualty's new position.

The Skipper estimated the vessel was within 45 NM of the Bull Rock.

FV Ellie Adhamh's chart position is shown as according to this most recent SITREP3 at Appendix 7.13 below.

See Appendix 7.13 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP3/UIINO469/21 26 1647Z Mar21 – Emergency Position Indicating Radio Beacon Activation Reported Position and Chart.

18.37 hrs MRSC Valentia transmitted a SAR SITREP4/UIIN0469/21. Entry date: 26 1837 Z Mar 21.

The weather on scene was reported to be Westerly, Beaufort Force 7 (near Gale force) with a high sea swell but moderate waves.

18.47 hrs LÉ George Bernard Shaw advised ETA on scene 1-2 hrs. Merchant ship Frio Forwin ETA 1 hour. Weather 2700 at 35 knots. Seas high, visibility good.

19.17 hrs Merchant ship Frio Forwin on scene with FV Ellie Adhamh, communications established.

20.04 hrs Naval patrol LÉ George Bernard Shaw established radar contact and communications with the casualty.

See Appendix 7.14 – Marine Rescue Sub Centre Valentia SITREP4/UIINO469/21 26 1837Z Mar 21.

20.40 hrs OSC aboard naval patrol LÉ George Bernard Shaw discusses towing arrangements with the Skipper of FV Ellie Adhamh. Skipper advises that his VHF hand-held radio batteries are low in power and requests VHF radios and salvage pumps be landed onboard the fishing vessel. Valentia Coast Guard Radio (CGR) advised.

MRSC Valentia transmitted SAR SITREP5/UIIN0469/21. Entry date: 26 2258 Z Mar 21 with updated and additional information as follows:

The weather on scene was reported to be Westerly, Beaufort Force 7 (near Gale force) with a high sea swell and high waves.

22.00 hrs Naval patrol LÉ George Bernard Shaw on scene with FV Ellie Adhamh. Advised that crew onboard the fishing vessel were all right. Local weather conditions were westerly winds at 30 knots, gusting 40 knots at times. Visibility was good. Sea swell was over 15 m height. The naval OSC onboard LÉ George Bernard Shaw advised the intention was to establish a tow the following morning at 05.30 hrs.

See Appendix 7.15 – Marine Rescue Sub Centre Valentia Search and Rescue SITREP5/UIINO469/21 26 2258Z Mar 21.

2.15.4 **Saturday 27 March**

At 00.17 hrs Valentia CGR confirms with OSC onboard LÉ George Bernard Shaw that radios and pump are being arranged.

MRSC Valentia transmitted SAR SITREP6/UIIN0469/21. Entry date: 27 March 0818Z with updated and additional information as follows:

Weather on scene was reported as westerly force 6 (Beaufort Force 6 (Strong Breeze)). Sea very rough with high wave swells.

05.10 hrs LÉ George Bernard Shaw advises radio communications re-established with FV Ellie Adhamh.

06.25 hrs Castletownbere Coast Guard Unit (CGU) delivered hand-held radios (VHF's) and salvage pump to rescue helicopter R117.

06.39 hrs Rescue helicopter R117 advise they will not take pump onboard as it was not CHC (CHC was the contractor for SAR services) approved equipment.

Rescue helicopter R117 stood down and R115 tasked. LÉ George Bernard Shaw advise they are trying to establish a tow line to the casualty vessel.

At 07.56 hrs Skipper informs OSC onboard LÉ George Bernard Shaw that FV crew are tired and he was worried about water onboard.

08.00 hrs Castletownbere Lifeboat tasked.

08.01 hrs Rescue helicopter R115 was enroute with two bilge pumps and VHF radios for the casualty vessel, ETA 09.00 hrs.

08.10 hrs LÉ George Bernard Shaw advise they are still trying to attach a tow line.

At 08.39 hrs the FV Skipper informs OSC that he had two tonnes of water onboard. Pumps were not working, and the crew were anxious.

08.47 hrs Castletownbere Lifeboat launched with ETA to FV Ellie Adhamh in 3 hr 15 minutes.

09.02 hrs Rescue helicopter R115 on scene and deploying pumps to FV Ellie Adhamh.

See Appendix 7.16 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP6/UIINO469/21 27 0818Z Mar 21.

MRSC Valentia transmitted SAR SITREP7/UIIN0469/21. Entry date: 27 March 1117Z with updated and additional information as follows:

Weather on scene was reported as westerly winds force 7 (Beaufort Force 7 (near Gale)). Sea very rough with high wave swell.

09.18 hrs Rescue helicopter R115 reported to having landed two salvage pumps onboard the casualty vessel. Mid deck pumped out and vessel stable for the moment.

10.04 hrs LÉ George Bernard Shaw continued attempts to establish tow.

10.48 hrs LÉ George Bernard Shaw had the vessel under tow making 5.5-6 kts towards Castletownbere. Rescue helicopter R115 was released from the incident scene.

Owners contacted to arrange tow when vessel is within harbour limits. ETA for Eastern entrance to Castletownbere, 22.00 hrs that night.

Naval vessel LÉ George Bernard Shaw had onboard a Warship Electronic Chart Display and Information System (WECDIS), an electronic display system designed to support all phases of maritime navigation including route planning plotting, course monitoring, piloting, contact tracking, collision avoidance and conning information. The system provides real-time tactical information and has

information storage capability. The relative positions and movements of both vessels during the towing operation were plotted onboard the naval vessel and provided to the MCIB.

See Appendix 7.17 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP7/UIINO469/21 27 1117Z Mar 21 - FV Ellie Adhamh Taken in Tow.

See Appendix 7.18 - Naval Vessel Warship Electronic Chart Display and Information System Towing Operation Plot.

See Appendix 7.19 – FV Ellie Adhamh Taken in Tow Position (screengrab from the Warship Electronic Chart Display and Information System onboard the Naval Vessel).

At 13.56 hrs, MRSC Valentia transmitted SAR SITREP8/UIIN0469/21. Entry date: 27 March 1356Z giving information regarding tug towing rendezvous. The Owners of the casualty vessel were contacted for them to arrange towage when FV Ellie Adhamh was within harbour (Castletownbere) limits. ETA for eastern entrance Castletownbere was 22.00 hrs that night (Saturday 27 March). Tug Nomad was to meet the LÉ George Bernard Shaw at the western entrance to Castletownbere to assist and take over the tow when in the shelter of Bantry Bay at the eastern entrance to Castletownbere harbour. Castletownbere Royal National Lifeboat Institution (RNLI) was shadowing the casualty in case of problems arising. Rescue helicopter R115 was released for the moment. The ETA for eastern entrance to Castletownbere was 22.00 hrs.

See Appendix 7.20 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP8/UIINO469/21 27 1356Z Mar 21.

MRSC Valentia transmitted SAR SITREP9/UIIN/0469.21. Entry date: 27 March 1732Z with updated and additional information as follows:

Weather on scene was reported as south westerly winds, force 7 (Beaufort Force 7, near Gale). Seas were very rough with moderate wave swell.

14.48 hrs FV Ellie Adhamh was reported as having taken a significant list and the onboard pumps were failing. OSC onboard LÉ George Bernard Shaw requested MRSC to have rescue helicopter R115 on scene to remove crew if events turned for the worse while the naval ship would continue towing without the crew onboard.

15.16 hrs The weather was reported as deteriorating and the casualty's pumps were only working sporadically.

15.23 hrs The Skipper requested the naval vessel bring the towing course around into the weather to try to re-establish pumping and the stability of the FV and that pumping was sporadic and not keeping pace with the ingress of water.

15.35 hrs LÉ George Bernard Shaw heaved to into the prevailing weather and

suggested to the crew that they abandon the vessel if they cannot get the pumps working.

15.36 hrs As noted in a later SITREP, at this time R115 was proceeding to assist in the recovery of the seven crew (later arriving on scene at 17.50 hrs).

At 15.42 hrs the Skipper informed OSC that the pumps were blocking with debris and pumping was sporadic. The Skipper requested the naval vessel turn back east and "Make Haste" to Castletownbere. OSC informed the FV Skipper that was not possible to turn back to the east due to safety concerns for the FV and the naval vessel. The naval vessel's anemometer recorded winds gusting at 60 kts at 15.42 hrs on 27 March (equivalent to Beaufort 11 "violent storm").

At 15.53 hrs OSC requested that a rescue helicopter be tasked as soon as possible. The Skipper informed OSC that he (the FV) now had four-five tonnes of water in the middle deck. OSC informed the Skipper that he had 20 minutes to restore pumping or else he would be directed by the IRCG to abandon ship.

At 15.56 hrs OSC advised the FV Skipper to get his crew into survival suits and stream a liferaft from the stern of the FV.

16.02 hrs The SAR SITREP9 reported that the accommodation deck was flooding and that they had deployed a liferaft over the stern of the vessel. At 16.16 hrs it was reported the liferaft was lost.

16.30 hrs Rescue helicopter R115 was on scene and attempting to winch crew aboard the helicopter.

16.57 hrs Rescue helicopter R115 recovered its winchman without any of the crew. Conditions were reported as being very poor. Another liferaft was lost. In addition, LÉ George Bernard Shaw also deployed a liferaft which was also lost.

17.26 hrs Castletownbere RNLI attempted to get another liferaft onboard the casualty vessel.

See Appendix 7.21 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP9/UIINO469/21 27 1732Z Mar 21.

MRSC Valentia transmitted SAR SITREP10/UIIN0469/21. Entry date: 27 March 1751Z with updated and additional information as follows:

Weather reported on scene. South westerly force 7 (Beaufort Force 7, (near Gale)). Sea very rough with moderate wave swell.

17.40 hrs Rescue helicopter R117 on scene, R115 returning to Castletownbere for fuel. R117 attempting to hi-line a liferaft down to the casualty.

18.22 hrs Rescue helicopter R117 liferaft was onboard casualty and the helicopter was attempting to winch the crew aboard.

18.37 hrs Winchman on the deck of the casualty.

18.55 hrs Rescue helicopter R117 advised that all seven crew from the casualty vessel were onboard the helicopter and was heading for Cork Airport. Castletownbere RNLI all-weather lifeboats (ALB) was stood down and rescue helicopter R115 returned to Base.

See Appendix 7.22 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP10/UIINO469/21 27 1751Z Mar 21.

At 18.59 hrs MRSC Valentia's SAR SITREP11/UIIN0469/21. Entry date: 27 March 1859Z issued with updated and additional information as follows:

Weather reported on scene. South-westerly wind force 7 (Beaufort Force 7 (near Gale)), Sea, very rough with moderate wave swell.

19.04 hrs Rescue helicopter R117 was enroute to Cork Airport with seven crew from FV Ellie Adhamh onboard, ETA Cork Airport 19.40 hrs.

19.08 hrs LÉ George Bernard Shaw was attempting to change course to tow the casualty vessel into Bantry Bay.

At 19.14 hrs The towing bridle parted in position 51° 27.42'N 010° 39.44'W. Due to the weather conditions the naval crew were unable to reconnect the tow line to the drifting and unmanned casualty vessel.

19.22 hrs Reported in SITREP11 that the naval vessel attempted to turn back on an easterly course towards Bantry Bay. The SITREP noted that the bridle had parted in position 51° 27.23'N 010° 38.9'W.

19.23 hrs Tug Nomad was contacted by underwriters to assess whether the tug crew could connect a tow but were informed they could not in the conditions prevailing. The tug crew were monitoring the situation to assess if it were possible to connect up a tow. It was reported that there were no remains of a towing bridle on the FV.

It was observed at the time that the FV Ellie Adhamh was observed with an increased list to port and taking water over the bow.

See Appendix 7.23 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP11/UIINO469/21 27 1859Z Mar 21.

See Appendix 7.24 - FV Ellie Adhamh Towline Breaks - Chart Position.

19.53 hrs NMOC Dublin transmitted SAR SITREP1 and Final Entry Date: 27 March 1953Z with updated and additional information as follows:

Weather reported on scene. Winds West South-Westerly force 7 – 8 (Beaufort Force 7- 8 (near Gale to Gale)). It noted some earlier information.

20.15 hrs Rescue helicopter R117 had landed at Cork Airport with all crew from FV Ellie Adhamh aboard. Incident closed.

See Appendix 7.25 - National Maritime Operations Centre Dublin SITREP1 and Final UIINO484/21 27 1953 Z Mar 21.

20.57 hrs MRSC Valentia transmitted SAR SITREP12/UIIN0469/21. Entry Date: 27 March 2057Z with updated and additional information as follows:

The weather on scene was reported as: South-westerly wind force 7 (Beaufort Force 7, near Gale). Sea very rough with moderate wave swell.

Co-ordinating instructions were that the SAR phase was concluded.

20.58 hrs Naval patrol vessel LÉ George Bernard Shaw was released to resume patrol. The naval vessel made course for a safe haven in Bantry Bay.

21.48 hrs Castletownbere Lifeboat back at Base.

22.09 hrs Tug Nomad back on berth in Castletownbere.

22.41 hrs All SAR operations complete.

See Appendix 7.26 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP12/UIINO469/21 27 2057Z Mar 21.

2.15.5 **Sunday 28 March**

MRCC Dublin issued a 'Salvage and Recovery Operation for FV Ellie Adhamh' SITREP. SITREP Entry Date 28 0152Z Mar 21, noting that a Letter of Direction was submitted to the Owner of FV Ellie Adhamh the previous night at 23.11 hrs and that at 23.31 hrs the Owner of FV Ellie Adhamh had advised that Atlantic Towage had been contracted to assist with the salvage and recovery of FV Ellie Adhamh.

See Appendix 7.27 - Marine Rescue Coordination Centre Dublin Salvage and Recovery Operation SITREP/UIINO485/21 28 0152Z Mar 21.

This SITREP also updated and issued additional information as follows:

06.27 hrs Rescue helicopter R115 proceeded to the casualty vessel to assess area.

06.30 hrs Merchant Vessel (MV) Corrib Fisher reported a visual sighting on the casualty vessel.

08.07 hrs Rescue helicopter R115 arrived on scene. MV Corrib Fisher was released from the operation. R115 observer reported on video that *"Vessel upright with very slight list to port … Still upright looks like she could be for quite a while*".

See link to IRCG video accessible via report on MCIB website CLICK HERE

08.16 hrs Tug Nomad reported to have arrived on scene. R115 was released.

09.08 hrs Tug Nomad reported the casualty vessel had a 30-degree list to the port side. Tug Ocean Navigator reported to be enroute to the scene.

MRSC Valentia transmitted a Salvage and Recovery Operation SITREP/UIIN0485/21. Entry date: 28 1250Z Mar 21 updating and issuing additional information. The casualty position as: 51° 27.29'N 010° 39.07'W. The weather on scene was reported as: South-westerly wind force 7 (Beaufort Force 7 near Gale). Sea very rough with moderate wave swell.

Events were noted until 13.46 hrs on the 28 March.

Weather on Scene was: South-westerly wind force 7 (Beaufort Force 7 (near Gale)). Sea very rough with moderate swell wave.

10.25 hrs Tug Nomad reported the casualty vessel was listing 30 – 40 degrees and there was a smell of diesel in the area.

10.27 hrs The naval service was requested to assist.

10.55 hrs Tug Nomad reported the casualty vessel FV Ellie Adhamh had sunk in position 51° 37.20'N 010° 23.02'W.

11.15 hrs Commissioner of Irish Lights (CIL) buoy-laying vessel Granuaile was advised. Naval patrol vessel LÉ George Bernard Shaw stood down.

12.12 hrs Rescue helicopter R115 was tasked for a sweep of area in the afternoon (presumably to check for debris and pollution as normal and so navigation warnings can be updated).

13.00 hrs New Radio Navigation Warning (RNW) was issued for the area.

13.46 hrs Irish Coast Guard rescue helicopter R115 was stood down due to deteriorating weather conditions.

See Appendix 7.28 - Marine Rescue Sub Centre Valentia Salvage and Recovery Operation for FV Ellie Adhamh SITREP UIINO485/21 28 1250Z Mar 21.

See Appendix 7.29 - FV Ellie Adhamh Reported Sunk - Chart Position.

See Appendix 7.30 - FV Ellie Adhamh Sinking.

2.15.6 Maritime Emergency Response Assets tasked in this incident:

- IRCG (MRSC) Valentia coordinated the SAR response.
- RNLI Castletownbere ALB.

- Rescue helicopters R115 (Shannon based) and R117 (Waterford based).
- Naval service patrol vessel LÉ George Bernard Shaw.
- Castletownbere Coast Guard Unit.

2.15.7 Civilian vessels involved in this incident:

- Fishing Vessel: Monica 2.
- Tug: Nomad.
- Merchant Vessel: Frio Forwin.
- Tug: Ocean Navigator.
- Merchant Vessel: Corrib Fisher.
- Buoy-laying vessel: Granuaile.

The IRCG SITREPs set out above evidence the significant number and type of SAR resources brought to bear on this incident at considerable cost to the State and other stakeholders and at significant risk to the rescuers. The Rescue operations took place in increasingly difficult weather and have been reported as being exceptionally challenging. The fact that all crew were safely removed from the vessel is a reflection of the skill of those involved in the operation.

3. NARRATIVE

3.1 The FV Ellie Adhamh vessel departed its home port of Castletownbere on 13 March 2021 for a fishing trip to trawl for prawns. The Skipper of the fishing vessel intended to return to its home port on or about 30 March. On Thursday 25 March 2021 the FV Ellie Adhamh with seven crew onboard was fishing approximately 160 NM west off the west coast of Co. Cork. The weather at the time was moderate but the forecasted weather caused concern to the vessel's Skipper, and he decided that this was to be the last trawl before the vessel headed for Castletownbere. Around 19.00 hrs-20.00 hrs having hauled the last trawl onboard and emptied the catch into the fish hopper, the vessel experienced a 220V electrical power supply failure to the middle deck (also known as the factory deck) and the wheelhouse deck, immediately affecting the deck lighting. The Skipper stated that he directed the crew to close the hatches and retire to the galley (which was also on the main deck but in the accommodation) while he attended to the electrical problem. There was emergency lighting on in the accommodation supplied by the emergency batteries. The instruction to close the hatches was an essential one to ensure that the stability of the vessel was maintained. There is no record to corroborate what hatches were closed at this time and as appears in the photograph at Appendix 7.1 the two aft hatches for the trawl wire shooting hoods were not closed, and the forward starboard access hatch was open on 27 March (later images on the 28 March show this access hatch to then be closed).

3.2 The Skipper went to the engine room to investigate the electrical power problem. All appeared normal to the Skipper, the machinery was operating, and the lights were on but as he approached the electrical main switchboard, he noticed a smell of burning in the vicinity of the 380V/220V panel. The Skipper saw on the 380V/220V panel of the main switchboard that an electrical supply 220V breaker providing 220V power to the distribution board (which supplied power to the lights on all decks above the engine room including the main/factory deck) was in the tripped position and despite his attempts to reset the breaker switch it remained in the tripped position.

See Appendix 7.3 – General Arrangement Plan of the Engine Room (situated under the main deck) - Sourced from the Marine Survey Office Approved Stability Book, for Illustration Only.

Main Switchboard Panel Arrangement – Manual Page 0103/CP.

Also in Appendix 7.4 - 380V/220V Systems Main Switchboard - Manual Page 0103/05.

3.3 The Skipper stated that from his previous experience onboard FV Ellie Adhamh he knew that without this particular 220V breaker being in its normal operating position providing power to the decks above the engine room, several important systems would be out of use. The Skipper recounted that the systems included.

- All deck main lighting.
- Wheelhouse Navionics including GPS and Radar.
- Autopilot.
- Navigation lights.
- Main radio high frequency communications systems.
- Toilet system pump.
- Emergency systems battery charger.

The Skipper is incorrect about his understanding of some of the systems assuming that they are as per the Electro Huelva S.L. electrical drawings supplied because the navigation including GPS, and main radio high frequency communications systems came from the GMDSS battery bank, while the toilet system pump came from the engine room 380V switchboard.

3.4 The Skipper recounted that if the 220V electrical power to these systems was disrupted then the vessel's emergency battery system(s) would switch on (two separate battery banks supplying the vessel's main operating systems and the vessel's radio installation) thereby providing a limited duration 24V DC emergency electrical power to:

- the emergency lighting system (main emergency batteries).
- the remote control of the main propulsion operating systems (main emergency batteries).
- radio communications equipment (radio installation emergency batteries).
- and navigation lights (main emergency batteries).

Therefore, from the time when this situation arose, the vessel's crew were relying on the vessel's emergency systems limited battery power for the fishing vessel's remote control of the main propulsion operating systems to continue operating the radio communications equipment or enable safe navigation until such time as the 220V supply to the main systems and battery chargers was restored.

3.5 After the emergency batteries supply activated (which the Skipper thought would last for about eight hrs), local control was available in the engine room. The Skipper stated the 24V failure caused the clutch to disengage and pitch to go full astern. The Skipper's observation that the pitch went full astern can only be from the pitch indication seen in the wheelhouse console. It may be that the indication showed full astern as this system power supply also failed. As the indication would have been based on a feedback signal of either milliamps or

voltage proportional to the position off the blades, no signal would show as full astern. The clutch cannot be engaged unless the pitch is neutral, and this was reading full astern. The Skipper described trying to get the pitch to neutral but failed because there was no power. The clutch can also be engaged manually (local control was available in the engine room) but it is evident the Skipper was not aware of this. The Owner asserted that as the Skipper had assisted the engineers in the installation and commissioning of the new gearbox in 2019, he had an extensive amount of knowledge of the gearbox and main engine. If that is the case, then it is even less explicable why engaging the clutch manually was not done.

3.6 The Skipper recalled that the particular electrical system anomaly with the breaker had been like this for years. The Skipper had been working on the vessel for the previous eight years. The problem had occurred previously but had always been resolved by replacing the defective 220V breaker switch. When he was appointed as Skipper in January 2021, he did not take steps to have this rectified so there was no spare onboard. The spare breaker part had not been provided to the vessel by the time FV Ellie Adhamh left port on 13 March 2021. The Owner now suggests that all vessels should carry spare circuit breakers.

See Appendix 7.4 - Two Typical Marine Modular Circuit Breaker/Switches.

3.7 From his previous experience onboard the FV Ellie Adhamh, the Skipper knew that the vessel would need assistance when the emergency system's battery power was exhausted. The Skipper knew the main emergency batteries power would last about eight hours and the vessel was approximately 160 NM from its home port. Anticipating the eventual need for assistance, the Skipper contacted the nearby FV Monica 2 firstly, to enquire as to whether the other vessel had a spare 220V breaker switch onboard, and secondly to request a tow back to port if needed. He was informed by the Skipper of the FV Monica 2 that they had no spare breaker switch onboard and that a tow would be provided when needed. The Skipper says that at some point much later he requested the Coast Guard and also the Navy if they had a spare breaker, which they did not. The Skipper engaged the hand steering system and both vessels headed in company at best speed, directly for Castletownbere while the vessel still had its propulsion systems working. The crew stated the weather was moderate at this time and not causing any undue motions to the vessel.

See Appendix 7.10 and Appendix 7.11 – Weather Conditions for 25 March 2021 for location 105 NM to the southeast of the vessel's then position and Weather and Sea Area Forecasts.

3.8 At approximately 06.00 hrs the following day (Friday 26 March), the fishing vessel's emergency main battery system power was exhausted causing the 24V emergency control systems including its emergency lighting and vessel's CPP control systems to shut down. It was no longer possible to draw in the trawl wires and secure the two aft hatches for the trawl warp shooting hoods. The

fishing vessel lost forward propulsion and was adrift. Its emergency battery supply for radio communications and GPS was still operational. The Skipper was unaware of any procedures for taking control of the CPP locally in the engine room. On failure of the 24V DC battery supply, the CPP system indicator moved to the full astern position and the gearbox drive clutch was disengaged. The failure of the 24V DC battery supply simultaneously disengaged the main No. 1 generator. That left the No. 2 (or auxiliary) and No. 3 (harbour) generators for starting. The Skipper could have started the No. 2 generator as starting it did not require the now failed No. 1 generator. Had he done that he would have had power in the main switchboard which would have restored the engine room lights. He could then have had lights to obtain manual local control on the propulsion systems including the clutches and CPP control systems and the clutch for the shaft driven generator. Had this happened the vessel could have steamed to port.

3.9 Valentia Coast Guard was contacted at 08.30 hrs by the Owners and appraised of the situation and that a tow was required. The Owners arranged for a tug which embarked at 09.00 hrs. FV Ellie Adhamh was still in company with the other fishing vessel, the FV Monica 2. FV Monica 2 established a tow, but the tow parted approximately one and a half hours later due to the heavy weather. Despite several attempts to reconnect the tow line, all attempts failed and FV Ellie Adhamh was adrift again. Both vessels were approximately 55 NM from the home port of Castletownbere; the weather was worsening and the sea swell was forecast to increase to heavy swells that evening. The Skipper reported that he had contacted the Owner of FV Ellie Adhamh via the FV Monica 2 (as he had no other way of contacting the Owners) to organise a tugboat tow and learned there was a tug in Castletownbere, but it would take some time to rendezvous with the disabled fishing vessel. The Skipper decided to “batten down the hatches and sit it out” until the tug arrived. The weather was worsening and at approximately 11.00 hrs FV Monica 2 left the scene and resumed its journey eastwards in order to make Castletownbere before the worst of the forecasted bad weather arrived.

3.10 The radio apparatus onboard has its own dedicated emergency battery system, separate from the vessel’s main emergency battery system as required by GMDSS Regulations. The radio apparatus emergency batteries enable distress and DSC transmissions with a GPS plotter feed to give the distress position. The radio emergency batteries lasted longer than the vessel’s main emergency batteries due to lower load on the batteries. The radio systems emergency battery power onboard FV Ellie Adhamh was still sufficient to operate the radio apparatus and GPS equipment but only for a short period of time. The Skipper had been unable to contact the vessel’s Owner and had to make contact via the FV Monica 2 who contacted the Owner and advised of the situation after the power failure. The Owner made arrangements for a tug to tow the fishing vessel to port. Once the FV Monica 2 departed, the vessel had no communication capacity except via the battery-operated hand held two-way VHF radio within a range of about 5-10 NM and as long as there was a line of sight.

3.11 The Castletownbere tug organised by the Owner had sailed but at 12.09 hrs it was reported that it had suffered weather damage (it's windows were stove-in), rendering the tug unable to provide a tow and the tug returned to Castletownbere.

3.12 At 12.58 hrs MRSC Valentia issued a request for assistance for the disabled FV Ellie Adhamh. At 13.06 hrs the naval service patrol vessel LÉ George Bernard Shaw responded with an ETA in six hours (approximately 19.00 hrs) to the disabled fishing vessel's reported position. It advised that it would be unable to establish a tow when it arrived due to the bad weather. At 13.26 hrs rescue helicopter R115, based at Shannon, responded with an ETA in one hour 18 minutes (14.44 hrs) at the fishing vessel's position.

3.13 Rescue helicopter R115 arrived on scene around 14.25 hrs and established radio communications with the crew of the fishing vessel. R115 reported the crew were staying onboard and did not require evacuation from the disabled fishing vessel. R115 was released to return to the Castletownbere helicopter pad. The Skipper wanted to conserve power for the two-way VHF radio and told the rescuing authorities he was shutting down communications overnight of the 26-27 March and requested hand held VHF sets to be air dropped by rescue helicopters with the salvage pumps.

3.14 The MCIB learned from several crewmembers that as the weather worsened the vessel was rolling considerably. The main working deck lights had been extinguished at the initial failure at 19.00 hrs-20.00 hrs on the previous evening of the 25 March. They recalled there were then no lights operating in the decks apart from in the engine room and the crew were working in darkness in all compartments outside the engine room. As the engine room lights were on there was electrical power available for the bilge pumps as these were supplied from 380V section of the switchboard. The crew encountered difficulties in pumping overboard the shipped seawater which was leaking aboard through the defective overboard waste discharge chute mechanism, located on the port side, aft section of that deck due to pumping blockages from catch coming out of the hopper by the sluice door over the conveyor belt. Although the emergency lights had kicked in, they had faded out when the main emergency batteries became exhausted at approximately 06.00 - 06.30 hrs the morning of the 26 March when there was then no power at all onboard.

3.15 The Skipper described that free water on the factory deck was normally pumped overboard using the factory deck bilge pumps fixed at set locations around the factory deck. Under normal circumstances, free water on the factory deck drains into bespoke deck bilge pump sumps set into the deck adjacent to the pump. Grids or strainers set into, and flush with, the deck allowed the free water to drain through the grid and into the sump, but the grid stopped debris and fish waste from entering the bilge pump sump and suction pipe which connected the sump to the bilge water pump. Normally, the deck bilge pumps sucked out the collecting bilge water from their respective sumps and pumped

it directly overboard through their dedicated hull mounted valves. Crew working on the factory deck would normally keep the sump grids clear by manually scooping away any debris collecting on the grid and blocking the bilge water from draining into the sump. The Skipper stated that if the crew did not keep the grids clear of debris, or if the pump suction pipes were chocked up, the pumps would fail to function correctly, and free water would accumulate on the factory deck. The Skipper also recalled that once towing commenced the waste hatch was submerged the whole time because it was so low to the water being just above the waterline; not high above it but barely above it.

3.16 The catch from the vessel's last trawl had already been emptied into the catch hopper when the 220V AC electrical failure occurred on the evening of Thursday 25 March. So, the vessel's increasingly violent rolling motions was causing the catch to break up and slide down the hopper onto the conveyor belt where it spilled out over the factory deck. The fish remains, prawn parts and debris were continually spilling out, mixing with seawater from the leaking waste discharge hatch and washing around the factory deck while the crew attempted to pump out the accumulated water through the deck pumps. The crew were working using the emergency lighting while the factory deck pumps were operating (being powered by the 380V supply directly from the engine room main switchboard and shaft generator). However, the deck pumps were not functioning properly as the sumps and pump suction pipes were choked with fish remains and debris. Attempts to clear the blockages were mostly unsuccessful as the catch was continually spilling down onto the deck from the hopper. There are no reports of efforts to stop the catch from spilling out from the catch hopper. The emergency lights failed at approximately 06.00 hrs on the Friday (26 March) and all power to the deck pumps was lost as the shaft generator de-clutched and the vessel became powerless.

See Appendix 7.2 – C. General Arrangement Plan of the Main Deck – Post 2012 Alteration, Manually Altered (marked-up) to Illustrate Change as no Drawing Available.

3.17 As time progressed and the fish catch in the hopper spilled out the crew (tired and working in the dark) found the task of keeping the deck pump suctions clear of the resultant mash of fish remains increasingly challenging. Crew efforts to pump the factory deck clear of water were faltering.

3.18 The Skipper recounted that when the engine stopped, the fishing vessel started drifting according to wind direction and sea swell. When the engine stopped due to the exhausted 24V DC system, then so did the shaft driven generator and power was lost to the deck bilge pumps and to the pumps operating the trawl warps, which extended through the still open shooting hood hatch doors.

3.19 No records or observation log are available in respect of the operational use of the factory deck from around 20.00 hrs on the Thursday (25 March) evening. It appears that steps were not taken to ensure that the factory deck remained

clear of fish debris during the period when the emergency lights and deck pumps were operational. Crew describe the build-up of blockages in the sumps and increasing water ingress. Clearing the fish debris might have involved working in the dark which would have been difficult and as there was no power to the deck pumps after the total power failure at approximately 06.00 hrs on Friday. Once blocked there was no other way of clearing the water until the salvage pumps were landed on Saturday morning.

3.20 The overboard waste discharge chute provided a means for the crew to eject any waste or debris from the fish processing system directly overboard through the vessel's side. To stop ingress of water when the conveyor belt was not in operation the chute was fitted with a hinged lid or hatch on its upper surface (directly under the end of the conveyor belt) which could be secured and made watertight by tightening down the lid's two butterfly nuts on their hinged screw pins. According to the Skipper, the chute was fitted with an inside non-return flap which could be moved by a hand operated lever attached to the flap's spindle. This lid should be watertight to prevent the passage of water into the vessel.

3.21 The lever spindle passed through the side of the chute via a bushing arrangement. At the time of the incident the bushing was missing, and the bush orifice was open allowing water to enter the deck space when the chute was submerged in the sea as the vessel rolled. The missing bush would also have prevented the flap from performing as a non-return flap as required due to the play in the spindle displacing and preventing the flap from sealing properly. This sealing failure would allow sea water to flow past the flap and a roll induced surge force would act directly on the waste chute hinged lid. The Skipper says that when he and the Owner inspected the chute in January 2021, they identified no issues with it. There are no available records in respect of this inspection. It is not known how long the bushing was missing.

3.22 The overboard waste discharge chute was mounted on the hull at the end of the conveyor belt and very close to the vessel's normal waterline and due to the heavy rolling motion of the vessel, the discharge chute was being immersed with water initially coming inboard through the hole in the chute mechanism. The vessel had a reduced freeboard (as per the 2009 MSO exemption) so that the main deck was assigned a minimum freeboard of 250 mm rather than 300 mm under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640/2007. The reduced freeboard meant that the waste chute was nearer the water line. The consequence of that was that in the increasingly heavy seas the waste chute cover or lid and flap frequently came under increasing seawater pressure. Crew interviews also stated that at some stage water was coming in through the lid seal as the vessel rolled and the chute submerged.

3.23 The stability information for the vessel was based on an incline report date 30 September 2008 to determine the vessel's lightweight. As the stability standard

to which the vessel was built is based on the Torremolinos International Convention, the lightweight should have been confirmed after ten years. The MSO were aware of this, and a check was scheduled after the date of the incident. The light weight of such vessels is known to increase over time and as such the freeboard would be further compromised, resulting in the chute being even closer to the waterline, and leading in turn to more sea pressure as a result.

3.24 By the Friday evening the vessel's radio installation emergency battery back-up system was failing and the Skipper made a request for salvage pumps and a VHF radio handset. The Skipper became concerned for the safety of the fishing vessel as he envisaged that assisting vessels may not be able to locate his position. At 16.40 hrs the Skipper activated the vessel's EPIRB to transmit an accurate position of the vessel to the Coast Guard which they had requested in order to enable assisting vessels locate the drifting and disabled FV Ellie Adhamh. He says that he did not consider there was any danger at this time.

3.25 MRSC Valentia issued a SAR SITREP at 16.47 hrs. The weather by this time had deteriorated to Beaufort Force 8 with a high sea swell. Rescue helicopter R115 again located the distressed vessel and at 17.31 hrs reported that the vessel's crew did not request immediate evacuation. R115 had to return to Castletownbere owing to fuel constraints.

3.26 The helicopter had reported that a towing bridle had been made up by the crew in preparation for the anticipated towing operation. The crew had constructed the towing bridle using a trawl wire normally stowed on a reel drum on the vessel's foredeck, starboard side. Approximately 10 m of 25 mm wire was taken manually (due to the total loss of electrical power there was no hydraulic power to the drum motor) from the drum and led through the vessel's bow fairlead or 'bull ring' and the end secured to the vessel. The port side bull ring used was directly in front of the drum from which the tow wire was taken, which is offset from the bow centreline (see Appendix 7.1 A - Photograph of FV Ellie Adhamh (taken on Friday 26 March 2021 by Irish Coast Guard). The net had been recovered on the Thursday as the catch was completed, and the main hydraulic system was shut down. As the main generator was de-clutched with the later 24V DC electrical failure, one of the four large hydraulic pumps rated at 110 kW could not be started due to the required large starting current. There was however a "net retrieve pump" (breaker 19) rated at 5.5 kW at 380V AC which could have been used and started on the No. 2 generator. As set out above, the Skipper could have started the No. 2 generator as starting it did not require the failed No. 1 generator. The fact that it was not used indicates a lack of emergency preparedness by the Skipper and crew.

3.27 The situation at approximately 19.00 hrs on Friday 26 March was as follows:

- Rescue helicopter R115 had arrived at the casualty's location, and had been advised the crew did not want to be evacuated and was returning to Castletownbere to refuel.

- Rescue helicopter R117 was on stand-by in Castletownbere.
- MV Frio Forwin announced it was close by the casualty's position.
- Naval vessel LÉ George Bernard Shaw was enroute to the casualty. The On-Scene Coordinator (OSC) was onboard the naval vessel (Officer Commanding (OC)) and in radio contact with the Skipper of FV Ellie Adhamh.

At this stage the R115 had been out twice to the vessel that day, the naval vessel was not due until 23.00 hrs, the vessel was "dark" since about 06.00 hrs, radio communications were limited, there was no arrangement in-train to have a 220V breaker sent out or, to give the Skipper instructions on how to activate the auxiliary generator, the weather was worsening as expected. The only plan to protect the crew was dependent on the naval vessel tow because it had indicated earlier it would be unable to tow the vessel due to the weather and sea conditions.

3.28 At approximately 20.00 hrs the naval vessel LÉ George Bernard Shaw established radar contact and the ships Commanding Officer also known as On-Scene Commander (OSC) onboard was in radio communication with the fishing vessel's Skipper. The OSC advised the Skipper as to the plan for towing the fishing vessel. The Skipper requested a handheld VHF radio and salvage pumps be landed onboard as the vessel's radio installation emergency battery back-up system was failing. The salvage pumps were required to pump out the sea water in the vessel's factory deck which was conveyed to the rescue services. This was 24 hours into the incident and appears to be the first notification to external rescue services that water ingress and difficulties in pumping water out had become an issue. It is also a significant period after the loss of electric power.

3.29 By 22.00 hrs the naval vessel had arrived on scene. The Skipper was in contact with the OSC using VHF radio. A plan was made to establish a tow the following morning as they wanted to avoid the crews working on decks in darkness in rough sea conditions. The Skipper made known that his intention for the night was to power down the radio installation to conserve its emergency batteries power. He says he also asked the OSC onboard LÉ George Bernard Shaw if they had a spare breaker, which they did not.

3.30 On the morning of Saturday 27 March 2021 at 06.25 hrs, Castletownbere CGU delivered hand-held radios (VHF's) and a salvage pump to rescue helicopter R117. At 06.39 hrs however, rescue helicopter R117 advised they would not take pump onboard as they were not Canadian Helicopter Corporation Ireland approved equipment. Rescue helicopter R117 was stood down and R115 tasked. At 08.01 hrs R115 was enroute (for the third time) with two bilge pumps and VHF radios for the casualty vessel, ETA 09.00 hrs. At 08.47 hrs Castletownbere Lifeboat was launched.

3.31 Around 08.40 hrs the Skipper estimated there was approximately two tonnes of seawater washing around the factory deck. Two tonnes of water on this deck

would equate to around 25 mm depth over the deck area but this would have accumulated in the forward areas. Crewmembers of the fishing vessel stated that at this time the vessel was experiencing heavier rolling and taking seas into the factory deck through the port aft side overboard waste discharge chute. It was reported that at 09.18 hrs R115 had arrived and lowered two salvage pumps and additional fuel (two 5 lt tanks of diesel for each pump) and VHF radio handsets to the crew onboard. The salvage pumps were reported as being effective, and the crew reported that the middle deck (factory deck) had been pumped out and that the vessel was stable for the moment. As each pump was rated at 45 cubic metres per hour, the pump was set up on the deck. It was pumped out in at most 16 minutes.

3.32 A photograph taken on 27 March by the R115 shows the winchman in the bow, three crew on deck and pumping taking place on the forward port side of the vessel. The photograph shows no tow line so was taken before the tow was achieved around 10.48 hrs. Although there is reference to the Skipper having directed that all hatches be closed on the Thursday evening when the main electricity supply failed, it is evident from this image that the forward starboard access hatch (to the factory deck below) was open, and the shooting hatches at the rear are still open. The forward access hatch was closed at some point as it is closed in videos taken on the Saturday.

See Appendix 7.31 - Irish Coast Guard Photograph Taken on 27 March 2021.

3.33 A little earlier, at approximately 07.00 hrs in daylight the naval vessel started preparation for towing, passing up and down the stricken vessel. The naval vessel made several attempts to pass its towing hawser (towline) across to the casualty vessel. The OSC recounted that they attempted to pass a ballistic gun line across the fishing vessel (the lightly constructed gun line was connected to a more heavily constructed messenger line which in turn was attached to a towing bridle and hawser) to be hauled aboard by the casualty vessel's crew. Despite several attempts the gun line either broke or missed the casualty vessel due to the strong winds and heavy weather. As a last resort, following discussion between the OSC and the Skipper, the naval vessel's crew attempted to manoeuvre the naval vessel close enough to the casualty vessel to make a lee for the casualty and to throw across the messenger line, but this manoeuvre was abandoned when hull contact was made between the bows of the fishing vessel and the port side of the naval ship. This incident was recorded on camera. The FV Ellie Adhamh bulbous bow appears to have hit the side of the naval vessel as FV Ellie Adhamh was lifted on a wave and the damage to the naval vessel was an indent on the side as well as some minor upper deck damages, locker and handrails, where the bow flare of the FV Ellie Adhamh came down on the side as the wave dropped.

See Appendix 7.32 - A. Photograph of FV Ellie Adhamh showing the Bulbous Bow's Bulb in the Air as the Vessel Sank.

B. Image of Point of Contact.

3.34 Although a messenger line was successfully passed between the crews shortly after this time, the line broke soon after due to the inclement weather conditions and high sea swells. OSC onboard the naval vessel recounted that there appeared to be no physical damage to the casualty vessel bows but some superficial damage to the port side plating and to the main deck railings of the naval vessel. Weather and sea conditions were further deteriorating as the naval ship stood away from the casualty vessel while the OSC re-evaluated the situation to develop a safer strategy to link up a towing hawser to the casualty vessel.

3.35 The logbook from LÉ George Bernard Shaw on Saturday the 27 March indicates the following (paraphrased for clarity):

a. 10.00 hrs: Efforts still underway to connect the tow, connection not yet established (efforts hampered by worsening weather conditions).

b. 10.23 hrs: The messenger line has been successfully passed and connected (the tow is 'established', but not yet considered 'underway').

c. 10.48 hrs: Tow established and now underway.

By 10.48 hrs, almost three hours after the process had started, a towline was established, and the naval vessel was towing the casualty at 4-5 kts on a course towards Castletownbere. The difficulties with attaching a tow were resolved when a crewmember came up with the idea of attaching a rope to the bridle from the FV Ellie Adhamh to a float which was thrown into the water. After the vessel had drifted a distance from the float, the naval vessel crew were able to safely approach the float and pick up the bridle and attach it to their tow line.

3.36 Crew witnesses onboard LÉ George Bernard Shaw described the tow as being difficult in that the naval vessel was towing the casualty vessel on an east south-easterly course towards Castletownbere while both ships were being influenced by the winds which were backing from westerly to south westerly force 7 creating a rough and significant following sea swell. Witnesses recalled that at the start of the tow the casualty vessel was listing to port. The casualty vessel had almost completed a fishing trip (having started on 13 March and scheduled to complete on 30 March). They had carried out their final trawl before heading for home. As the processed catch was stowed in the main hold which was substantially positioned to port (due to the blast freezer on the starboard side which would have been empty as the last haul was still to be processed), the vessel would have had a natural port list before the tow. In addition, the choice of positioning the tow to the port side of the bow would have added to the list-causing heeling momentum. Onboard the casualty vessel this list had the effect of further submerging the overboard waste discharge chute as it was located on the port after quarter of the vessel and increasing the likely ingress of seas via the waste discharge cover. Water ingress into the casualty vessel increased and

the Skipper reported to the OSC at 13.16 hrs (over two hrs 30 minutes into the tow) that the supplied salvage pumps were clogging up with debris and water levels were rising on the factory deck.

3.37 By 14.48 hrs the crew of the naval vessel were increasingly concerned at the situation onboard the fishing vessel which had developed a more significant list to port. A crewmember recounted that pumping operations onboard the FV Ellie Adhamh were again failing due to the blocked salvage pump suctions and "the vessel's compartments were flooding" the fish hold and accommodation.

3.38 A crewmember stated that he thought waves inside the vessel were deep about 0.5 m at times and washing over the small riser wash plate or sill (approximately 0.5 m high), dividing the after part of the main deck from the forward part, thereby gradually entering the fish hold through the fish hatch loading hatch (Hatch L), located at the forward end of the main/factory deck. He stated that he thought the fish hold was flooding from this small hatch. The crewmember also recalled that there was water in the accommodation and believed it was leaking into the accommodation cabin spaces through the cabin escape hatch (marked Hatch I), located port side of the main deck adjacent to the waste discharge chute. The Owners disagree with this recollection as the fish hatch loading hatch (Hatch L, part of the main deck fish hatch, Hatch G) was located at the port forward side of the working deck and was at a height of at least 0.7 m. The Skipper has stated that this was closed securely so that if there was water in the accommodation area, the crew were either using the cabin escape hatch (marked Hatch I) to get from the main deck to the cabins in the normal course of events, or vice versa, or there was water entering the accommodation from another area other than the watertight cabin escape hatch (marked Hatch I). During Saturday the Skipper was moving between the main deck via the accommodation area up to the wheel house to communicate with the naval vessel on his handheld VHF. This route was through the dry locker access door (watertight door marked '5'), the only water tight door on the route. It was inevitable that water, accumulating at an increasing level in the factory deck due to the limited pumping, would down flood through the door marked 5 into the accommodation (galley, accommodation spaces, crew cabins and dry locker space) if that door was open.

See Appendix 7.33 - FV Ellie Adhamh – Hatch Plan - Main Deck and Lower Deck.

See Appendix 7.34 - FV Ellie Adhamh – Hatch Plan – List of Hatches and Doors.

3.39 At 14.48 hrs FV Ellie Adhamh was reported as having a significant list and the onboard pumps were failing. The Skipper does not agree with the factors identified by the crew but described the cause of the port list as being due to:

- the cold store (fish freezer hold) being nearly full (with the packaged prawn catch).
- the fishing vessel's fuel tanks being nearly empty (due to the fuel having

been consumed during the fishing voyage).

- The tow line bridle was leading off to the vessel's port forward quarter and therefore the vessel was being pulled over from this angle.
- The wind was blowing from the starboard side and exacerbating the list.

3.40 The Skipper surmised that the fishing vessel's list to port was due to a combination of weather and towing and the vessel's loaded condition. However, all crew witnesses onboard the fishing vessel stated that the prawns and debris significantly impeded salvage pump operations by blocking the suction hoses after being drawn in with the flood waters. As a result, the crew had serious difficulties clearing the blocked suctions. This is consistent with what the Skipper reported to the OSC at 13.16 hrs. A crew witness stated that flood waters in the fishing vessel's factory deck increased in depth and waves were washing along the entire deck, the vessel was listing to port and rolling violently. The rolling motion impeded the crew's efforts to unblock the pumps, lighting was poor and water levels were rising.

3.41 Whatever the precise situation, by 14.48 hrs the OSC onboard the naval vessel was concerned for the safety of the fishing vessel's crew and requested rescue helicopter R115 to stand-by in case the fishing vessel's crew required immediate evacuation. The OSC had determined that the towing operation could continue without the FV Ellie Adhamh crew being onboard. About 30 minutes later the weather was reported as deteriorating even more and the casualty's pumps were only working sporadically. The Skipper requested the naval vessel to bring the towing course around into the weather to try to re-establish pumping and the stability of the vessel and that pumping was sporadic and not keeping pace with the ingress of water.

3.42 The Skipper reported that when the tow was about 10 NM from the Bull Rock, around 15.23 hrs, he asked the OSC to slow down so the water onboard could settle, and he could pump out the water from the deck. He says that he went down to the main deck and pumped out the water to about 1-2 feet and confirmed this to the OSC. The location is questionable as later at 19.14 hrs the vessel is noted as being 15 NM south west of the Bull Rock.

3.43 By 15.35 hrs LÉ George Bernard Shaw was heaved-to into the weather in order to reduce the rolling of the fishing vessel and thereby to assist its crew to clear the blocked suctions of the salvage pumps, and continue pumping out the vessel. Around 15.40 hrs the Skipper informed the OSC that the pumps were blocking with debris and pumping was sporadic. The Skipper requested the naval vessel turn back east and "Make Haste" to Castletownbere. OSC informed the Skipper that it was not possible to turn back to the east due to safety concerns for the FV Ellie Adhamh and the naval vessel crews. At this stage the naval vessel's anemometer recorded winds gusting at 60 kts at 15.42 hrs on 27 March (equivalent to Beaufort 11 "violent storm").

3.44 Very shortly after the Skipper informed the OSC that the fishing vessel had four to five tonnes of water in the middle deck (or perhaps 1-2 feet of water as reported being the situation very shortly before this). OSC also then requested that a rescue helicopter be tasked as soon as possible. At 15.56 hrs the OSC advised the FV Skipper to get his crew into survival suits and stream a liferaft from the stern of the FV.

3.45 At 16.02 hrs the crew reported the fishing vessel's accommodation was flooding. One crewmember advised that in his opinion the water in parts of the accommodation area was about 1.5 m approximate, depending on the wave created by roll of the vessel. The water was coming in through the cabin escape (or rescue) hatch ("I") (which is the escape hatch from the accommodation to the factory deck and is the shortest route to access the factory deck and then the open deck via the starboard fish access hatch or though the wheel house). The Owners and Skipper have suggested that the cabin escape hatch could have been open and letting water down flood the accommodation area if the crew were using it to access the factory deck, and/or the upper open deck. It is clear from the video footage that the forward starboard access hatch (to the factory deck below from the open deck) was open for at least some part of Saturday and that crew were on deck assisting in the tow and the pumping. It is probable that the crew did indeed use the cabin escape hatch ("I") to get from the accommodation area to the factory deck and then to the open deck. The Skipper advised that in his opinion the water was getting into the accommodation area from the factory deck, through a watertight door into the galley, then into the hallway with a free run into the accommodation area.

3.46 At 16.02 hrs when the crew reported the fishing vessel's accommodation was flooding the crew launched the vessel liferaft. The reason for needing a liferaft in position was to provide protection in the event of any crew going overboard during the rescue. However, the weather conditions were such that the liferaft was blown away and lost. A series of failed attempts to launch a number of other liferafts followed, firstly from the FV Ellie Adhamh, then from both the naval vessel and the rescue helicopter. Rescue helicopter R115 had been tasked at the direction of the OSC at 15.53 hrs when the Skipper reported four-five tonnes of water in the middle deck. R115 arrived around 16.30 hrs and for about an hour it made attempts to evacuate the crew by winch with no success due to the poor conditions. At 16.57 hrs rescue helicopter R115 recovered its winchman but without any of the crew. At 17.26 hrs Castletownbere RNLI attempted to get another liferaft onboard the casualty vessel. All liferafts were lost. R115 returned to Castletownbere for refuelling at around 17.40 hrs and was relieved by rescue helicopter R117.

3.47 After about 40 minutes, by 18.22 hrs the R117 liferaft was onboard the vessel and the helicopter crew started to attempt winching up the crew. Eventually, at 18.55 hrs (some two hours after the R115 had first arrived on scene) rescue helicopter R117 succeeded in lifting the fishing vessel's crew and airlifted them to safety and onwards to land at Cork Airport.

3.48 On exiting the vessel the Skipper advised that all the upper deck hatches were tight, the only open door was the one he was using to go up and down from the wheel house into the galley and out onto the deck to pump the water. In fact, the latter statement overlooked the still open shooting hood hatches. It is also possible that the crew on leaving the accommodation area to prepare for the airlift left the cabin escape hatch ("I") open. The Skipper was unable to confirm that all watertight doors were secured before the airlift was completed due to the focus on that difficult operation.

3.49 A still taken from an IRCG video while the vessel was under tow on Saturday 27 March at an unknown time shows the vessel in what appears to be a stable state. The crew appeared to have been unable to keep the replacement pumps operating which could mean that either they were not sufficiently skilled to do that or, that at some point the rate of water ingress was too much for the pumps, or a combination of both. It was noted at 16.02 hrs in the IRCG SITREPs that the accommodation deck was flooding. As the accommodation alleyway was to port this would also have contributed to the list. At some point, the list created by the water getting in to the factory deck, which was increasing as the sea pressure increased on the waste discharge hatch cover, combined with the list from the loading of the vessel and the tow being on the port bow bull ring, reached a point which, with following seas, resulted in a list to such a degree that water started coming in through the port side open shooting hood hatch (probably after the crew were airlifted).

See Appendix 7.35 - Still from Irish Coast Guard Footage – Vessel Under Tow.

3.50 IRCG video footage from 28 March shows the vessel rolling in very heavy seas. Although what has been reported as a "significant list" is not defined, it is considered to be when the upper weather deck is about to be submerged. Since the port side shooting hood hatch was open, this down flooding point added to the flooding of the working deck. The rate of ingress was obviously slow enough that the vessel did not sink till the following morning. The IRCG SITREP (see Appendix 7.27) records the tug Nomad advising that at 09.08 hrs on 28 March the vessel had a 30-degree list to port (increasing to 30-40 degrees a little over an hour later).

See Appendix 7.36 - Still from Irish Coast Guard Footage – Vessel Listing to Port (28 March 2021).

3.51 The fishing vessel was abandoned but the towline remained attached to LÉ George Bernard Shaw and the naval vessel resumed the towing operation. By 19.08 hrs the crew of the naval vessel were attempting to bring the towed vessel round into Bantry Bay, but the prevailing weather and following seas was blowing the casualty vessel off course. After the airlift the flooding was occurring through the chute and the open shooting hoods, then possibly with down flooding through either internal weathertight door marked '5' and/or the accommodation escape hatch. By now it was reported that the fishing vessel was

rolling badly with an unknown quantity of flood water onboard. The tow line was increasingly under strain and at 19.14 hrs the towing hawser disconnected when the bridle onboard the fishing vessel parted. The fishing vessel's position was approximately 15 NM southwest of the Bull Rock, off the west coast of Co. Cork. Bad weather conditions precluded any attempts by the naval patrol vessel's crew to regain the tow. This would have required a boarding party to board the FV Ellie Adhamh which was impossible in the prevailing conditions.

3.52 The fishing vessel's crew were safe, and the SAR operation finished. MRSC Valentia released LÉ George Bernard Shaw, and it resumed its patrol. All other SAR vessels and aircraft were stood down and the SAR operation was concluded by 22.41 hrs (Saturday 27 March). At that time the FV Ellie Adhamh, which had been abandoned earlier, was bow down, listing significantly to port and drifting towards the coast driven by the prevailing weather.

3.53 The following morning (Sunday 28 March) a tug was again despatched from Castletownbere to assist in a salvage operation to recover the abandoned FV Ellie Adhamh. Valentia MRSC again sought assistance from the Navy. The tug was in sight of the fishing vessel when it reported at 10.25 hrs that the vessel had 30–40-degree list to port. Another tug was despatched from Castletownbere but at 10.55 hrs the first tug reported that FV Ellie Adhamh had, by that time, sunk. The Commissioners of Irish Lights (CIL) buoy-laying vessel Granuaile was advised, and the naval patrol vessel was stood down. At 12.12 hrs rescue helicopter R115 was tasked for a sweep of the area in the afternoon and was stood down due to deteriorating weather conditions at 13.46 hrs.

4. ANALYSIS

4.1 This incident occurred as a result of a sequence of events putting the lives of the crew and responders at risk and culminating in the sinking of FV Ellie Adhamh on the morning of 28 March 2021. The sinking of the vessel, the lack of records and the conflicting evidence means that the analysis of the causes requires piecing together the reliable evidence that is available.

4.1.1 The initial factor that led to the water ingress that eventually resulted in the loss of the vessel was water ingress through the waste overboard discharge chute cover and the missing bush for the displaced outboard flap. This water ingress was not controlled resulting from the failure of essential electrical systems and the loss of propulsive power when the electrical breaker failed. With the vessel disabled, this chute came under forces which had not been experienced when the vessel was under way. The securing toggles for the inboard cover were then subject to fatigue failure by the cycling load caused by the surge within the chute. The vessel has a list to port due to its loading by the Thursday evening. It remained disabled and was then towed (the tow by a much smaller vessel having failed on the Friday morning) starting on Saturday morning via a tow line attached to its forward port side. A further factor that then came into play was the failure to ensure the watertight integrity of the intact hull by not closing the shooting hood hatches. As the water ingress progressed this increased the displacement of the vessel which was being towed in following seas which contributed to the eventual down flooding through the shooting hoods (or hatches) in the upper deck (which were not closed as shown in the photograph in Appendix 7.1 A) and accelerated the sinking of the vessel. This situation was seriously compounded by the lack of emergency preparedness before the vessel set sail, on the evening of Thursday 25 March 2021, and was further compounded in the latter stages by the crew operating and maintaining the vessel.

4.1.2 The circumstances surrounding the simple breaker failure escalated the incident from a routine breakdown at sea to a complex rescue operation and ultimately a very serious marine casualty with the sinking of FV Ellie Adhamh and the evacuation of the seven crew by SAR services in difficult conditions. The following events enables a framework of analysis for each contributory event.

4.1.3 The safety management failings include:

a) Lack of emergency planning (damage control and local control of machinery).

b) Failing to follow up on repetitive equipment failings (electrical circuit breaker).

c) Failing to provide a skipper with the proven management competency.

d) Failing to provide experienced crew to support the Skipper with an engineer and or chief mate.

The following enables a framework of analysis for each contributory event in each numbered paragraph:

4.2 Electrical failure and cause of the electrical failure.

4.3 Electrical design failings.

4.4 Failure to resolve recurring issue with circuit breaker and to carry a spare breaker.

4.5 Lack of training/knowledge to manually operate the main propulsion operating systems.

4.6 Failure to alert Coast Guard fully and to take other available steps.

4.7 Failure to keep the factory deck clear.

4.8 Water ingress.

4.9 Lack of training and communications.

4.10 Statutory duty to ensure vessel is fit to proceed to sea and not to make changes without consent and notification obligations to the Classification Society.

4.11 Weather.

4.12 Weather and Navy tow on 27 March 2021.

4.13 Weather and tow line after recovery of crew.

4.2 Electrical Failure and cause of the Electrical Failure

4.2.1 At approximately 20.00 hrs on Thursday 25 March 2021 a circuit breaker on the main switchboard in the engine room of FV Ellie Adhamh failed in operation. The failure of this particular circuit breaker disrupted electrical power supplying electrical equipment and systems located outside the engine room. The FV Ellie Adhamh electrical manual shows that the affected equipment was supplied from two distribution boards one located in the wheelhouse and another in the alleyway. Both distribution boards were supplied with power from two 220V circuit breakers at the main switchboard, (circuit breaker No. 51 and No. 52 respectively). The affected circuits were as follows:

- All Upper Decks main lighting (from circuit No. 51 and circuit No. 52).
- Wheelhouse main lighting (from circuit No. 51).

- Port and starboard shelter deck lights (circuit No. 52).
- Emergency systems battery charger (circuit No. 51), also supplying 24V systems in the wheelhouse.

4.2.2 The information provided in the Electro Huelva S.L. electrical manual shows that the failure of only one breaker should not cause a failure of both upper deck and wheelhouse main lighting systems. This indicates that more than one breaker was tripped or burnt out. Electrical fires often originate in main or distribution switchboard and electrical motors or generators.

4.2.3 The Skipper stated that he noticed a smell of burning at the main switchboard in the vicinity of the 380V/220V panel and saw that the 220V breaker providing power to the lights on all decks above the engine room, as well as other systems, was tripped. It is evident that the 380V/220V transformer was still functioning as the engine room lighting was still on, so the issue was localised to circuit breakers 51 and 52. Despite his attempts to reset the breaker switch, it remained in the tripped position. Given the degree of ventilation air changes in the machinery space the burning smell would indicate a fire within the switchboard.

4.2.4 Failure of an electrical component accompanied by a burning smell in the proximity might indicate that an overload condition may have been experienced in that component or a localised component fire. A loose connection leading to arcing and burning of the common busbar for breakers is the more likely cause. A busbar is a copper bar which is used in ship's switchboards to conduct electricity from the generators to the various breakers. The busbar's copper bars are bolted together. During normal ship operations, the busbar connections are subjected to vibrations generated by the ship and ship machinery. The vibrations cause loosening of both connections in the busbar, which can lead to short circuit and arcing.

4.2.5 While electrical fires are sometimes caused by a component failure, the more common reasons are dirt leading to overheating or short-circuit, or a loose connection leading to arcing. Arcing can cause substantial damage to electrical equipment. Arcing between the busbar and the breaker may be due to improper wiring or equipment installation, a loose connection, or dirt resulting in the busbar melting or vaporising thereby interrupting the supply to the neighbouring breakers.

4.2.6 The case for the cause being the busbar is supported from the list of equipment that lost power when the breaker failed. It can be seen that circuit breaker 51 is the common power circuit supplying all upper deck lights and emergency battery(s) charger. It can therefore be deduced that the main switchboard 220V circuit breaker 51, failed. Based on the original circuit diagrams provided, circuit 51 (supplying the wheelhouse distribution board) supplies the emergency battery charger, while circuit 52 (supplying the alleyway distribution board)

supplies the shelter deck lighting. It is apparent that the 220V supply to both the battery charger and the factory/shelter deck lighting failed at the same time.

4.2.7 There is no evidence of any further testing or evaluation of the failure. There were no trained or qualified electricians onboard (although this is not a requirement for a fishing vessel of this size). Factual evidence as to the failure is almost impossible to ascertain due to the total loss of the vessel. However, as set out above, one cause for arcing between the busbar and the breaker is improper equipment installation or maintenance. Arcing as a result of a loose connection and substantial damage to the common busbar is in all probability the cause of the electrical failures and was a causal factor in the subsequent loss of the FV Ellie Adhamh on 28 March 2021

4.3 Electrical Design Failings

4.3.1 The light on the main deck was supplied by two circuits, one port, one starboard. Both however were supplied from the same distribution board. This caused a complete blackout in the working fish deck when the breaker on that distribution board failed.

4.3.2 If port and starboard sides were supplied from separate breakers, there would have been some lighting available to enable the crew to work on controlling the water ingress and clearing the pump suctions. This is considered a design failure which did not ensure that a single failure would not compromise the safe operation of the vessel. This was a contributory factor.

4.4 Failure to Resolve Recurring Issue with Circuit Breaker and to Carry a Spare Breaker

4.4.1 The Skipper recalled that this particular electrical system fault had occurred previously during his employment on the vessel but was always resolved by replacing this particular 220V breaker switch on the main switchboard panel with a spare breaker stored onboard. This is considered a critical system and when failures occurred previously should have been subject of proper investigation to establish the cause of the reported regular failures. This should have been carried out in port using qualified personnel. Changing the breaker is not considered the correct resolution of the root cause of the failures. The reason for the breaker failures has never been established.

4.4.2 The failure of the circuit breaker component was predictable as the Skipper reported that it repeatedly occurred. There was no appropriate spare 220V breaker onboard at the time of the circuit breaker failure on 25 March 2021.There were no reported efforts to rig some form of temporary lighting to the main deck from another 220V supply.

4.4.3 The failure to investigate the cause of the previous electrical failure(s) by qualified personnel in port and the failure to ensure that replacement breakers were properly fitted were causal factors in the subsequent loss of the fishing vessel on 28 March 2021.

4.4.4 Not having an appropriately sized spare circuit breaker onboard was also a causal factor in the subsequent loss of the fishing vessel on 28 March 2021.

4.4.5 The fact that all light on the main deck was supplied by two circuits, both supplied from the same distribution board, demonstrates poor preparation for an emergency as a single failure of the distribution system blacks out the entire main deck. This compounds the seriousness of the failure to resolve the recurring issue with the breaker(s).

4.5 Lack of Training/Knowledge to Manually Operate the Main Propulsion Operating Systems

4.5.1 At approximately 20.00 hrs on Thursday 25 March 2021 there was an electrical failure that affected essential electrical supplies. The power to the hydraulic system to winch in the trawl warps (to enable the shooting hood hatches to be closed) was available from the 380V electrical supply. The vessel's emergency battery system(s) switch on two separate battery banks supplied the vessel's main operating systems and the vessel's radio installation, and thereby provided a limited duration 24V DC emergency electrical power to:

- the emergency lighting system (main emergency batteries).
- the vessel's main propulsion operating systems (main emergency batteries).
- radio communications equipment (radio installation emergency batteries).
- navigation lights (main emergency batteries).

4.5.2 By around 06.00 hrs the next morning the emergency electrical system had been exhausted which had been anticipated. The Skipper stated the 24V failure caused the clutch to disengage and pitch to go full astern. The information that the pitch was full astern was from the pitch angle indicator in the wheelhouse which also suffered a power failure and therefore would have shown full astern as there was zero signal milliamps or voltage. The clutch cannot be engaged unless the pitch is neutral. The Skipper described trying to get the pitch to neutral but failed as there was no power to the wheelhouse instrumentation and controls. The clutch can also be engaged manually. It is evident the Skipper was unaware of what to do in an emergency situation. The vessel's "main propulsion operating systems" is best described as the "remote control of the main propulsion operating systems". Local control was available in the engine room after 06.00 hrs. The crew at no time activated the local controls.

4.5.3 The gearbox manufacturers operator's manual contains a data sheet (at page 5), and details of how to manually override the hydraulic main clutch (at pages 32 and 33), and a description of the hydraulic operating system with schematic diagram (at pages 38, 39 and 41).

See Appendix 7.37 - Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41).

Referring to the hydraulic system description at pages 38 and 39 and hydraulic diagram 4-06805 at page 41 of the manual in particular; it can be seen that there were two electric solenoid operating hydraulic directional valves; one solenoid valve (position 18 in the hydraulic diagram) engaging the clutch for the main propulsion drive, and the other solenoid valve (position 22) for engaging/ disengaging the power take-off for the shaft generator (No. 1).

4.5.4 Once the ships emergency 24V DC power failed, these solenoid valves would have been de-energised thereby disengaging the main propulsion drive clutch and the shaft generator (No. 1) power take-off clutch with resulting loss of propulsion and electrical generation (if the shaft generator was in-use). A servo cylinder (position 9) provided for propellor pitch control and was regulated by a pilot controlled proportional valve (at position 11), which would have maintained the propellor pitch setting at the time of failure. The gearbox manual includes detailed procedures at pages 32/33 for manual override of the hydraulic main clutch, either by mechanically activating the hydraulic clutch or activating the clutch by pressing the clutch together mechanically. The method selected will depend on the nature of the fault.

4.5.5 The failure of the 24V DC battery supply, simultaneously with the propulsion clutch, disengaged the main No. 1 generator and failed or lost the 380V supply. That left the No. 2 (or auxiliary) and No. 3 (harbour) generators. The Skipper could have started the No. 2 generator as starting it did not require the failed No. 1 generator. Had he done that he would have had power on the main switchboard which would have restored the engine room lights. He could then have had lights to obtain manual local control on the main clutches and the CPP propellor. Had this happened the vessel could have steamed safely to port. In addition, he would have had power after 06.00 hrs on the Friday to retrieve the trawl warps and close the shooting hood hatches. The Owner asserted (for the first time during the submission of a second set of Observations on the draft report) that the Skipper had experience and training in the manual operation of the main propulsion systems, and in the starting of all generators onboard. However, they have also stated that on the Thursday night one of the owners gave advise to the Skipper on how to reinstate power to the vessel, via the Skipper of the FV Monica 2. The Owner also asserted that they had been told by the Skipper of the FV Monica 2 that the Skipper had exhausted all possibilities in restoring power to the vessel including that he had attempted to start the No. 2 (or auxiliary) generator. No evidence has been provided by the Skipper to describe these efforts in any way to confirm this. No explanation has been

provided as to why such efforts would have been unsuccessful.

4.5.6 The Skipper provided no evidence that he was trained and/or able to manually operate the main propulsion operating systems which meant that propulsion and the ability to control navigation was lost. The Skipper was also untrained and/or unable to start the No. 2 or auxiliary generator. The resulting failure to retrieve the trawl warps and close the shooting hood hatches ultimately created a major source of water ingress in the latter stages of this marine casualty. There were no suitably trained personnel and planning for such an emergency for when the main electrics failed and this was a contributory factor.

4.6 Failure to Alert Coast Guard at an Early Stage and to take other Available Steps

4.6.1 At approximately 19.00 hrs-20.00 hrs on Thursday 25 March 2021 there was an electrical failure that affected essential electrical supplies and a partial blackout onboard the fishing vessel. No steps were taken to alert the IRCG of the then electrical failure/partial blackout and likelihood of the anticipated loss of ahead propellor pitch and the vessels ability to continue safe navigation. A skipper or master of a vessel should not delay notifying the SAR system if a problem is, or may be, developing which could involve need for assistance[11]. Such notification allows the SAR system to carry out preliminary and contingency planning that could make the critical difference if the situation worsens. The Skipper had a GMDSS general operating certificate during which course he would have been trained on the correct procedure for emergency situations.

4.6.2 The first recorded notice to the emergency services of any problems onboard the fishing vessel was at approximately 08.30 hrs on Friday 26 March 2021 when the Owners of the FV Ellie Adhamh radioed Valentia CG to inform them that the fishing vessel had broken down and required a tow. It was much later, on the following day, that the emergency services were advised that there were difficulties in maintaining an acceptable level of flood water onboard due to the failure of the pumps to operate effectively. From Thursday evening the weather had deteriorated seriously as per the weather forecast. Once the FV Monica 2 departed for home port, communications were very limited onboard FV Ellie Adhamh.

4.6.3 No steps were described by the Skipper on the Thursday evening to alert the Owner and to arrange for the delivery of a replacement circuit breaker, or to immediately start arrangements for an earlier tow (which vessel could have been supplied with the required spare breaker). No steps were described by the Skipper to seek advice directly or via the Owners as to possible options which would have resulted in obtaining instructions on how to avail of the manual systems. The Owner asserted (for the first time during the submission of a

11. Volume III of the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual)

second set of Observations on the draft report) both that the Skipper was trained and knew how to reinstate power, but nevertheless they say they passed advice in this regard via the Skipper of the FV Monica 2. These alleged communications took place in this indirect manner for some unexplained reason. There is no record of any assessment of the capacity of the FV Monica 2 (a smaller vessel) to manage a tow in the forecast weather. The Owner asserted (again for the first time during the submission of a second set of Observations) that they had made alternative towing arrangements with larger fishing vessels that were still in the fishing grounds that the FV Ellie Adhamh had departed from. It is not known which other (unidentified) vessels had offered a tow on their return to port. It is not explained how this would have assisted the vessel in time and given the worsening weather conditions. The Owner also alleged that when these various vessels passed the FV Ellie Adhamh on the Friday night and on the Saturday morning, the Navy was on site and would not allow them to assist. No evidence was ever provided by the Skipper, the IRCG or the Navy to corroborate this allegation.

4.6.4 At approximately 06.00 hrs on Friday 26 March 2021 the fishing vessel emergency control systems including its emergency lighting and vessel's CPP control system, shut down. The fishing vessel became adrift. It appears the Skipper only advised the Owner on the Friday morning after the emergency electrical supply had run out as had been expected. The Owner advised that they contacted Valentia CG at 08.30 hrs on the Friday morning to advise of the situation onboard. The Owner also arranged a tug but due to the bad weather the tug had broken wheelhouse windows and could not proceed.

4.6.5 The accompanying fishing vessel FV Monica 2 established a tow on the Friday morning when the emergency batteries electrical supply failed. This was a difficult operation in the very bad weather at the time. Both vessels were approximately 55 NM from the home port of Castletownbere. However, the tow line parted approximately one and a half hours after the tow commenced and the fishing vessel crews were unable to reconnect the tow line. The MCIB calculated that both fishing vessels would be in a safe haven by approximately 16.00 hrs that day if that tow managed to be maintained at 5 kts speed. The weather was strong to near gale, but wind and sea swell were behind the two fishing vessels and favourable for their course homeward.

4.6.6 While the shaft alternator remained clutched in, there was continuing electrical supply to the bilge pumps in the sumps in the factory deck, but they became clogged with fish debris (that was not cleared overnight when there were emergency lights in the deck) and there was increasing water ingress during Friday. The Skipper sought manual pumps late on Friday afternoon (which were delivered the next morning). Had they been requested earlier in the day they could have been delivered earlier given that R115 was out twice on the Friday to the vessel and the management of water could have been started earlier.

4.6.7 The failure to firstly, evaluate the situation once the electrics failed on the

Thursday evening to include assessing the weather and planning for alternatives if the FV Monica 2 tow did not work, and secondly, with the failure to fully inform the IRCG of the partial blackout and anticipated total loss of ability to continue navigation, were contributory factors in the loss of FV Ellie Adhamh.

4.7 Failure to Keep Factory Deck Clear

4.7.1 At approximately 20.00 hrs on Thursday 25 March 2021 there was an electrical failure that affected essential electrical supplies. The fishing vessel's situation worsened from 06.00 hrs on 26 March 2021 as the main emergency battery system became exhausted and FV Ellie Adhamh lost propulsion.

4.7.2 The overboard waste discharge chute was fitted with a hinged lid which could be (and should have been) made weathertight, however the lever operated spindle which passed through the side of the chute via a bushing arrangement was missing the bushing at the time of the incident, and the bush orifice was open allowing water to enter the deck space when the chute was submerged in the sea as the vessel rolled.

4.7.3 In fishing operations (especially when towing or hove to) a problem may arise with decked fishing vessels whereby water is shipped or allowed to accumulate in an enclosed work deck. This not only leads to uncomfortable working conditions but can lead to the accumulation of water down flooding into below deck spaces, thereby creating a detrimental effect on the vessel's stability by introduction of "free surface effect" particularly on a large deck area. It is essential, therefore, that the means of rapidly clearing entrapped water is fitted in vessels with enclosed fish or factory decks. This vessel had a natural baseline trim forward on the main deck and water on the deck would run forward when the vessel was loaded.

4.7.4 At the time of the incident, the factory deck of FV Ellie Adhamh was fitted with four 380V electric deck pumps; one deck pump on the port side, one located at port mid and two on the starboard side. The 380V power supply for these pumps continued to be available to the bilge pumps until the 24V DC battery emergency control system was exhausted causing the engine driven shaft alternator to de-clutch and stop the 380V supply.

4.7.5 The weather and sea conditions deteriorated from Thursday, and the leaking waste chute was regularly submerged as the vessel increasingly rolled in the mounting sea swells. The crew encountered difficulties to control the ingress of water into the main deck space, exacerbated by the lack of adequate lighting in the main deck space, and the fish catch continually spilling out onto the deck space, and blocking the suction pipes of the deck and salvage pumps. The crew were unable to keep the water levels down as the deck pump's suctions became blocked.

4.7.6 In addition to not being able to avail of the No. 2 generator and regain manual control from the time of the initial electrical failure there is no evidence of any

damage control measures to manage the situation directly on the factory deck. This despite knowing that the emergency supply had an approximate eight-hour duration span, and that the weather was predicted to worsen.

4.7.7 The failure to take practical steps in the main deck to control the evolving situation there, or to plan for the consequences of total electrical failure by the Friday morning are considered causative factors in the loss of the vessel.

4.8 Water Ingress

4.8.1 It is accepted that there was a gap in the side of the overboard waste discharge chute due to the missing bushing which was allowing seawater to enter the main deck area. The Owner and Skipper have stated that they checked the waste discharge unit in January 2021 and observed no missing bushing. No records or evidence were provided confirming their inspection. Given the bushing was missing it is difficult to understand how the leak was not noticed when the bushing went missing sometime between January and 25 March 2021. FV Ellie Adhamh was taking water into the main deck space through its overboard waste discharge chute located above its normal waterline, the chute being repeatedly submerged by the rolling motion of the drifting vessel.

4.8.2 All electrical power to the upper decks was lost on Thursday evening (25 March) with an emergency supply left that then ran out on Friday morning (26 March). However, the 380V supply continued to operate when the main engine de-clutched with the loss of the 24V DC supply (which held in the clutch for the generator that provided the 380V three phase supply) and power to the bilge pumps was available and for the four hydraulic pumps for the trawl winches up to Friday morning (the power to the hydraulic pumps would have been shut down when they completed the last haul on the Thursday).

4.8.3 Water ingress continued throughout Friday and into Saturday (27 March), even after rescue helicopter R115 provided emergency salvage pumping equipment to the vessel. The flooding information from crew statements are varied and are not all consistent. The Owner stated the Skipper first noticed the water coming in via the missing bushing on Saturday 27 March, but it remains unknown when that ingress started (and there were no lights on the factory deck after the electrical failure to assist in observation). The Owner further stated that when the Skipper did notice the water ingress via the chute it created no concern as he thought it was of an insufficient amount. The Skipper stated that in his opinion there was no issue with onboard water for about 33 hours after the emergency battery failure. However, there was obviously an unresolved issue and the Skipper himself describes the gap through the waste chute as having the size/diameter of a garden hose, and even before the ingress was noticed on the Saturday, emergency pumps had been requested.

4.8.4 At approximately 08.40 hrs the Skipper reported he estimated there was two tonnes of seawater on the factory deck. The deck water was reported as having

been pumped out by salvage pumps provided by the Coast Guard when at 09.18 hrs rescue helicopter R115 reported to having landed two salvage pumps onboard the casualty vessel. The casualty vessel pumped out its middle deck and was stable at that time, (see Appendix 7.17 - Marine Rescue Sub Centre Valentia Search and Rescue SITREP7/UIINO469/21 27 1117Z Mar 21 - FV Ellie Adhamh Taken in Tow). The MCIB calculated that two tonne is approximately 25 mm (one inch) of water covering the main deck. However, the Skipper also stated that after pumping there still remained 12-24 inches, (30.5- 61 cm), of water on deck.

4.8.5 The naval tow was under way by 10.58 hrs with a tow line attached to the port side which would have increased the port list already present from the vessel's loading of a completed catch. At 15.53 hrs the Skipper stated there was around five tonnes on deck and this was around 65 mm (2.5 inches) over the full deck if evenly distributed. During this time the OSC clearly was increasingly concerned that the situation onboard was not under control and was pressing ever more strongly for evacuation, which was being resisted by the Skipper.

4.8.6 This vessel had a weathertight enclosed area up to the upper deck and the Stability Book calculations did not include calculations for water on the factory deck as it was considered weathertight. The working instructions in the Stability Book state *"The levels of stability shown in Part III are entirely dependent upon water being excluded from within the hull below upper deck level. Open doorways, hatchways, etc breach this watertight integrity leaving the vessel vulnerable to capsize when suddenly heeled, or when taking sea aboard"*.

4.8.7 In 2012 the waste discharge chute part of the fish processing unit was moved from the starboard side to the port side. This was of relevance to the stability of the vessel. The 2009 MSO letter within the Stability Book provided an exemption so that the main deck was assigned a minimum freeboard of 250 mm rather than 300 mm under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007. The reduced freeboard meant that the original waste chute was nearer the water line. The consequence of that was that in heavy seas the waste chute cover and flap came under greater pressure. However, moving the fish processing production area and equipment in 2012 from forward starboard to aft port would not have substantially altered the situation. The second stability issue was that the approved Stability Book shows standard loading conditions whereby the loading has the vessel trimmed by the bow relative to the baseline. Whilst the vessel may have a keel trim by the stern, the water accumulating on the main deck would have a tendency to flood forward. This is relevant in considering the later source of water ingress into the accommodation area from the open shooting hatches after the crew were airlifted off and the likely open watertight door No. 5.

4.8.8 The waste chute cover was fitted "back to front" in that the face intended to take the pressure, was facing into the main deck whereas the pressure was coming from the outside. As the chute cover (or lid) was secured from the inside, the loading force - the water surging up the chute exerted considerable

force on to it. This raised a question over the watertight nature of the factory deck. No evidence was provided that the new chute was design approved or surveyed. It was not the same as the original design drawings but was reported by the Owner to be the same as that which was installed as the original chute cover. A handwheel type closure using four locking cleats would have provided better resistance to external sea water pressure.

4.8.9 The hinged lid on the waste chute was leaking past the seals as the non-return flap was displaced and not providing the required damping of the water to the lid underside. Sea water pressure would have acted directly on the underside of the lid and the installation of the lid was not appropriate for this water pressure. In this type of situation, the crew might also try to tighten up the two toggles, which could lead to over tensioning or fatigue failure of the toggle bolts. The Skipper has stated that he had never observed water leaking through the chute cover. One of the Owners (who stated that he had the vessel built and skippered the trawler for six years) has stated that there never was any water ingress through the waste chute even when the vessel was towed in similar weather conditions, with the port side chute often being submerged. However, such a situation in this incident arose from the consequences of the vessel not being under way (without propulsive power), not taking steps to clear the fish debris, and the prevailing severe weather and sea conditions.

4.8.10 There was water in the factory deck and this was running into the accommodation (as reported by the crew) which was on the port side. This was increasing the port list thereby putting the defective waste chute further under the water. The vessel also had slack fuel tanks as most of the fuel had been consumed and this would have increased the free surface effect increasing the vessel's roll and list.

4.8.11 MRSC Valentia SAR SITREP9/UIINO469/21 27 1732Z Mar 21 (see Appendix 7.21) reports that at 16.02 hrs, the accommodation was flooding, so the water would be higher than the hatch coaming which was 460 mm and would require around 34 tonnes free surface water on the deck if the vessel was on an even keel. However, as the vessel was pitching and rolling the amount of free water required on deck to flood the accommodation would be less. If the Skipper's earlier estimates were accurate then it must follow that there was a sudden increase in the inflow. This could be attributed to failure of the toggles on the chute lid causing more rapid flooding. The toggles would have been subjected to cyclic loading for the previous 20 hours at this stage.

4.8.12 The following timings and flow rates support the deduction that there was rapid flooding onboard:

Using the Skippers reference to a "garden hose", a 10 mm diameter is estimated to pass about one tonne per hour. A 20 mm diameter hole would therefore pass four tonne an hour. If the chute hatch cover was leaking along an edge 500 m long with an opening of 1 mm it would pass about four tonnes an hour. Hence

the flooding rate could be in order of five tonnes per hour. Taking the lowest rate of four tonnes per hour, then over six hours the level would have risen to a level to cause flooding of the accommodation through door No. 5 (see Appendix 7.33 and Appendix 7.34 - FV Ellie Adhamh Hatch Plans). The reported rates and given that the vessel was disabled for nearly 24 hours would lead to the following rate of water ingress:

- First 12 hours – two tonnes
- Next six hours – four to five tonnes
- Next nine minutes – 30 tonnes
- Next 11 hours with vessel under tow for the first three hours, then drifting and sinking at 10.55 hrs, Sunday 28 March (off the Bull Rock on the west coast of Co. Cork).

This supports the likelihood that there was progressive failure of structural integrity i.e. the waste chute hatch securing toggles, leading to rapid flooding. The MCIB provided estimated flooding rates with a margin of error in the region of 20%. Human observation and recollection may also not be entirely accurate. It must be recalled that even from before the pumping operation after the pumps were delivered on Saturday 27 March, the Skipper accepts he was under pressure from the OSC of the naval vessel to launch liferafts and vacate the vessel. He has stated that after the pumping there was still 12-24 inches/30.5-61 cm of water on deck. By mid-afternoon the situation had clearly deteriorated with an increasingly difficult rescue situation and the attendant risk to the lives of the crew.

4.8.13 The Skipper stated that all the hatches had been closed from the Thursday evening, however, both port and starboard shooting hatches are clearly open, with trawl wire passing through as viewed in videos and photographs from the rescue services involved on Saturday 27th March 2021. The photograph taken on the 27 March by the R115 (see Appendix 7.31 - Irish Coast Guard Photograph Taken 27 March 2021) shows the winchman in the bow, three crew on deck and pumping taking place on the forward port side of the vessel. The photograph shows no tow line, so was taken before the tow was achieved around 10.48 hrs. It is evident from this image that the forward access hatch (to the factory deck below) was open, and the shooting hatches at the rear are still open. All hatches are obviously not visible so their status at this time is not recorded.

4.8.14 The Skipper did not in fact ensure that the vessel was made watertight when its power failed on Thursday evening. This was a requirement of the approved Stability Book which states (with under lineation added):

"11. Watertight Integrity
The levels of stability shown in Part III are <u>entirely dependent</u> upon water being excluded from within the hull below upper deck level. Open

doorways, hatchways, etc breach this watertight integrity leaving the vessel vulnerable to capsize when suddenly heeled, or when taking sea aboard. Doors hatches and similar openings, leading within weathertight structures should therefore be kept closed at sea when not in use."

4.8.15 Had the trawl warp shooting hood hatches been made watertight during the time when it was possible to do so. It is quite possible that the water from the defective waste discharge unit might not have been sufficient to so profoundly affect the vessel's stability during the tow when it was unable to make its way under its own steam. However, there are recorded cases as in 2020 of a Dutch vessel where a defective bilge pump led to such flooding that the angle of list to starboard exceeded 50 degrees and led to complete flooding. See Dutch report.[12]

Loss of fishing vessel, 23 December 2020 - Onderzoeksraad voor Veiligheid.

South Africa also saw the need to issue a Merchant shipping notice MN No. 12 of 2013[13] which had the following summary:

"Factory deck flooding has contributed to the loss of a number of South African registered fishing vessels in recent years. This marine notice applies to all South African registered fishing vessels provided with factor deck spaces which form part of the enclosed volume of the vessel and advises the minimum standards of watertight integrity to be applied to reduce the risk of flooding and for conformance with statutory legislation."

4.8.16 At some point, the list created by the water getting into the factory deck, which was increasing as the sea pressure increased on the waste discharge hatch cover, combined with the list from the loading of the vessel and the tow line being attached to the port bow bull ring, reached a point where, with the following seas, resulted in a list to such a degree that water started coming in through the open port side shooting hood hatch. The navigation course to a safe haven also contributed to the situation as the vessel was subject to following seas with six metre wave heights which would have swamped the stern leading to additional water ingress throughout the period. On 27 March from 14.48 hrs-16.02 hrs, several references were made to a "significant list". While the extent of the list is not clear or precisely recorded at this time, at some stage the list would have

12. "On 23 December 2020, a Dutch fishing vessel UK-160 Riemda, sank off the French coast. All crew members survived the accident without serious injury.

While hauling in one of the fishing nets, the vessel suddenly heeled over to starboard. When checking the fishing nets, a crew member noticed that on the starboard side, the deck was one and a half metres under water, and the starboard bilge pump was not working. The pump turned out to be jammed by a piece of rope. Efforts to restart the bilge pump were unsuccessful. The crew tried to trim the vessel level in several different ways, but unsuccessfully. The vessel heeled ever further to starboard, at which point the fish waste discharge chute started to take on water. At a later stage, the hatch of this chute was closed, but despite these measures, the vessel continued to list ever further to starboard. When the angle of list to starboard reached more than 50 degrees, the engine room air inlet came under water, causing the stern part of the vessel to fill completely with water."

13. https://www.samsa.org.za/Marine%20Notices/2013/MN%2012%20of%202013%20-%20Factory%20Deck%20Flooding%20Of%20Fishing%20Vessels.pdf

brought the shooting hoods into play as a potential down flooding point. This would have brought the stability of the vessel (per the Stability Information Book which confirms how the vessel met the survivability minimum criteria) into a region where the vessel no longer complied with the criteria and once that "tipping point" was reached, added to the ingress of water. It seems possible that when the vessel was abandoned one internal watertight door was open and this would have increased the flooding effect. On exiting the vessel, the Skipper advised that all the upper deck hatches were tight, the only open door was the one he was using to go up and down from the wheel house into the galley and out on to the deck to pump the water. It is also possible that the crew on leaving the accommodation area to prepare for the airlift left the cabin escape hatch ("I") open. The Skipper was unable to confirm that all watertight doors were secured before the airlift was completed due to the focus on that difficult operation. The shooting hood hatches were clearly open. It is noted that the vessel remained afloat for about 19 hours after concern was raised over the vessel's list, so it took until 10.55 hrs on Sunday 28 March for the vessel to be so flooded that it sank.

4.8.17 The defective condition, and incorrect design of the overboard waste discharge chute with the failure to seal the trawl warp hatches, were causal factors in the loss of FV Ellie Adhamh.

4.9 Lack of Training and Communications

4.9.1 The Skipper had received marine training through attendance at BIM safety training courses and study for his Second Hand Limited Certificate.

4.9.2 During this incident the organisation, safety and survival actions of the crew relied mainly on the Skipper's actions. The Skipper was responsible for the operation of the ship and the fishing operations. He was the Owner's appointed Skipper onboard the FV Ellie Adhamh despite not having the required certification of a Second Hand Special Certificate of Competency. The Owner asserted (for the first time during the submission of a second set of Observations on the draft report) that the Skipper had experience and training in the manual operation of the main propulsion systems, and in the starting of all generators onboard. No evidence has been provided by the Skipper to confirm this. No explanation has been provided as to why if the Skipper was so experienced and trained the backup options were not successful. The Owner insist that the Skipper was competent and experienced with proven management experience.

4.9.3 The crew had no known capabilities in radio communications, and they were not fluent English speakers (two having no English or Polish and the two chargehands having broken English). This necessitated the Skipper to be available in person at the radio, throughout the incident, in order to communicate with the Emergency Services. The crew were insufficiently trained and unable to carry out the engine room fault finding checks during the first electrical failure and the Skipper was required to leave the wheelhouse for the engine room to try to

determine the cause of the failure at the main switchboard. The Owner asserts that the Skipper had demonstrated his experience to the Owner in electrical fault finding and repair during his time as the vessel's engineer. The Skipper was not trained in electrical fault finding or repair. It is not recognised as best practice when adopting dual role manning that the Skipper is also the vessel's engineer.

4.9.4 The lack of trained and experienced crew hindered the Skipper as he grappled with the management of the evolving dangerous situation onboard. This very likely contributed to the Skipper not conducting a thorough investigation into the causation of the electrical failures and not adequately managing the vessels emergency/damage control procedures to maintain propulsion and watertight integrity. Deteriorating weather conditions and crew fatigue would also have been an increasing factor in the Skipper or the crew not considering other options as the situation worsened. The Skipper did not show any awareness of the procedures for manual operation of the vessel's CPP system from the local control station in the engine room.

The Skipper failed to ensure that the vessel was made watertight and failed to assess the effect of the water ingress from the missing bushing in the waste chute when he first observed this on Saturday 27 March.

The crew were unable to maintain continuous operation of the IRCG salvage pumps.

Aside from the lack of crew skills and emergency training, had the Skipper been incapacitated the capability of the crew to carry out even basic medical first aid, and to communicate and navigate the fishing vessel may not have been sufficient to allow for the satisfactory outcome to this incident.

4.9.5 The Skipper needed to organise, lead, and direct the crew's efforts in pumping water overboard, prepare for towing and limit seawater from entering the vessel while maintaining communications with the rescue services. These activities were hindered by difficulties in communication with, and between, the crew and the crews lack of emergency training. The Owner has asserted that the crew were trained in emergency procedures and were subject to the required emergency drills as per safety requirements. However, no documentation has been provided to corroborate this assertion. With properly trained crew and a properly certified Skipper, without the language barriers, the Skipper could have delegated some of the vital tasks referred to above.

4.9.6 In September 2023 following a prosecution by the Department of Transport, the Owner of the Ellie Adhamh pleaded guilty to setting sail from Castletownbere Fishery Harbour Centre on 13 March 2021, without a person holding a Certificate of Competency, and also pleaded guilty that the vessel had set sail with a crewmember who had not undergone Basic Safety Training. The Skipper was convicted and fined €2,000 for not holding a Certificate of Competency while in charge of the vessel which took into consideration another charge in relation to

the timesheets. It should be noted that the MCIB is not a prosecutorial body and had no involvement in the prosecutions.

4.9.7 The Skipper's lack of the required qualifications, and experience, with the crews' lack of emergency training and poor fluency in the English language were contributory factors in the loss of FV Ellie Adhamh.

"7(10) (a) The condition of the vessel and its equipment shall be maintained to conform with these Regulations to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons on board.

(b) After any survey of the vessel under this Regulation has been completed, no change shall be made to the structural arrangements, machinery, equipment and other items covered by the survey, without the approval of the Minister. "

4.10 Statutory Duty to Ensure Vessel is Fit to Proceed to Sea and not to make Changes Without Notification and Notification Obligations to the Classification Society

4.10.1 Changes to a vessel's construction requires Classification Society approval. The Classification Society approval means that the changes to the vessel comply with the Societies Rules regarding verification of compliance with technical, safety and engineering standards for the design, construction, and life-cycle maintenance of ships. Bureau Veritas requires vessels owners to inform them of any changes made to their vessels. FV Ellie Adhamh was in Class with Bureau Veritas at the time of the re-location of the overboard waste discharge chute in 2012.

4.10.2 In addition to the obligations to the Classification Society, there is a prohibition on changes after a survey and consequently an obligation placed on the vessels owner by Regulation 7 (10)(b) of the Merchant Shipping (Safety of Fishing Vessels) (15-24 m) Regulations 2007 S.I. No. 640 of 2007 to seek MSO approval for changes made to a vessels hull or equipment affecting the vessels overall safety condition. This Regulation states *"After any survey of a vessel under this Regulation has been completed, no change shall be made to the structural arrangements, machinery, equipment and other items covered by the survey, without approval of the Minister"*.

4.10.3 The Owner gave evidence that the location of the fish processing unit was changed in 2012 from its original position midships on the starboard side to the port side of the main deck on the vessel's side at its aft end, just above the vessel's waterline. A new chute and hull penetration were fitted port aft with the attached hinged lid. The Yard No. 187 Door and Hatch Plan dated 4 December 2002 for the main deck FV Ellie Adhamh, pre 2012 alteration, shows the original design position of the overboard waste discharge chute was on the vessel's starboard side between frame 25 and frame 27 (midships is frame 21).

4.10.4 The modification required the hull structure to be cut and a new overboard fitting to be fabricated and fitted. This should have been approved by the Minister through the MSO and also the vessel's classification society, Bureau Veritas, to ensure the change/modification was safe and its design, materials and thickness were appropriate for the ship side fitting, and also that the closing devices fitted were appropriate for the location in the ship side at the waterline. One fixed bilge pump on the starboard side of the factory deck was also removed and the second pump starboard was cross connected to the port mid pump. These changes led to a reduced pumping capacity and change in weight distribution and should have been approved by the relevant authorities.

4.10.5 The alterations made to the vessel's hull by repositioning the location of the fish processing unit and installing a new overboard waste discharge chute with the removal of a bilge pump, fall under Part 2 and Part 4 of the Regulations and therefore required consent.

4.10.6 The Owner of the FV Ellie Adhamh did not apply for permission to change the location of the fish processing unit and install a new overboard waste discharge chute. The 2012 changes were not notified to Bureau Veritas.

4.10.7 It is also important to note that this vessel was given an exemption from Regulation 41(2) of the Merchant Shipping (Safety of Fishing Vessels) (15-24 m) Regulations 2007 S.I. No. 640 of 2007 in the MSO approved Stability Book to allow the vessel to have a lower freeboard of 250 mm rather than the minimum 300 mm allowed in the Regulations. Had the required permission been sought the MSO advise that they would have undertaken a detailed examination, presumably also taking into consideration the stability factors and the exemption.

4.10.8 There was an additional factor arising from the non-disclosure of the 2012 changes to Bureau Veritas. Throughout the statutory surveying process, the MSO took into consideration the classifications status of the vessel together with other factors. Bureau Veritas in turn required, in accordance with its rules, that structural changes be advised to it. Because the 2012 changes were not notified this contributed to their not being identified and fully surveyed either by the Bureau Veritas or the MSO. Had the changes been notified to Bureau Veritas, the design of the lid and closing devices would have been evaluated against rule requirements. The height above the waterline was also critical and there are strict rules governing this type of garbage chute for the disposal of fish waste discharge chute. During the survey of 7 January 2021, the MSO had no evidence from Bureau Veritas to suggest the making of unauthorised changes. The MSO have advised that if such evidence had been detected, then appropriate action would have been taken by the MSO regardless of the vessel's classification status. This identifies a possible gap in the ability of the relevant authorities to supervise the safety of vessels, although a survey by the Bureau Veritas or the MSO would have been unlikely to have altered the sequence of events leading to this marine casualty as it would not have identified the first causal factor of the breaker issue, and the Owner asserts that the bushing was in place in January 2021.

4.10.9 The fact that the Owner as of 2012 carried out changes of such a major nature having no regard whatsoever to the installation of another weathertight fitting and its impact on the survivability of the vessel, evidences a serious lack of understanding of the stability characteristics of the vessel. The Owner does not agree with this assessment. The added failure to comply with Classification Society Rules, and with Regulation 7 (10)(b) of the Merchant Shipping (Safety of Fishing Vessels) (15-24 m) Regulations 2007 S.I. No. 640 of 2007 shows a disregard for the regime that is designed to support a fishing vessel owners' obligation to ensure the vessel is safe for use. These failures were a contributory factor in this marine casualty.

4.11 Weather

4.11.1 On Saturday 27 March 2021 the prevailing weather was gusty west to south-westerly gale force winds, heavy sea swells and 6 m wave heights. The naval vessel's anemometer recorded winds gusting at 60 kts at their then location at 05.42 hrs on 27 March (equivalent to Beaufort 11 "violent storm").

4.11.2 The weather greatly hindered the efforts of the crew onboard the casualty vessel to sustain water pumping operations and keep the vessel from developing a port list. Towing operations to bring the stricken fishing vessel to safe haven inside Bantry Bay were also constrained by the prevailing weather and sea conditions. The vessel did of course operate in bad weather conditions previously, but the lights were on, and power was available to control the fish processing equipment and pumping. If the weather was calm the situation could have been controlled even if the vessel needed a tow this could have been undertaken and the vessel returned safely to port.

4.11.3 The prevailing weather and sea conditions were a contributory factor in the situation that put the crew and responders at risk and culminated in the loss of FV Ellie Adhamh.

4.12 Weather and Navy Tow Line on 27 March 2021

4.12.1 Several attempts were made to connect a tow line to the naval vessel on the morning of Saturday 27 March. During one such attempt there was contact between the starboard bow of the vessel and the port side of the naval vessel causing minor damage to both vessels.

4.12.2 The Skipper requested salvage pumps (see paragraph 2.15.3), which were delivered by rescue helicopter R115 the following morning (see paragraph 2.15.4 above). The Owners of the vessel have asserted from the outset of the MCIB investigation that there was little or no water onboard until after the Navy started the tow (some 110 NM from the position they were at on Thursday at 20.00 hrs), that the collision was caused by incompetence of the Navy, and, that the collision during the tow line connection operation was much more serious than reported. The Owners assert that therefore the collision was a causative

factor in the vessel sinking. The Owners and the Skipper have also asserted that the water on the deck was clear when the tow started and that it was only after the tow commenced that the trawler began to list to port and that is how it took on more water. They assert that the bulbous bow had been damaged after what they describe as a "substantial collision" with the Navy vessel and may have been causing a drag. The Owner asserts that the bow could only be bow down if there was water in the forepeak, located in the area behind the bulbous bow. They also assert that the contact during the tow caused damage to the casualty vessel that was *"far from superficial"*. Observations by the Owner on the draft report state *"one could not consider a bent bulbous bow and pierced hull and structure to be "minor" damages"*. It appears that the Owner (no representative for which was onboard) assert that there was damage to the hull with the implication that there was water ingress. It is not clear that this assertion is agreed by the Skipper.

4.12.3 This incident was recorded on camera and has been reviewed by MCIB. The FV Ellie Adhamh bulbous bow appears to have hit the side of the naval vessel as FV Ellie Adhamh was lifted on a wave and the damage to the naval vessel was an indent on the side as well as some minor upper deck damages, locker and handrails, where the flare of the FV Ellie Adhamh came down on the side as the wave dropped. The seven crew were on the forecastle deck at the time of the impact, and they all remained standing indicating the impact was not severe. In vessel construction there is additional reinforcement in the bow more than the side, as the bow has to survive the impact of waves as it is driven into them, where the vessel side does not.

4.12.4 There may have been some deformation of the bulbous bow on the FV Ellie Adhamh but there does not appear to have been any serious damage or water ingress. If there was, the water would have been seen flowing out of the damaged area when the bulb was exposed as it lifted out of the water. The bulb was part of the forepeak tank that was used for fresh water with a capacity of 5.9 MT units. At the time of the incident the fresh water in the tank was around 1.7 MT based on condition four in the Stability Book. Any major damage to the bulb would be clearly visible in later photographs and it was not. The photograph in Appendix 7.31 shows the bulb in the air as the vessel sank and the bulb profile can be clearly seen to be intact. This type of contact between vessels is not uncommon in salvage and rescue operations in very bad weather.

4.12.5 Notwithstanding all the available evidence the Owner has continued to assert that the inflow of water was from another unknown source not investigated by the MCIB. The implication being that the naval vessel caused so much damage to the FV Ellie Adhamh that this caused the vessel to sink. They also allege that the interpretation of the footage of the collision was done by unqualified persons with the implication that the interpretation is incorrect although no actual aspects of any evidence have been identified as to what is incorrect. The naval services have confirmed to the MCIB that as of August 2024 no correspondence has been received from the Owner, insurers or agents with respect to the sinking of the FV Ellie Adhamh.

See Appendix 7.32 - A. Photograph of FV Ellie Adhamh showing the Bulbous Bow's Bulb in the Air as the Vessel Sank.

See link to video: CLICK HERE

4.12.6 The contact between the Navy vessel and the fishing vessel is not considered to be a causative or contributory factor in the sinking of the vessel.

4.12.7 The Owner and the Skipper have criticized the naval operations in respect of the tow and in respect of their support operations for the crew recovery operation by IRCG Rescue helicopters R115 and R117. No qualifications from either have been provided to establish their status for this evaluation. The OSC have advised that this was one of the most difficult rescue operations that they had been involved in, due to the weather which had deteriorated seriously from the Thursday evening as per the then available weather forecasts.

4.12.8 The incident by the time the crew were airlifted from the vessel had been running for 48 hours approximately. For the last 24 hours of the incident the fishing vessel was a "dead ship" without any electrical power. After 24 hours the crew fatigue (lack of sleep and food) would have impacted on their ability to assist themselves and the decision to remove the crew for the safety of life at sea was justified and probably should have been taken much earlier given the weather conditions.

4.12.9 The Owner and the Skipper have also criticized the MCIB for deliberately downplaying the "collision" due to bias on its part. This is not accepted. The MCIB are satisfied that the record of events and the causes identified for the very serious incident that put the lives of the crew, and those of the responders at risk, with the total loss of a valuable fishing vessel, speak for themselves.

4.13 Weather and Tow Line after Recovery of Crew

4.13.1 At 10.48 hrs on Saturday 27 March, the crew of the fishing vessel connected the naval vessel's towing hawser to the vessel's tow bridle rigged at the bows of the casualty vessel. The naval vessel commenced towing the casualty towards Castletownbere. Due to the heavy rolling and increasing seas the Navy vessel turned the tow back into the wind to reduce the rolling and help the crew in their efforts to pump out water from the main deck. The crew were airlifted to safety. Shortly after the crew were rescued the Navy vessel attempted to turn the tow back towards Castletownbere but the towing bridle at the bows of the casualty vessel broke and the tow was disabled. Prevailing weather conditions precluded any attempts by the crew of naval vessel LÉ George Bernard Shaw to replace the bridle and reconnect a tow line. Overnight the FV Ellie Adhamh developed a 30°– 40° list to port and sank the next morning off the Bull Rock.

4.13.2 The failure of the vessel's towing bridle combined with the weather conditions was a causative factor in the loss of FV Ellie Adhamh.

5. CONCLUSIONS

5.1 The following are the factors that led to the risk to the lives of the seven crew and the consequential exposure to the lives of the persons involved in the extensive support and rescue operation, and ultimately, to the loss of the FV Ellie Adhamh. It must be stated that the rescue services all contributed extensively, in appalling conditions firstly, in attempts to save the vessel by supplying equipment and by towing her and secondly, by ensuring all the crew were safely lifted off the vessel with no injuries and no loss of life.

a) Electrical failure: the Circuit No. 51 and Circuit No. 52 breaker failure.

b) The failure to investigate the cause of the previous repeated electrical failures with electrical design failings.

c) The failure to provide the vessel with a properly qualified and trained skipper in accordance with the Regulations in force for that vessel.

d) The crews lack of emergency training especially in damage control of the leaks/flooding in the factory deck and poor fluency in the English language.

e) The Skipper and crews lack of knowledge or training in the emergency procedures to enable operation of the propulsion and CPP control systems when the power supply failed.

f) The failure to establish a viable tow late on Thursday 25 March or early on the morning of Friday 26 March and the failure to assess and consider a back-up plan to relying solely on the tow from the FV Monica 2. This included not assessing the consequences of having no electrical supply when the emergency battery supply was used up, the anticipated limited ability to communicate, the increasing bad weather, the failure to anticipate and manage the events in the factory deck, not informing the Coast Guard and not seeking external qualified advice in a timely manner.

g) Not closing all watertight and weathertight openings within and without the vessel as per the Working Instructions in the Stability Information Book when the electricity supply failed, allowed water ingress to flow to other compartments including the accommodation, increased the list, and contributed to the ultimate sinking of the vessel.

h) The defective condition of the overboard waste discharge chute and the design of the chute cover combined with the design and stability characteristics which led to water ingress.

i) The Owners apparent lack of appreciation of the stability characteristics of the vessel, their carrying out of changes that might affect stability, with the failure to comply with Classification Society Rules, and to ensure there was a qualified skipper onboard, shows a disregard for the safety regime provided

for in the Merchant Shipping (Safety of Fishing Vessels) (15-24 m) Regulations 2007 S.I. No. 640 of 2007 and in particular one of the basic obligations on every owner to conform with the Regulations to maintain the vessel and its equipment so as to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons onboard.

j) By omitting to apply to the Minister for approval(s) for the changes, and by failing also to notify the changes having made them, was likely to lead to their exclusion from an MSO examination for safety approval and the requisite periodic safety surveys.

k) The prevailing weather and sea conditions.

l) The failure of the vessel's towing bridle combined with the weather conditions on 27 March.

6. SAFETY RECOMMENDATIONS

6.1 Preamble

6.1.1 The Irish Governments Maritime Safety Strategy[14] published by the Minister for Transport, Tourism and Sport in 2015 recognises the need for improved safety standards in fishing vessels of similar size and type to FV Ellie Adhamh. The Irish Maritime Administration in pursuit of their strategic objective were to carry out a number of actions to improve safety standards in the Irish Fishing Fleet. Two in particular are of interest in respect of this marine casualty:

"Action 9. The standards for fishing vessels less than 24m on length will be updated, incorporating relevant MCIB recommendations (start 2015)."

"Action 29. An enhanced flag state inspection regime on fishing vessels will be implemented to promote adherence to maritime safety requirement in the sector. (Start 2016)."

A review of the effectiveness of the implementation of Action 9 and Action 29 of the Maritime Safety Strategy may provide useful lessons about safety issues relating to vessel under-manning, lack of safety training and certification among in particular, but not limited to, non-national fisher crew as these are some of the issues identified.

Similar issues were apparent in a recent 2022 Marine Casualty Investigation Board report in respect of an incident involving the loss of the FV Horizon in May 2021. The "Report of an Investigation into the Fire and Loss of FV Horizon off the Old Head of Kinsale, Co. Cork 14 May 2021" (MCIB 309)[15] indicated significant parallels to the incident involving FV Ellie Adhamh and are also relevant to issues raised in this report.

The Irish Maritime Directorate (IMD) Strategy 2021 – 2025)[16] issued in February 2021 by the Department of Transport states in its "Vision' and Core Objective"' that its Goal 1.6 for the IMD's Maritime Safety Policy Division is as follows: "Goal 1.6: 9. Develop a maritime safety policy and plan focussing on the wider aspect of maritime safety." The policy statement and plan seem to follow on from policies and plans contained in the 2015 Maritime Safety Strategy and provides a platform from which to continue to improve Ireland's maritime domain.

6.1.2 It is not for the Marine Casualty Investigation Board to make any determination as to whether there has been compliance with the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007.

14. See https://www.gov.ie/en/publication/d00485-maritime-safety-strategy/ for the April 2015 Maritime Safety Strategy.

15. See https://www.mcib.ie/_fileupload/Documents/reports/mcib-309-fv-horizon/2022-04-25-10-07-MCIB%20Horizon%20Report.pdf

16. See https://www.gov.ie/transport

6.1.3 It is not for the Marine Casualty Investigation Board to make any determination as to whether there has been compliance with the Fishing Vessel (Basic Safety Training) Regulations S.I. No. 587 of 2001.

6.1.4 It is also not for the Marine Casualty Investigation Board to make any determination as to whether there has been compliance with the Fishing Vessels (Certification of Deck Officers and Engineer Officers) (Amendment) Regulations 2019 S.I. No. 673 of 2019 in respect of the Skipper's certification. As a matter of record, the Skipper was subsequently convicted and fined for not holding the correct certificate of competency. The Marine Casualty Investigation Board is not aware of what other charges, if any, were brought by the Minister for Transport in relation to the circumstances involved in this marine casualty.

6.1.5 It is noted that since the date of this marine casualty new regulations entitled *Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2023* (S.I. No. 313 of 2023), came into operation on 1 July 2023. These Regulations revoke and replace the *Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations, 1988* (S.I. No. 289 of 1988) and its amending regulations. The new regulations apply to fishers aboard fishing vessels that are 15 metres in length overall and over. Of particular note with regard to training is the fact that an expiration date of five years has been placed on all certificates of competency for fishing vessels, for both deck and engineer officers, where they are issued after the regulations came into operation.

The new regulations provide that all certificates of competency can be revalidated for a further period of five years, and every five years thereafter, subject to the requirement to complete updated training for the following relevant ancillary courses at intervals not exceeding five years: Personal Survival Techniques (PST), Fire Prevention and Firefighting (FPFF), and Advanced Firefighting (AFF). There are transition arrangements for certificates of competency, or a certificate of service, for either a deck or engineer officer, which are currently in force. These will remain valid for a period of five years from the date the regulations came into operation. Therefore, as the regulations come into effect on 1 July 2023, any currently valid certificates of competency will remain valid until 1 July 2028. Any certificates of competency issued after 1 July 2023 will have a validity of five years from their date of issue.

The Department of Transport issued Marine Notice No. 41 of 2023[17] that sets out the details and the effect of the new regulation.

The introduction of an expiration date of five years on all certificates of competency for fishing vessels, for both deck and engineer officers (with the consequential requirement for updated training on renewal) is to be welcomed and removes the basis for what would otherwise be included in the below Recommendations.

17. https://www.gov.ie/pdf/?file=https://assets.gov.ie/278672/a96f8f8c-eac9-4287-85c4-424f3e5d3bd6.pdf#page=null

6.2 Recommendations

6.2.1 That the Minister for Transport and/or the Marine Survey Office as appropriate, consider the contents of this report in the context of the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007, and in particular Regulation 7(10) which required that:

a) the condition of the vessel and its equipment shall be maintained to conform with the regulations to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons on board; and

b) the vessel to be maintained in a fit and safe state, and which prohibited the effecting of changes to the structural arrangements, machinery and other items covered by the survey, without Marine Survey Office approval.

6.2.2 That the Minister for Transport consider an amendment to the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007 and in particular Regulation 12 to provide for the better enforcement, and/or penalties, to better ensure compliance with the Regulations.

6.2.3 That the Minister for Transport and/or the Marine Survey Office as appropriate, should review the process and procedures that ensure, and record, that conditions that are applied to Fishing Vessel Safety Certificates (and in particular interim ones) which must be complied with before departure are complied with before the vessel departs.

6.2.4 That the Minister for Transport consider issuing a Marine Notice on the issues arising where a vessel initially built to Class has not been maintained “in Class”.

6.2.5 That the Minister for Transport should issue a Marine Notice reminding owners, skippers, officers, and crew of fishing vessels of the requirement for all crewmembers to have appropriate certification for the vessel type and have Basic Safety Training in accordance with the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2023 (S.I. No. 313 of 2023), and also of the need to prepare well in advance for the updated training that will be required by 1 July 2028 for those who held certificates of competency at 1 July 2023, if they want their certificates to be renewed.

6.2.6 That the Minister for Transport should issue a Marine Notice reminding owners, skippers, of their obligations under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 S.I. No. 640 of 2007, and in particular Regulation 7(10) which required that:

a) the condition of the vessel and its equipment shall be maintained to conform with the regulations to ensure that the vessel in all respects will remain fit to proceed to sea without danger to the vessel or persons on board; and

b) the vessel to be maintained in a fit and safe state, and which prohibited the effecting of changes to the structural arrangements, machinery and other items covered by the survey, without Marine Survey Office approval.

6.2.7 The Minister for Transport should issue a Marine Notice reminding owners, operators, skippers of the importance of being aware of the procedures for operating the propulsion and controllable pitch propeller systems in emergency conditions in the event of control system failure. The procedures required should be clearly posted at the main engine and controllable pitch propeller control stations.

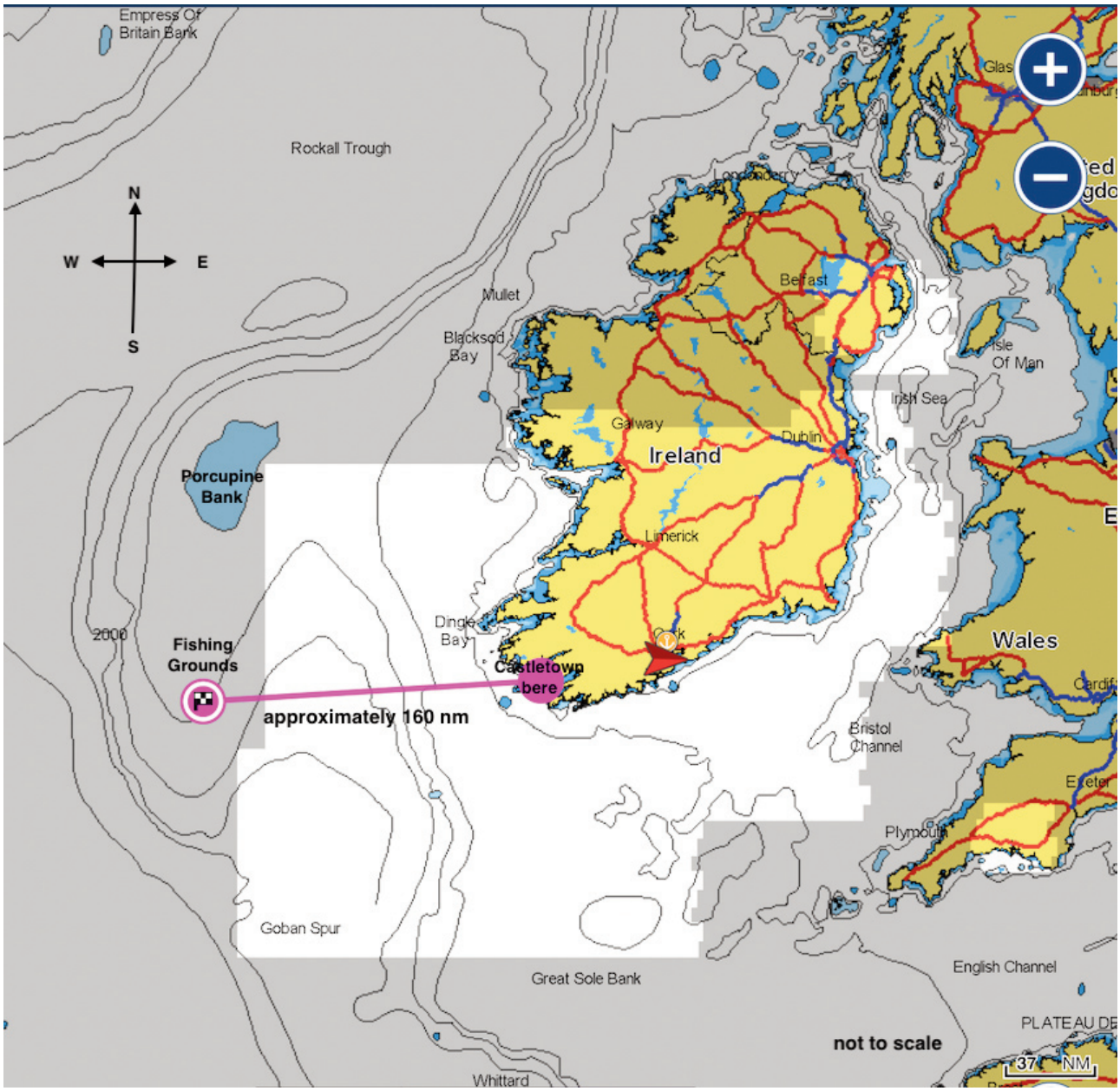
6.2.8 The Minister for Transport should consider whether providing guidance in the form of a safe management code (similar to that which exists for merchant vessels) to owners and skippers to improve the safety, maintenance and the operation of their vessels, would significantly assist owners and skippers in complying with their statutory safety obligations.

7. APPENDICES

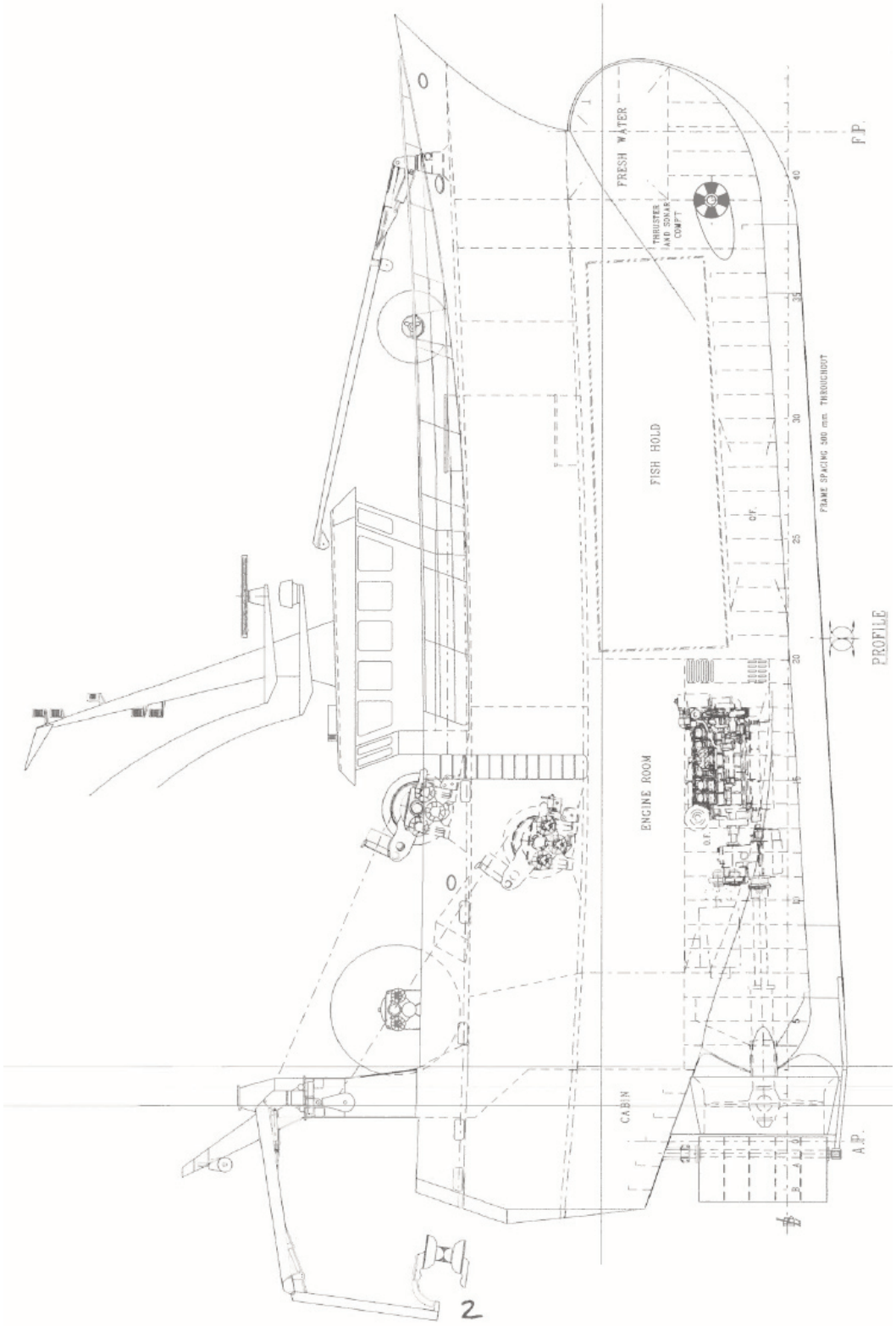
Appendix 7.1 A. Photograph of FV Ellie Adhamh (taken on Friday 26 March 2021 by Irish Coast Guard)

A – Bull Ring

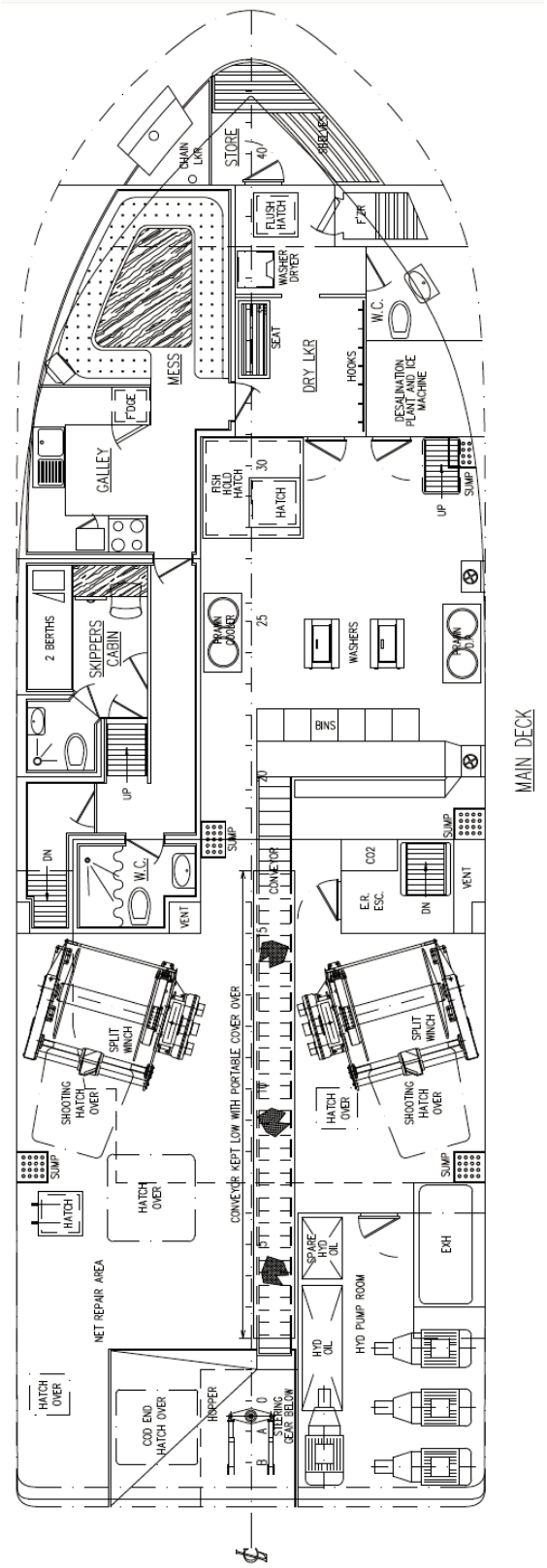
Appendix 7.1 B. Fishing Grounds (Chart)



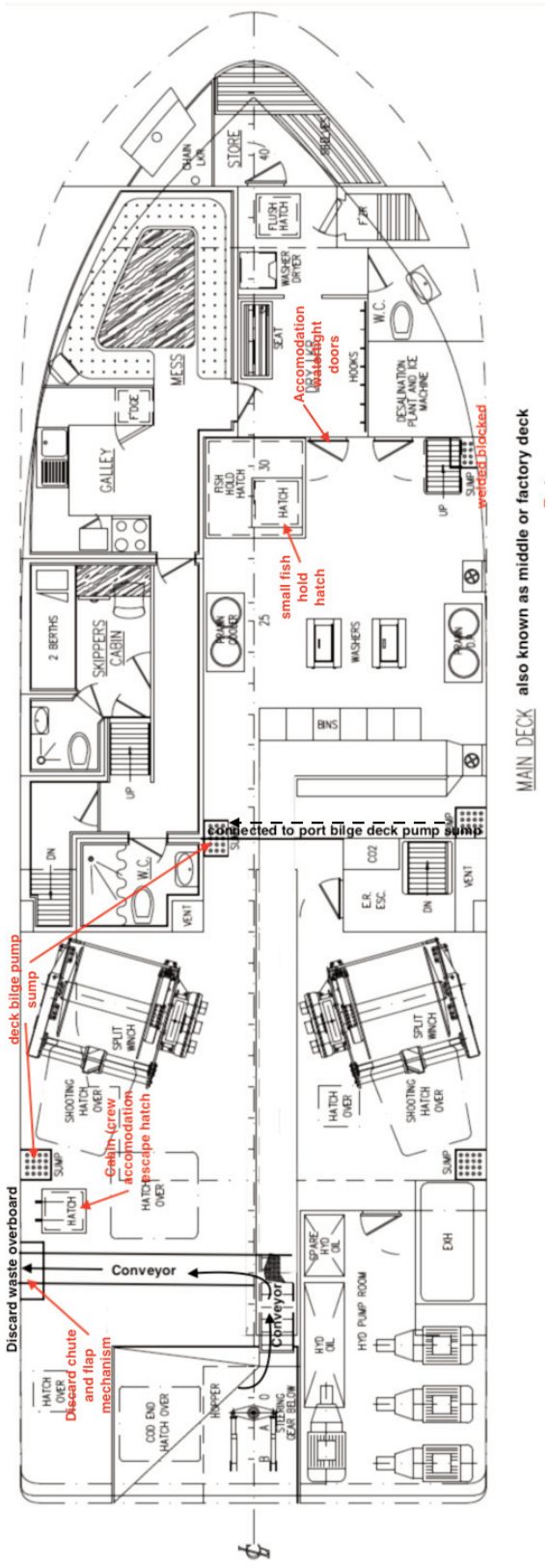
Appendix 7.2 A. General Arrangement Profile FV Ellie Adhamh (sourced from Marine Survey Office Approved Stability Book, for illustration)



Appendix 7.2 B. General Arrangement Plan of the Main Deck – Previous to the 2012 Alteration (sourced from Marine Survey Office Approved Stability Book, for illustration)

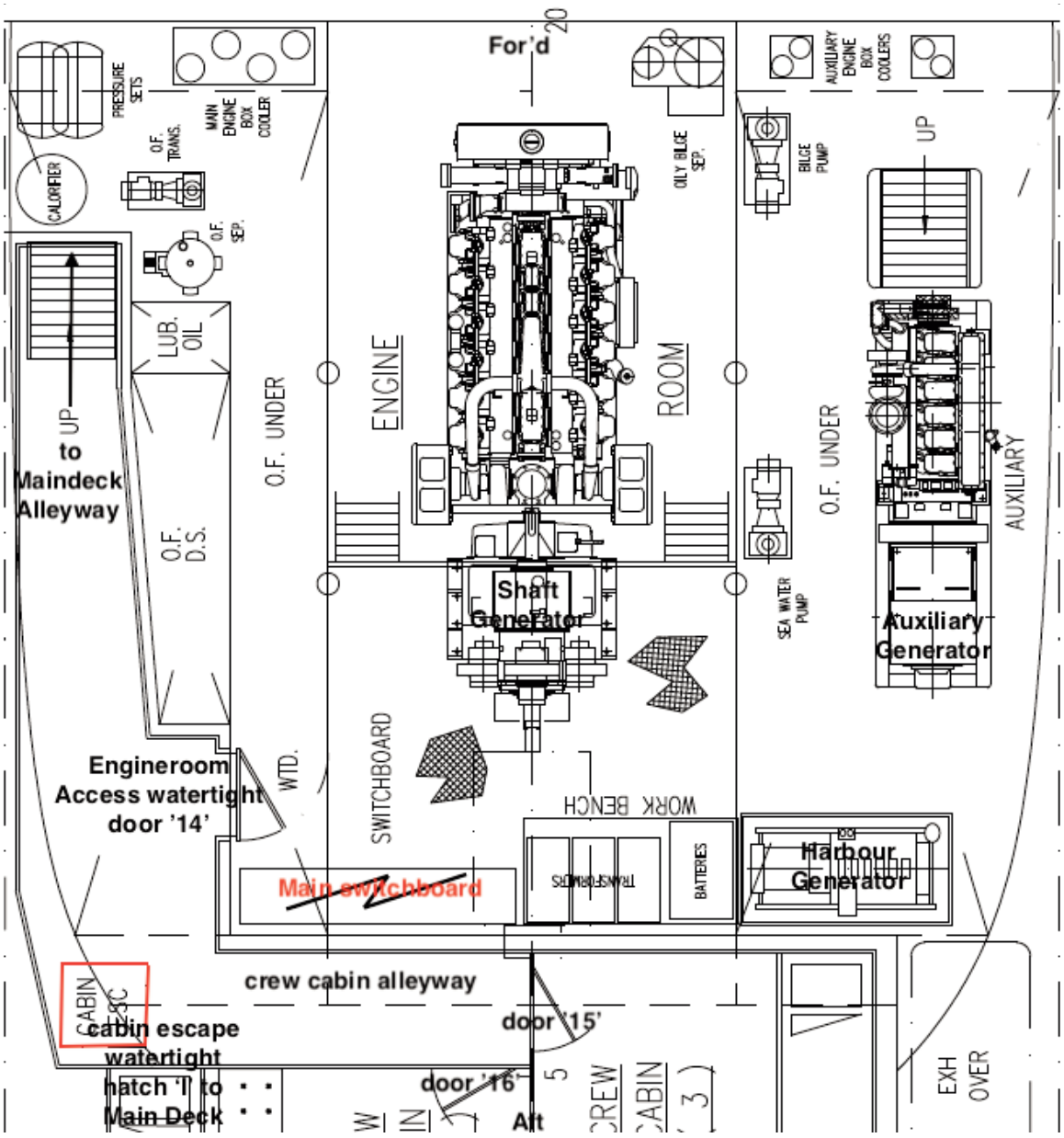


Appendix 7.2 C. General Arrangement Plan of the Main Deck – Post 2012 Alteration, Manually Altered (marked-up) to Illustrate Change as no Drawing Available



Appendix 7.2 D. Photograph of Main Deck Showing Post 2012 Alterations

Appendix 7.3 General Arrangement Plan of the Engine Room (situated under the main deck) - Sourced from the Marine Survey Office Approved Stability Book, for Illustration Only



Appendix 7.3 Electro Huelva S.L. – Electrical Manual Title Block

MATERIALES EN/EQUIPMENT:

CUADROS/BOARD	FABRICANTE–MANUFACTURER
INTERRUPTORES AUTOMATICOS/AUTOMATIC SWITCH	ABB
EQUIPOS DE MEDIDA Y PROTECCION/MEASURE & PROTECTION EQUIPMENT	SACI SERIE NAVAL
INTERRUPTORES MAGNETOTERMICOS/MAGNETO–THERMIC SWITCH	ABB
CONTACTORES, RELES TERMICOS Y AUXILIARES CONTACTORES, THERMAL RELAY & RELAY	ABB
TRANSFORMADORES DE INTENSIDAD/CURRENT TRANSFORMER	SACI
PULSADORES Y PILOTOS/BUTTON & PILOT	SACI
INTERRUPTORES DE PAQUETE/SWITCH	TELERGON
TRANSFORMADORES TENSION MANIOBRA/HANDLING VOLTAGE TRASNFORMER	MANUMAG
RECTIFICADORES/RECTIFIER	SEMIKRON
CONMUTADORES CONTROL DE MEDIDA/COMMUTATION MEASURE CONTROL	TELERGON
CABLE INTERIOR/INSIDE CABLE	EXZHELLENT MAR–RDt (BICC General Cable)
DISYUNTORES/BREAKER	TE – SCHENEIDER

INSTALACION/INSTALLATION	
CABLES TIPO/TYPE CABLES POWER – RVK	TOP CABLE RVK 0.6/1KV
CANALETA SOPORTA CABLES/HOSE TROUGH CABLE BRACKET	ESMENA GALVANIZADA
APARATOS ILUMINACION/LIGHTING SYSTEM	MATEO MILETCH
LUCES NAVEGACION/NAVIGATION LIGHTS	AQUA SIGNAL

Electro Huelva, S.L.
MONTAJES Y REPARACIONES NAVALES E INDUSTRIALES

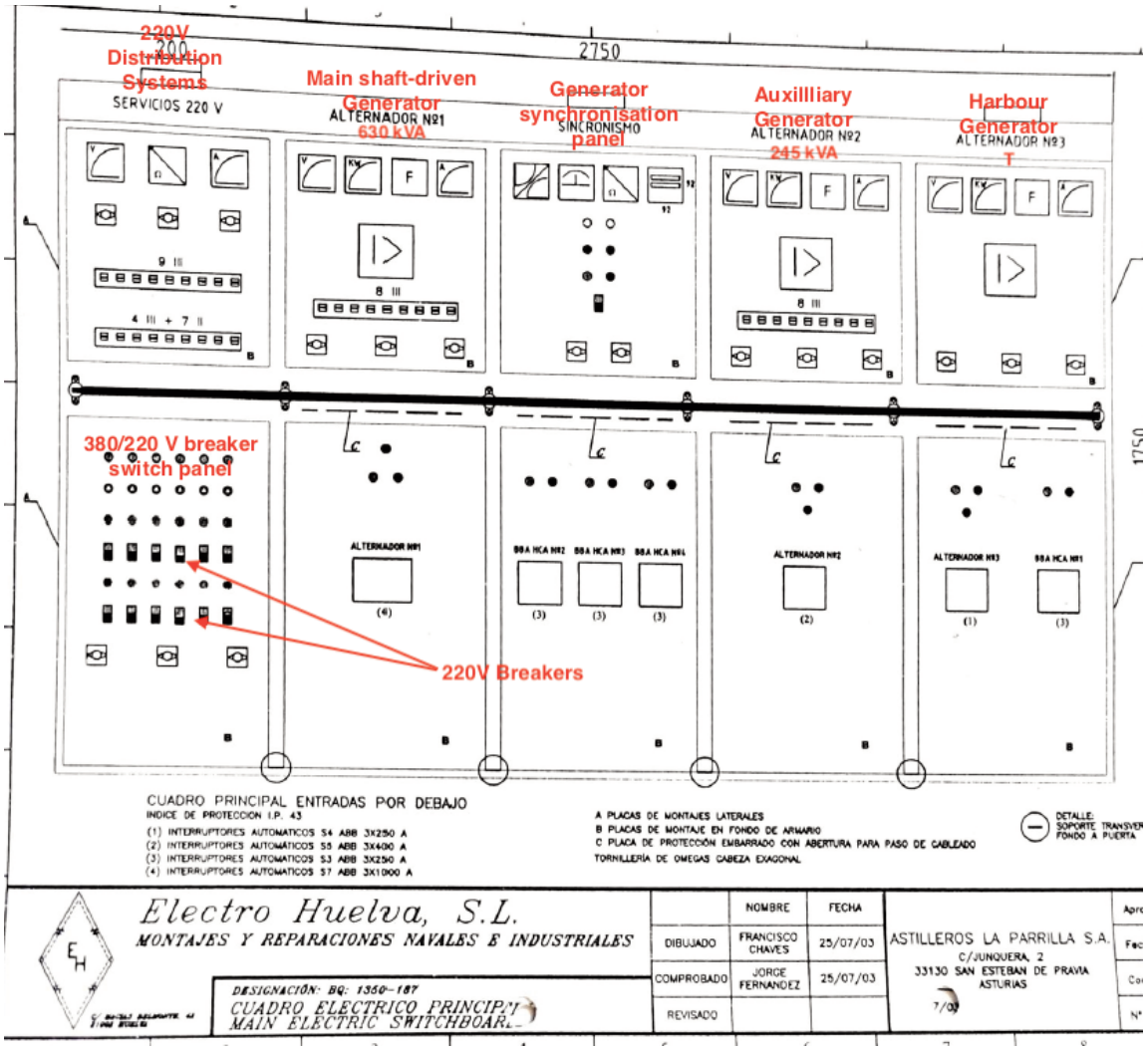
DESIGNACION: BQ: 1360-187
SIMBOLOGÍA Y MATERIALES
EQUIPMENTS

	NOMBRE	FECHA
DIBUJADO	FRANCISCO CHAVES	25/07/03
COMPROBADO	JORGE FERNANDEZ	25/07/03
REVISADO		

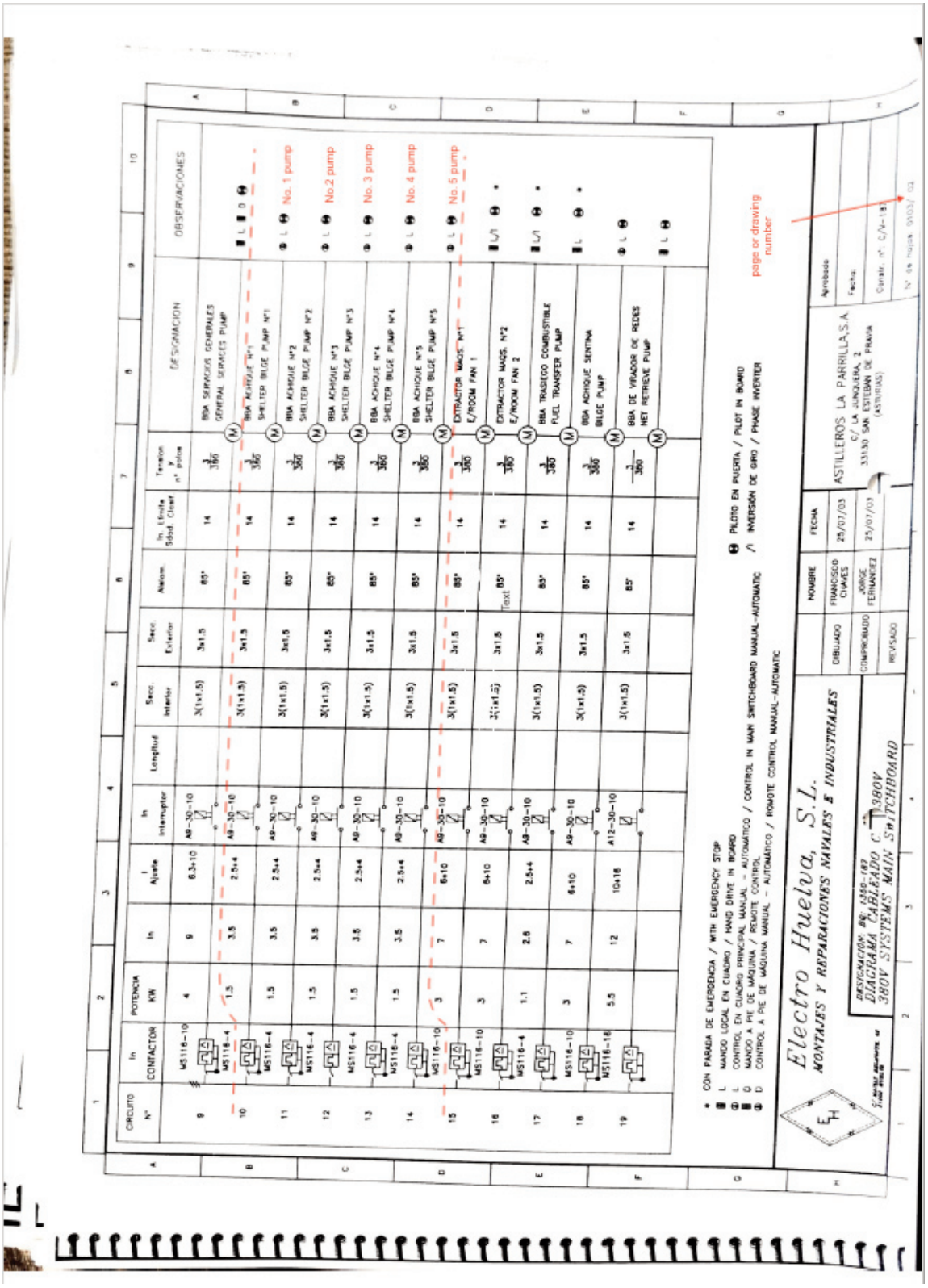
ASTILLEROS LA PARRILLA,S.A.
C/ LA JUNQUERA, 2
33130 SAN ESTEBAN DE PRAVIA
(ASTURIAS)

Aprobado
Fecha:
Constr. nº: C/V-187
Nº de hoja: 0103/ 00

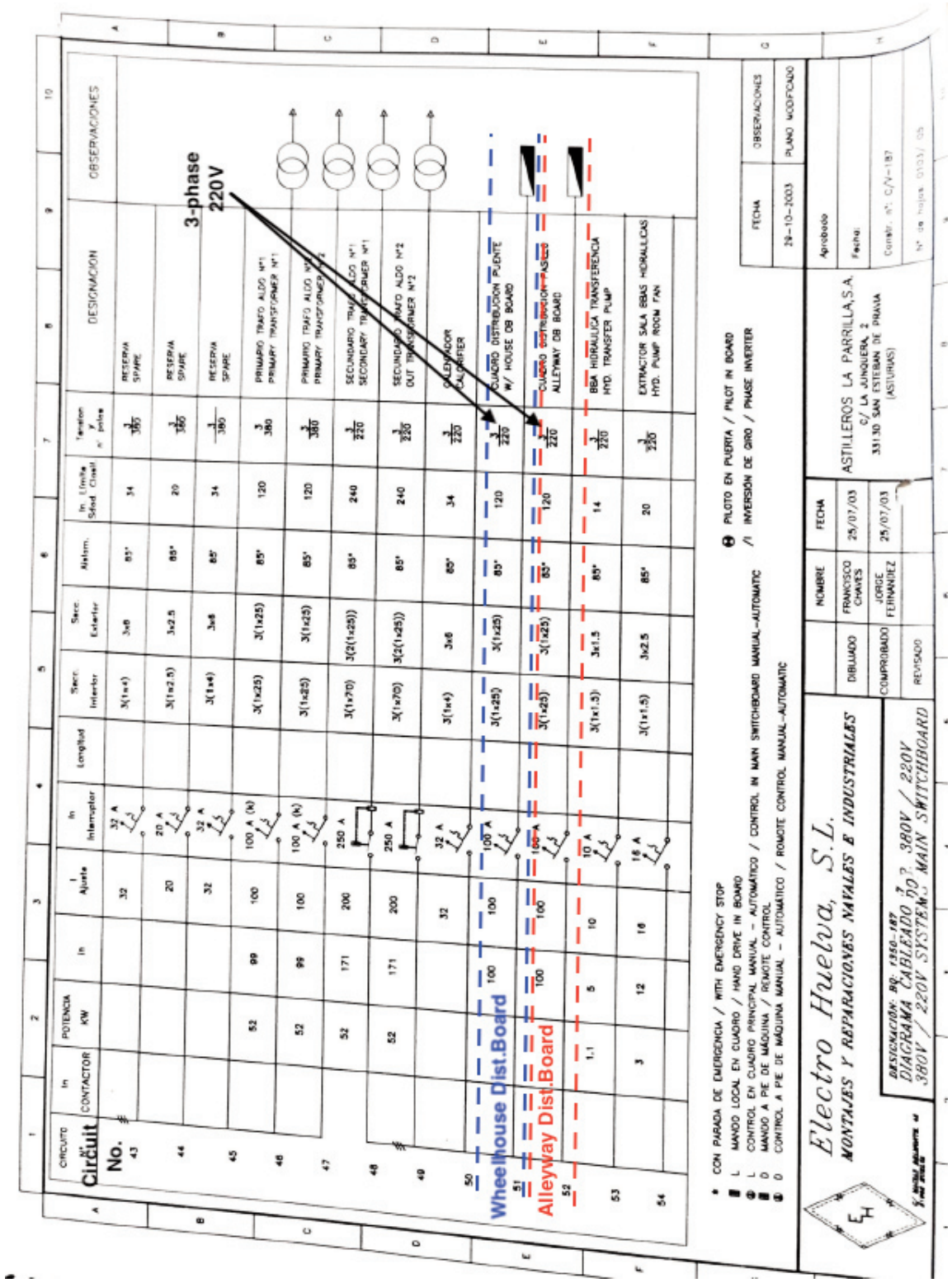
Appendix 7.3 Main Switchboard Panel Arrangement - Manual Page 0103/CP



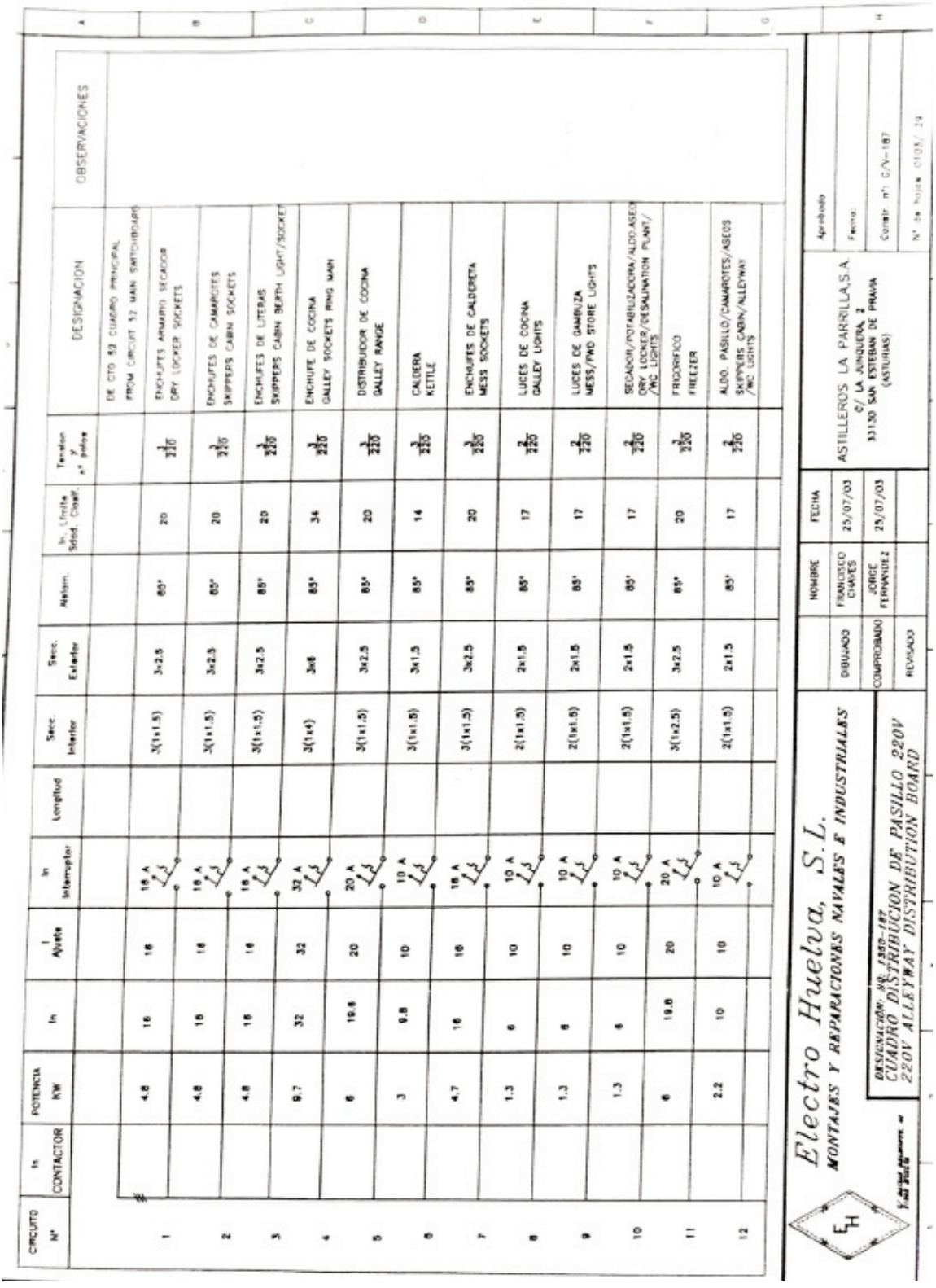
Appendix 7.4 380V Systems Main Switchboard - Manual Page 0103/02



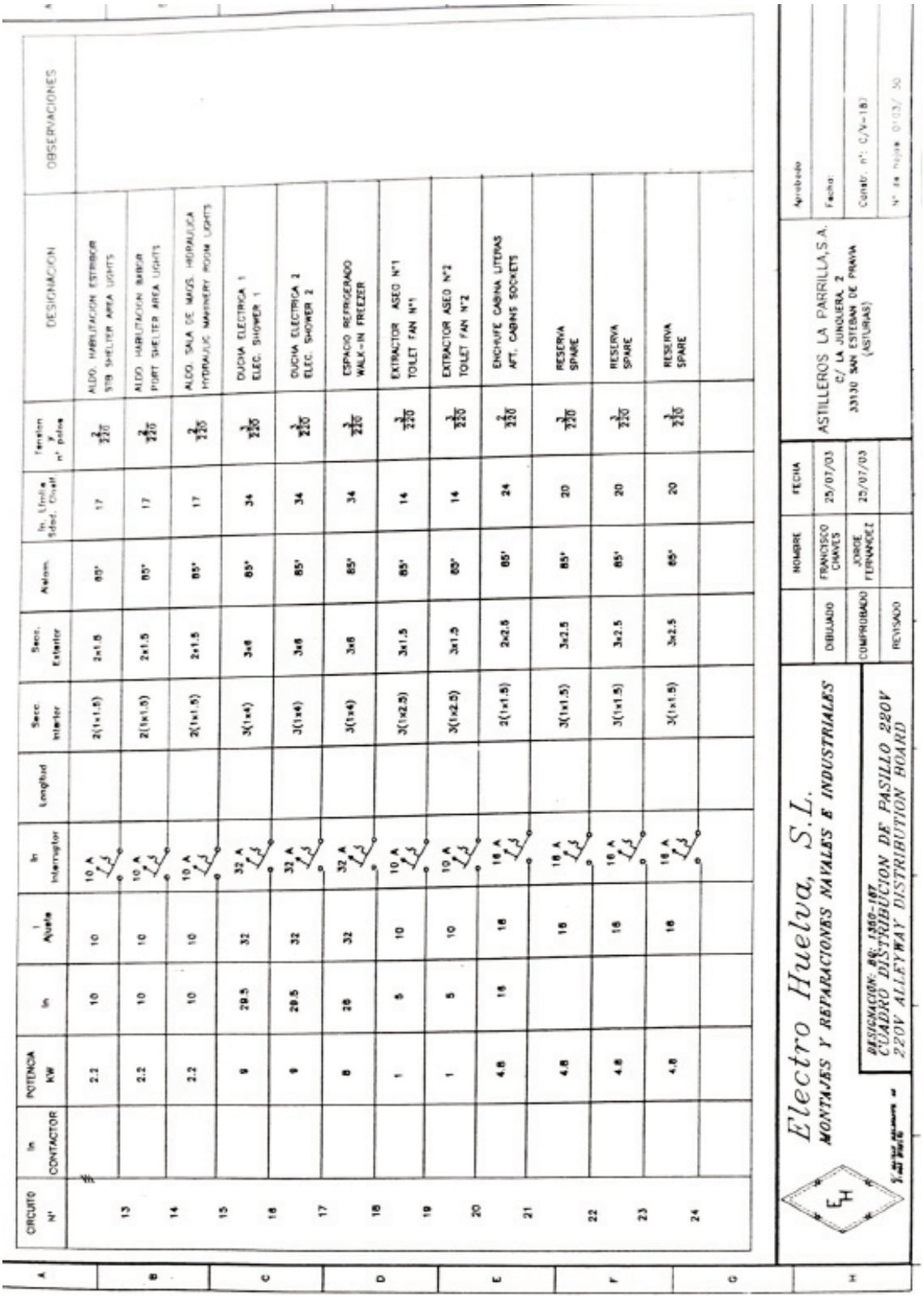
Appendix 7.4 380V/220V Systems Main Switchboard - Manual Page 0103/05



Appendix 7.4 220V Alleyway Distribution Board - Manual Page 0103/29



Appendix 7.4 220V Alleyway Distribution Board - Manual Page 0103/30



Appendix 7.4 220V Alleyway Distribution Board - Manual Page 0103/31

Circuito Nº	In Contactor	Potencia KW	In	I Ajuste	In Interruptor	Longitud	Secc. Interior	Secc. Exterior	Aislam.	In. Limite Sdad. Clasif.	Tension y nº polos	Designacion	Observaciones
												DE CIRCUITO 51 FROM CIRCUIT 51 MAIN SWITCHBOARD	
1		0.44	2	10	10 A		2(1x1.5)	2x1.5	85º	17	2/220	ALDO. DERROTA CHART LIGHTS	
2		1.3	6	10	10 A		2(1x1.5)	2x1.5	85º	17	2/220	ALDO. PUENTE W/HOUSE LIGHTS	
3		3.5	16	16	16 A		2(1x1.5)	2x1.5	85º	17	2/220	PROYECTORES GRUA AFT GANTRY FLOODLIGHTS	
4		3.5	16	16	16 A		2(1x1.5)	2x1.5	85º	17	2/220	PROYECTORES PUENTE PR. FWD WH/HOUSE FLOODLIGHTS	
5		3.5	16	16	16 A		2(1x1.5)	2x1.5	85º	17	2/220	PROYECTORES PUENTE PP. AFT WH/HOUSE FLOODLIGHTS	
6		1.3	6	10	10 A		2(1x1.5)	2x1.5	85º	17	2/220	ALDO. CBTA. SUPERIOR UPPER DECK LIGHTS	
7		1.8	6	10	10 A		3(1x1.5)	3x1.5	85º	14	3/220	PROYECTORES DE BUSQUEDA SEARCHLIGHTS	
8		3	10	10	10 A		3(1x1.5)	3x1.5	85º	14	3/220	CALEFACCION PUENTE WHEELHOUSE HEATER	
9		1.3	6	10	10 A		2(1x1.5)	2x1.5	85º	17	2/220	ALDO. BITACORA COMPASS/INSTRUMENT LIGHTS	
10		1.3	16	16	16 A		3(1x1.5)	3x2.5	85º	20	3/220	ENCHUFES ORDENADORES COMPUTERS SOCKET	

Electro Huelva, S.L.
MONTAJES Y REPARACIONES NAVALES E INDUSTRIALES

DESIGNACION: BQ: 1360-187
CUADRO DISTRIBUCION DE PUENTE 220V
220V WHEELHOUSE DISTRIBUTION BOARD

	Nombre	Fecha
Dibujado	FRANCISCO CHAVES	25/07/03
Comprobado	JORGE FERNANDEZ	25/07/03
Revisado		

ASTILLEROS LA PARRILLA,S.A.
C/ LA JUNQUERA, 2
33130 SAN ESTEBAN DE PRAVIA
(ASTURIAS)

Aprobado
Fecha:
Constr. nº: C/V-187
Nº de hojas: 0103/ 31

Appendix 7.4 220V Alleyway Distribution Board - Manual Page 0103/32

CIRCUITO Nº	In CONTACTOR	POTENCIA KW	In	I Ajuste	In Interruptor	Longitud	Secc. Interior	Secc. Exterior	Aislam.	In. Limite Sdad. Clasif.	Tension y nº polos	DESIGNACION	OBSERVACIONES
11		4.8	16	16	16 A		3(1x1.5)	3x2.5	85°	20	3/220	ENCHUFES DE PUENTE WHEELHOUSE SOCKETS	
12		3	10	10	10 A		3(1x1.5)	3x1.5	85°	14	3/220	ENCHUFES TV/CD/RAPP RAPP/TV/CD SOCKET	
13		1.3	6	10	10 A		3(1x1.5)	3x1.5	85°	14	3/220	CARGADOR DE BATERIAS E/CY BATTERY CHARGER	
14		3	10	10	10 A		3(1x1.5)	3x1.5	85°	14	3/220	VISTACLARAS WIPERS	
15		1.5	5	10	10 A		3(1x2.5)	3x1.5	85°	14	3/220	RESERVA SPARE	
16		3		10	10 A		3(1x1.5)	3x1.5	85°	17	3/220	RESERVA SPARE	
17		3		10	10 A		3(1x1.5)	3x1.5	85°	14	3/220	RESERVA SPARE	
18		3		10	10 A		3(1x1.5)	3x1.5	85°	14	3/220	RESERVA SPARE	

Electro Huelva, S.L.
MONTAJES Y REPARACIONES NAVALES E INDUSTRIALES

DESIGNACIÓN: BQ: 1860-187
CUADRO DISTRIBUCION DE PUENTE 220V
220V WHEELHOUSE DISTRIBUTION BOARD

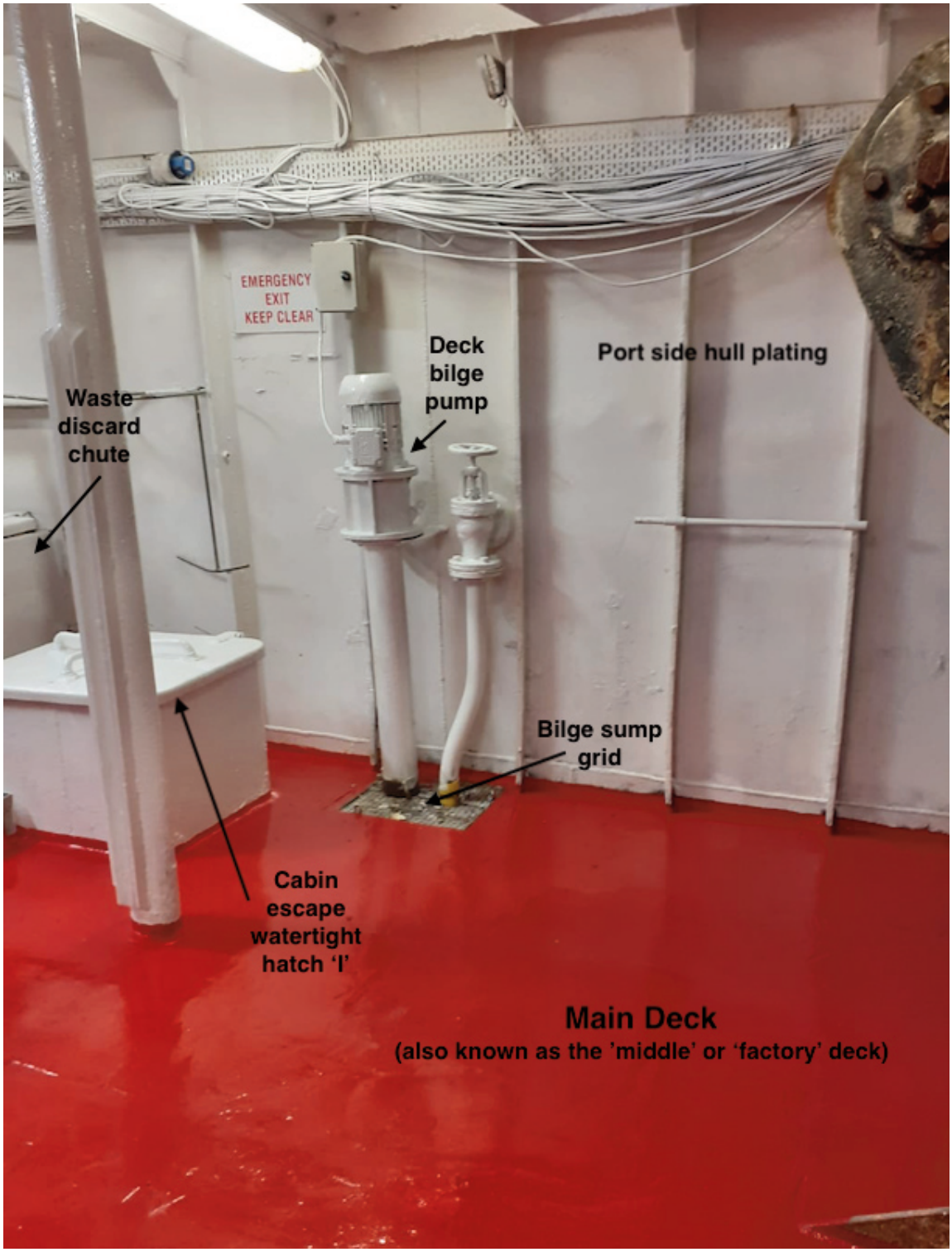
	NOMBRE	FECHA
DIBUJADO	FRANCISCO CHAVES	25/07/03
COMPROBADO	JORGE FERNANDEZ	25/07/03
REVISADO		

ASTILLEROS LA PARRILLA,S.A.
C/ LA JUNQUERA, 1
33130 SAN ESTEBAN DE PRAVIA
(ASTURIAS)

Aprobado
Fecha:
Constr. nº: C/V=187
Nº de hojas: 0103/ 32

Appendix 7.4 Two Typical Marine Modular Circuit Breaker/Switches

Appendix 7.5 Main Deck Cabin Escape Hatch Marked "I". Port Aft Deck Bilge Pump and Overboard Waste Discharge Chute (Photograph provided by Owner)



Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 1 of 6)

BUREAU VERITAS MARINE & OFFSHORE

GENERAL CONDITIONS

1. **INDEPENDENCE OF THE SOCIETY AND APPLICABLE TERMS**
   - 1.1 The Society shall remain at all times an independent contractor and neither the Society nor any of its officers, employees, servants, agents or subcontractors shall be or act as an employee, servant or agent of any other party hereto in the performance of the Services.
   - 1.2 The operations of the Society in providing its Services are exclusively conducted by way of random inspections and do not, in any circumstances, involve monitoring or exhaustive verification.
   - 1.3 The Society acts as a services provider. This cannot be construed as an obligation bearing on the Society to obtain a result or as a warranty. The Society is not and may not be considered as an underwriter, broker in Unit's sale or chartering, expert in Unit's valuation, consulting engineer, controller, naval architect, designer, manufacturer, shipbuilder, repair or conversion yard, charterer or shipowner; none of the above listed being relieved from any of their expressed or implied obligations as a result of the interventions of the Society.
   - 1.4 Only the Society is qualified to apply and interpret its Rules.
   - 1.5 The Client acknowledges the latest versions of the Conditions and of the applicable Rules applying to the Services' performance.
   - 1.6 Unless an express written agreement is made between the Parties on the applicable Rules, the applicable Rules shall be the Rules applicable at the time of entering into the relevant contract for the performance of the Services.
   - 1.7 The Services' performance is solely based on the Conditions. No other terms shall apply whether express or implied.

2. **DEFINITIONS**
   - 2.1 **"Certificate(s)"** means classification or statutory certificates, attestations and reports following the Society's intervention.
   - 2.2 **"Certification"** means the activity of certification in application of national and international regulations or standards ("Applicable Referential"), in particular by delegation from different governments that can result in the issuance of a Certificate.
   - 2.3 **"Classification"** means the classification of a Unit that can result or not in the issuance of a classification Certificate with reference to the Rules. Classification (or Certification as defined in clause 2.2) is an appraisement given by the Society to the Client, at a certain date, following surveys by its surveyors on the level of compliance of the Unit to the Society's Rules and/or to the Applicable Referential for the Services provided. They cannot be construed as an implied or express warranty of safety, fitness for the purpose, seaworthiness of the Unit or of its value for sale, insurance or chartering.
   - 2.4 **"Client"** means the Party and/or its representative requesting the Services.
   - 2.5 **"Conditions"** means the terms and conditions set out in the present document.
   - 2.6 **"Industry Practice"** means international maritime and/or offshore industry practices.
   - 2.7 **"Intellectual Property"** means all patents, rights to inventions, utility models, copyright and related rights, trade marks, logos, service marks, trade dress, business and domain names, rights in trade dress or get-up, rights in goodwill or to sue for passing off, unfair competition rights, rights in designs, rights in computer software, database rights, topography rights, moral rights, rights in confidential information (including know-how and trade secrets), methods and protocols for Services, and any other intellectual property rights, in each case whether capable of registration, registered or unregistered and including all applications for

Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 2 of 6)

and renewals, reversions or extensions of such rights, and all similar or equivalent rights or forms of protection in any part of the world.

2.8 "**Parties**" means the Society and Client together.

2.9 "**Party**" means the Society or the Client.

2.10 "**Register**" means the public electronic register of ships updated regularly by the Society.

2.11 "**Rules**" means the Society's classification rules (available online on veristar.com), guidance notes and other documents. The Society's Rules take into account at the date of their preparation the state of currently available and proven technical minimum requirements but are not a standard or a code of construction neither a guide for maintenance, a safety handbook or a guide of professional practices, all of which are assumed to be known in detail and carefully followed at all times by the Client.

2.12 "**Services**" means the services set out in clauses 2.2 and 2.3 but also other services related to Classification and Certification such as, but not limited to: ship and company safety management certification, ship and port security certification, maritime labour certification, training activities, all activities and duties incidental thereto such as documentation on any supporting means, software, instrumentation, measurements, tests and trials on board. The Services are carried out by the Society according to the Rules and/or the Applicable Referential and to the Bureau Veritas' Code of Ethics. The Society shall perform the Services according to the applicable national and international standards and Industry Practice and always on the assumption that the Client is aware of such standards and Industry Practice.

2.13 "**Society**" means the classification society '**Bureau Veritas Marine & Offshore SAS**', a company organized and existing under the laws of France, registered in Nanterre under number 821 131 844, or any other legal entity of Bureau Veritas Group as may be specified in the relevant contract, and whose main activities are Classification and Certification of ships or offshore units.

2.14 "**Unit**" means any ship or vessel or offshore unit or structure of any type or part of it or system whether linked to shore, river bed or sea bed or not, whether operated or located at sea or in inland waters or partly on land, including submarines, hovercrafts, drilling rigs, offshore installations of any type and of any purpose, their related and ancillary equipment, subsea or not, such as well head and pipelines, mooring legs and mooring points or otherwise as decided by the Society.

3. SCOPE AND PERFORMANCE

3.1 Subject to the Services requested and always by reference to the Rules, and/or to the Applicable Referential, the Society shall:

- Review the construction arrangements of the Unit as shown on the documents provided by the Client;
- conduct the Unit surveys at the place of the Unit construction;
- class the Unit and enter the Unit's class in the Society's Register;
- survey the Unit periodically in service to note whether the requirements for the maintenance of class are met. The Client shall inform the Society without delay of any circumstances which may cause any changes on the conducted surveys or Services.

3.2 The Society will not:

- declare the acceptance or commissioning of a Unit, nor its construction in conformity with its design, such activities remaining under the exclusive responsibility of the Unit's owner or builder;
- engage in any work relating to the design, construction, production or repair checks, neither in the operation of the Unit or the Unit's trade, neither in any advisory services, and cannot be held liable on those accounts.

Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 3 of 6)

4. RESERVATION CLAUSE

4.1 The Client shall always: (i) maintain the Unit in good condition after surveys; (ii) present the Unit for surveys; and (iii) inform the Society in due time of any circumstances that may affect the given appraisement of the Unit or cause to modify the scope of the Services.

4.2 Certificates are only valid if issued by the Society.

4.3 The Society has entire control over the Certificates issued and may at any time withdraw a Certificate at its entire discretion including, but not limited to, in the following situations: where the Client fails to comply in due time with instructions of the Society or where the Client fails to pay in accordance with clause 6.2 hereunder.

4.4 The Society may at times and at its sole discretion give an opinion on a design or any technical element that would 'in principle' be acceptable to the Society. This opinion shall not presume on the final issuance of any Certificate nor on its content in the event of the actual issuance of a Certificate. This opinion shall only be an appraisement made by the Society which shall not be held liable for it.

5. ACCESS AND SAFETY

5.1 The Client shall give to the Society all access and information necessary for the efficient performance of the requested Services. The Client shall be the sole responsible for the conditions of presentation of the Unit for tests, trials and surveys and the conditions under which tests and trials are carried out. Any information, drawing, etc. required for the performance of the Services must be made available in due time.

5.2 The Client shall notify the Society of any relevant safety issue and shall take all necessary safety-related measures to ensure a safe work environment for the Society or any of its officers, employees, servants, agents or subcontractors and shall comply with all applicable safety regulations.

6. PAYMENT OF INVOICES

6.1 The provision of the Services by the Society, whether complete or not, involves, for the part carried out, the payment of fees thirty (30) days upon issuance of the invoice.

6.2 Without prejudice to any other rights hereunder, in case of Client's payment default, the Society shall be entitled to charge, in addition to the amount not properly paid, interest equal to twelve (12) months LIBOR plus two (2) per-cent as of due date calculated on the number of days such payment is delinquent. The Society shall also have the right to withhold Certificates and other documents and/or to suspend or revoke the validity of Certificates.

6.3 In case of dispute on the invoice amount, the undisputed portion of the invoice shall be paid and an explanation on the dispute shall accompany payment so that action can be taken to resolve the dispute.

7. LIABILITY

7.1 The Society bears no liability for consequential loss. For the purpose of this clause consequential loss shall include, without limitation:

- Indirect or consequential loss;
- Any loss and/or deferral of production, loss of product, loss of use, loss of bargain, loss of revenue, loss of profit or anticipated profit, loss of business and business interruption, in each case whether direct or indirect.

The Client shall defend, release, save, indemnify, defend and hold harmless the Society from the Client's own consequential loss regardless of cause.

7.2 Except in case of wilful misconduct of the Society, death or bodily injury caused by the Society's negligence and any other liability that could not be, by law, limited, the Society's maximum liability towards the Client is limited to one hundred and fifty per-cent (150%) of the price paid by the Client to the Society for the Services having caused the damage. This

Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 4 of 6)

limit applies to any liability of whatsoever nature and howsoever arising, including fault by the Society, breach of contract, breach of warranty, tort, strict liability, breach of statute.

7.3 All claims shall be presented to the Society in writing within three (3) months of the completion of Services' performance or (if later) the date when the events which are relied on were first discovered by the Client. Any claim not so presented as defined above shall be deemed waived and absolutely time barred.

8. **INDEMNITY CLAUSE**

8.1 The Client shall defend, release, save, indemnify and hold harmless the Society from and against any and all claims, demands, lawsuits or actions for damages, including legal fees, for harm or loss to persons and/or property tangible, intangible or otherwise which may be brought against the Society, incidental to, arising out of or in connection with the performance of the Services (including for damages arising out of or in connection with opinions delivered according to clause 4.4 above) except for those claims caused solely and completely by the gross negligence of the Society, its officers, employees, servants, agents or subcontractors.

9. **TERMINATION**

9.1 The Parties shall have the right to terminate the Services (and the relevant contract) for convenience after giving the other Party thirty (30) days' written notice, and without prejudice to clause 6 above.

9.2 The Services shall be automatically and immediately terminated in the event the Client can no longer establish any form of interest in the Unit (e.g. sale, scrapping…).

9.3 The Classification granted to the concerned Unit and the previously issued Certificates shall remain valid until the date of effect of the termination notice issued, or immediately in the event of termination under clause 9.2, subject to compliance with clause 4.1 and 6 above.

9.4 In the event where, in the reasonable opinion of the Society, the Client is in breach, or is suspected to be in breach of clause 16 of the Conditions, the Society shall have the right to terminate the Services (and the relevant contracts associated) with immediate effect.

10. **FORCE MAJEURE**

10.1 Neither Party shall be responsible or liable for any failure to fulfil any term or provision of the Conditions if and to the extent that fulfilment has been delayed or temporarily prevented by a force majeure occurrence without the fault or negligence of the Party affected and which, by the exercise of reasonable diligence, the said Party is unable to provide against.

10.2 For the purpose of this clause, force majeure shall mean any circumstance not being within a Party's reasonable control including, but not limited to: acts of God, natural disasters, epidemics or pandemics, wars, terrorist attacks, riots, sabotages, impositions of sanctions, embargoes, nuclear, chemical or biological contaminations, laws or action taken by a government or public authority, quotas or prohibition, expropriations, destructions of the worksite, explosions, fires, accidents, any labour or trade disputes, strikes or lockouts.

11. **CONFIDENTIALITY**

11.1 The documents and data provided to or prepared by the Society in performing the Services, and the information made available to the Society, will be treated as confidential except where the information:

- is properly and lawfully in the possession of the Society;
- is already in possession of the public or has entered the public domain, other than through a breach of this obligation;
- is acquired or received independently from a third party that has the right to disseminate such information;

Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 5 of 6)

- is required to be disclosed under applicable law or by a governmental order, decree, regulation or rule or by a stock exchange authority (provided that the receiving Party shall make all reasonable efforts to give prompt written notice to the disclosing Party prior to such disclosure).

11.2 The Parties shall use the confidential information exclusively within the framework of their activity underlying these Conditions.

11.3 Confidential information shall only be provided to third parties with the prior written consent of the other Party. However, such prior consent shall not be required when the Society provides the confidential information to a subsidiary.

11.4 Without prejudice to sub-clause 11.1, the Society shall have the right to disclose the confidential information if required to do so under regulations of the International Association of Classifications Societies (IACS) or any statutory obligations.

12. INTELLECTUAL PROPERTY

12.1 Each Party exclusively owns all rights to its Intellectual Property created before or after the commencement date of the Conditions and whether or not associated with any contract between the Parties.

12.2 The Intellectual Property developed by the Society for the performance of the Services including, but not limited to drawings, calculations, and reports shall remain the exclusive property of the Society.

13. ASSIGNMENT

13.1 The contract resulting from to these Conditions cannot be assigned or transferred by any means by a Party to any third party without the prior written consent of the other Party.

13.2 The Society shall however have the right to assign or transfer by any means the said contract to a subsidiary of the Bureau Veritas Group.

14. SEVERABILITY

14.1 Invalidity of one or more provisions does not affect the remaining provisions.

14.2 Definitions herein take precedence over other definitions which may appear in other documents issued by the Society.

14.3 In case of doubt as to the interpretation of the Conditions, the English text shall prevail.

15. GOVERNING LAW AND DISPUTE RESOLUTION

15.1 These Conditions shall be construed in accordance with and governed by the laws of England and Wales.

15.2 Any dispute shall be finally settled under the Rules of Arbitration of the Maritime Arbitration Chamber of Paris ("CAMP"), which rules are deemed to be incorporated by reference into this clause. The number of arbitrators shall be three (3). The place of arbitration shall be Paris (France). The Parties agree to keep the arbitration proceedings confidential.

15.3 Notwithstanding clause 15.2, disputes relating to the payment of the Society's invoices may be submitted by the Society to the *Tribunal de Commerce de Nanterre*, France, or to any other competent local Court, at the Society's entire discretion.

16. PROFESSIONAL ETHICS

16.1 Each Party shall conduct all activities in compliance with all laws, statutes, rules, economic and trade sanctions (including but not limited to US sanctions and EU sanctions) and regulations applicable to such Party including but not limited to: child labour, forced labour, collective bargaining, discrimination, abuse, working hours and minimum wages, anti-bribery, anti-corruption, copyright and trademark protection, personal data protection (https://personaldataprotection.bureauveritas.com/privacypolicy). Each of the Parties warrants that neither it, nor its affiliates, has made or will make, with respect to the matters

Appendix 7.6 Bureau Veritas Marine and Offshore General Conditions – January 2021 Version (Page 6 of 6)

provided for hereunder, any offer, payment, gift or authorization of the payment of any money directly or indirectly, to or for the use or benefit of any official or employee of the government, political party, official, or candidate.

16.2 In addition, the Client shall act consistently with the Bureau Veritas' Code of Ethics and, when applicable, Business Partner Code of Conduct both available at https://group.bureauveritas.com/group/corporate-social-responsibility/operational-excellence.

Appendix 7.7 Marine Survey Office Report of 28 October 2015

Report of Survey / Inspection

ssel:	Ellie Adhamh	O.N/IMO:	WD 206
ort:	28/10/2015	Place of Inspection:	Rosslare Harbour
ɔection:	Flag Inspection		
sel:	15-24m FV	Port of Registry:	Wexford

Nature of Deficiency	Legislation Reference	Action Taken
Two year equipment and radio survey not completed		30
Crew members Not carrying safety training cards		17
Flares expired 08/2015		30
Rockets in line throwing devices expired 12/2014		30
Several medicines expired in medical locker		30
Fire extinguishers in wheelhouse showing low pressure, also in Engine room		30
Galley exhaust fan covered in grease and oil, grease trap missing		30
"Deep fat fryer" has to be removed or be of an approved type		17
Door into forepeak marked "Keep closed at sea" is blocked open with fishing gear		30
Lock into store room on main deck broken		17
Exposed wiring in Engine room on several items of machinery		30
Section of engine room entrance doorway has been cut away for access for A/E removal		30
Areas of structural fire protection missing in engine room		30
Bilge pump for main deck missing (note vessel does not have scuppers)		30
Starting battery for Diesel driven emergency fire pump is flat		30
Light fittings missing in crew accommodation		17
Window on starboard side of wheelhouse broken		17

Appendix 7.8 Marine Survey Office Intermediate Safety Survey Report 7 January 2021 (page 1 of 2)

(v0.1)

Dept. of Transport, Tourism & Sport
Marine Survey Office
Leeson Lane
Dublin 2

Phone: +353 (0)1 6783400
Email: [redacted]
Web: www.dttas.ie

Report of Survey/ Inspection

TMS No: 21381

Name of Vessel:	Ellie Ádhamh	ON/IMO:	9299238
Type of Vessel:	15-24M Fishing Vessel	Port of Registry:	Wexford
Date of Survey:	07/01/2021	Place of Inspection:	Castletownbere
Surveyor:	[redacted]	Activity:	Fishing Vessel Safety Certificate (15-24m)
Office:	Cork	Deficiencies:	Yes

Hull Modifications	☐	Exemptions / Equivalencies	☐

Inspection Operations

(Please tick the relevant areas inspected)

Hull Out of Water Survey	☐	Sea Valves & Skin Fitting	☐	Internal Void Space & Ballast Tank(s) Opened & Inspected	☐
Decks	☒	Steering / Engine Room	☐	Cargo Hold(s) / Tank(s)	☐
Accommodation	☐	Passenger Spaces	☐	Propeller Shaft & Rudder Removal	☐
Shell Plating U/T Inspection	☐	Safety Equipment	☒	Emergency Steering	☐
Sea Trials & Crew Drills	☐	Navigational Equipment	☒	MLC	☐
Radio Equipment	☐				
Other:					

Comments

Vessel FVSC expired 17/12/2020. Vessel previously with BV Class and docking, NDT, shaft withdrawal etc recorded as completed 4th January 2019. Radio Survey 13/12/2019

ER 3 Portable extinguishers suitable for oil fires 3 extinguishers for other spaces, mess, accommodation, wheelhouse etc.

Signature [redacted]

Appendix 7.8 Marine Survey Office Intermediate Safety Survey Report 7 January 2021 (page 2 of 2)

SUR 2500 Rev 2.00 (04/16)

Dept. of Transport, Tourism & Sport
Marine Survey Office
Leeson Lane
Dublin 2

Phone: +353 (0)1 6783400
Email: FirstNameLastName@dttas.ie
Web: www.dttas.ie

Deficiencies

Item No.	Nature of Deficiency	Legislation Reference (if detained)	Action Taken
1	Please supply a copy of current safety plan for vessel (scan or clear photograph is sufficient)		17
2	Please confirm the location of fire extinguishers and that a minimum size of 5kg CO2 / Dry Powder and 9L AFFF (Foam) are carried onboard		17
3	Repair of fire dampers x 6 to be completed including all lugs /toggles		17
4	Emergency air horn to repair		17
5	Power driven emergency fire pump to be demonstrated, if a surveyor cannot attend due to COVID restrictions, please video this test and submit same.		17
6	Bilge alarm (main) in engine room to test , if a surveyor cannot attend due to COVID restrictions, please video this test and submit same.		17
7	Bilge pumping test to carry out, bilges in each compartment to be pumped with other compartment valves open to prove NR valves - to be submitted by video if surveyor cannot attend		17
8	Lifting appliances to be load tested and certificate to submit		16
9	Safety Certificate to be displayed in public area e.g. bridge or mess		16
10	Confirm correct medical kit carried and the vessel is no less than 175 nautical miles from the nearest port with adequate medical equipment and which remain continuously within range of the helicopter rescue services		17
11	Remaining down flooding doors and hatches to hose test once shore contractors wiring / gas hoses removed		17
12	Please arrange with your PO to have fishers work agreements / medical fitness certificates / insurance etc. onboard vessel before departure		17

00	No Action Taken	18	ISM Non Conformities: rectify before departure
10	Deficiency Rectified	19	ISM Non-Conformities: rectify within 3 months
12	All Deficiencies Rectified	30	Grounds for Detention
15	Rectify Deficiency at Next Port	35	Ship allowed to sail after detention
16	Rectify Deficiency within 14 days	70	Classification Society informed
17	Master instructed to rectify deficiency before departure	99	Other (Specify in Clear Text)

This report must be retained on board for a period of two years and must be available for consultation by a Department of Transport, Tourism & Sport Surveyor at all times. This inspection is based on random samples and therefore deficiencies may exist which may not have been identified.

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 1 of 6)

MSO 1006 Fishing Vessel Safety Certificate (15-24m) DECLARATION OF SURVEY (Rev 2.0)(02/20)

INTERIM

FISHING VESSEL

SAFETY CERTIFICATE

This certificate of compliance shall be supplemented by a record of equipment

Issued under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 (S.I. No. 640 of 2007)

under the authority of the Government of Ireland

Name of Ship	Fishing Letters & Numbers	Official & IMO Numbers	Port of Registry	Length (L)	Length Overall (Loa)	Sea areas in which ship is certified to operate
Ellie Adhamh	WD206	9299238	Wexford	21.98	25.00	A1, A2

Date on which the keel was laid or ship was at a similar stage of construction [3] 01/01/2003

THIS IS TO CERTIFY:

1. that the ship has been surveyed in accordance with Regulation 7 of the Merchant Shipping (Safety of Fishing Vessels) Regulations 2007

2. that the survey showed that:
   1. the conditions of the hull, machinery and equipment, as defined in the above Regulations was in all respects satisfactory and that the vessel complied with the applicable requirements;
   2. the maximum permissible operating draught associated with each operating condition for the vessel is contained in the stability booklet dated 15/06/2009;
3. that an Exemption Certificate has not been issued.

This Certificate is valid until 31/05/2021 subject to surveys in accordance with Regulation 7(1)(b)(ii), (b)(iii) and (c).

Issued at Castletownbere (place of issue of Certificate) [redacted] 26/01/2021 (date of issue)

(signed) _____ An authorised officer.

(seal or stamp of issuing authority)

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 2 of 6)

MSO 1006 Fishing Vessel Safety Certificate (15-24m) DECLARATION OF SURVEY (Rev 2.0)(02/20)

Endorsement to extend the validity of the certificate for a period of grace where Regulation 11 applies

This certificate shall, in accordance with Regulation 11, be accepted as valid until _____

Signed: _____
(An authorised officer.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where Regulation 11(2) or Regulation 11(4) applies

This certificate shall, in accordance with Regulation 11(2)/Regulation 11(4) [1], be accepted as valid until

_____

Signed: _____
(An authorised officer.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

Endorsement for periodical surveys

Equipment survey

THIS IS TO CERTIFY that, at a survey as required by Regulation 7(1)(b)(ii), the vessel was found to comply with the relevant requirements.

Signed:
(An authorised officer.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

_____

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 3 of 6)

MSO 1006 Fishing Vessel Safety Certificate (15-24m) DECLARATION OF SURVEY (Rev 2.0)(02/20)

Radio surveys

THIS IS TO CERTIFY that, at a survey as required by Regulation 7(1)(b)(iii), the vessel was found to comply with the relevant requirements.

First periodical radio survey:

Signed:
(An authorised officer.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

Endorsement for intermediate survey

THIS IS TO CERTIFY that, at a survey as required by Regulation 7(3), the vessel was found to comply with the relevant requirements.

Signed:
(An authorised officer.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 4 of 6)

MSO 1006 Fishing Vessel Safety Certificate (15-24m) DECLARATION OF SURVEY (Rev 2.0)(02/20)

INTERIM

FISHING VESSEL SAFETY RECORD OF EQUIPMENT

for the Fishing Vessel Safety Certificate

This record shall be permanently attached to the certificate of compliance

Record of equipment for compliance with the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 (S.I. No. 640 of 2007)

1. Particulars of the vessel:

Name of Ship	Fishing Letters & Numbers	Official & IMO Numbers	Port of Registry	Length (L)	Length Overall (Loa)	Sea areas in which ship is certified to operate
Ellie Adhamh	WD206	9299238	Wexford	21.98	25.00	A1, A2

2. Details of life-saving appliances:

1.	Total number of persons for whom life-saving appliances are approved	7	
		Port	Starboard
2.	Total number of lifeboats	-	-
2.1	Total number of persons accommodated by them	-	-
3.	Number of rescue boats	-	
3.1	Total number of persons accommodated by them	-	
4.	Liferafts:		
4.1	Those for which approved launching appliances are required		
4.1.1	Number of liferafts	-	
4.1.2	Number of persons accommodated by them	-	
4.2	Those for which approved launching appliances are not required:		
4.2.1	Number of liferafts	2	
4.2.2	Number of persons accommodated by them	16	
5.	Number of lifebuoys	4	
6.	Number of lifejackets	9	
7.	Immersion suits:		
7.1	Total number	7	
7.2	Number of suits complying with the requirements for lifejackets	-	
8.	Radio installations used in life-saving appliances:		
8.1	Number of radar transponders	1	
8.2	Number of two-way VHF radiotelephone apparatus	2	

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 5 of 6)

MSO 1006 Fishing Vessel Safety Certificate (15-24m) DECLARATION OF SURVEY (Rev 2.0)(02/20)

3. Details of radio facilities:

	Item	Actual provision
1.1	VHF radio installation:	
1.1.1	DSC encoder	Provided
1.1.2	DSC watch receiver	Provided
1.1.3	Radiotelephony	-
1.2	MF radio installation:	
1.2.1	DSC encoder	-
1.2.2	DSC watch receiver	-
1.2.3	Radiotelephony	-
1.3	MF/HF radio installation:	
1.3.1	DSC encoder	Provided
1.3.2	DSC watch receiver	Provided
1.3.3	Radiotelephony	Provided
1.3.4	Direct-printing radiotelegraphy	-
1.4	Inmarsat ship earth station	-
2.	Facilities for reception of maritime safety information:	
2.1	NAVTEX receiver	Provided
2.2	EGC receiver	-
2.3	HF direct-printing radiotelegraph receiver	-
3.	Satellite EPIRB:	
3.1	COSPAS-SARSAT	Provided
4.	Vessel's radar transponder	Provided

4. Details of navigational equipment:

	Item	Actual provision
1.	Standard magnetic compass	Provided
2.1	Nautical Charts/ECDIS[1]: Nautical charts	-
2.2	Backup arrangements for ECDIS (if applicable)	-
2.3	Nautical Publications	Provided
3.	9GHz Radar	Provided
4.	Echo sounding device	Provided
5.	Communication between wheelhouse and machinery space	Provided
6.	Rudder, Propeller, Thrust, Pitch and Operational Mode Indicator	Provided
7.	Daylight Signalling Lamp	-
8.	Radar Reflector	-
9.	International Code of Signals	Provided

THIS IS TO CERTIFY that this Record is correct in all respects

Issued at Castletownbere (place of issue of Certificate) [redacted] 26/01/2021 (date of issue)

(signed) _____ authorised officer.

(seal or stamp of issuing authority)

[1] ECDIS - Electronic chart display and information system

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.8 Marine Survey Office Interim Fishing Vessel Safety Certificate 26 January 2021 (page 6 of 6)

CONDITIONS AND RESTRICTIONS

Stability

The skipper shall take precautionary measures necessary to maintain the stability of the vessel in accordance with the approved stability information book.

Crew members on watch shall fully observe instructions supplied in the approved stability information book.

Bulk loading of the catch is not permitted.

The vessel is not permitted to operate in regions where ice accretion is likely to occur – refer to Schedule 3, Paragraph 17 of the *Merchant Shipping (Safety of Fishing Vessels)(15-24 metres) Regulations 2007*.

The maximum permitted operating draught is 4.70 metres. At no time shall the loading mark on the side of the vessel be submerged.

Any alterations made to the vessel affecting its stability, revised stability calculations shall be undertaken to the satisfaction of the Minister.

Catch on deck is not permitted to be stowed on deck.

Medical equipment

The vessel carries category B medical equipment.

Abandon ship training and drills

Abandon ship training and drills to be conducted in accordance with Part 8 of the *Merchant Shipping (Safety of Fishing Vessels)(15-24 metres) Regulations 2007*.

Surveys

Owner/skipper shall ensure surveys in accordance with Part 1, Regulation 7 of the *Merchant Shipping (Safety of Fishing Vessels)(15-24 metres) Regulations 2007* are carried out on the vessel.

Additional Conditions and Restrictions

Name of Vessel	Ellie Adhamh	Date of Issue:	26/01/2021

Appendix 7.9 Main Deck: Conveyor, Hopper, and Overboard Waste Discharge Chute

Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

Met Éireann
The Irish Meteorological Service
Climate Services
Glasnevin Hill
Dublin 9

Seirbhísí Aeráide
Cnoc Ghlas Naíon
Baile Átha Cliath 9

Tel: +353-1-8064260
Email: enq@met.ie
Email: legal@met.ie

Our Ref: WS1730/2110_16 **Your Ref: MCIB 308**

Estimated weather and sea state conditions for the offshore area approximately 85 nautical miles southwest of Mizen Head (Decimal Degrees: 50.5805 -11.541333) on Thursday 25th March 2021 from 00:00 hours to 23:59 hours.

Meteorological Synopsis:	A depression south of Iceland (975 hPa) deepened on the 25-March-2021 and steered a strengthening southwesterly airflow over the area. The associated active weather front (cold front) moved eastwards across the area between 18:00 and 24:00.
Wind:	Winds were fresh Beaufort Force 5 (mean speed 16 – 22 knots) at first and for most of daylight hours. Winds increased in the evening as the weather front crossed: strong to near-gale and gusty Beaufort Force 6 or 7 (mean speed 22 – 33 knots). Wind direction was southwesterly for most of the day and veered westerly by late evening. Gusts were strongest with the passage of the front with maximum gusts of up to 40 knots occurred between 8pm and 10pm.
Visibility:	Visibility was moderate or poor (1 – 4 nm) in rain and heavy showers. Otherwise visibility was good (greater than 5 nm).
Sea State:	The sea state in the area was rough with significant total wave height of 3 to 4 meters from a westerly direction with a west-northwesterly swell. The maximum individual wave height (at M3) during the period in question was 5.7 meters.
Weather:	Scattered outbreaks of rain in the morning and forenoon. A period of fair weather with dry and sunny spells for a few hours in the afternoon before clouding over with rain in the evening followed by blustery showers. Showers in the late evening were heavy and possibly with hail and thunder.
Temperature:	Air temperature of 9 to 11 degrees Celsius.

Sea temperature: *10 to 11 degrees Celsius.*

This report was issued on: 13 October 2021.

Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

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Email: legal@met.ie

Appendix 1a Observations Buoy M3 (approximately 50 nautical miles to the northeast).

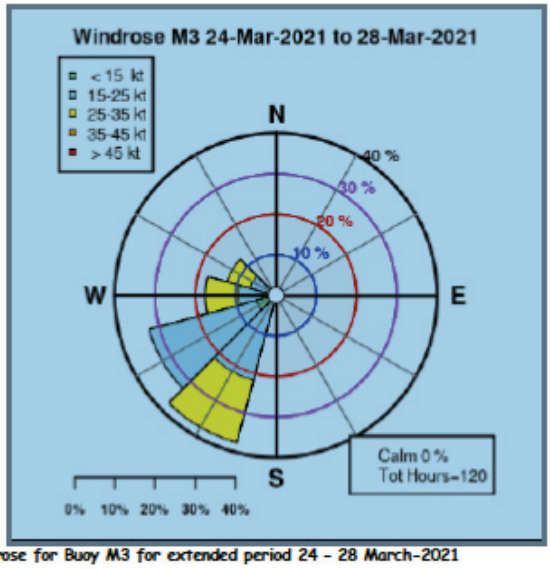

Figure 1Windrose for Buoy M3 for extended period 24 - 28 March-2021

time_6hr	windspeed_knots	wind_direction_degrees	max_gust_knots
2021-03-24 00	16.9	254	28.6
2021-03-24 06	19.8	228	28.8
2021-03-24 12	20.0	235	29.0
2021-03-24 18	13.7	265	19.1
2021-03-25 00	18.8	234	25.2
2021-03-25 06	17.5	230	26.1
2021-03-25 12	19.8	224	28.9
2021-03-25 18	22.8	227	36.7
2021-03-26 00	24.7	282	36.2
2021-03-26 06	26.9	275	41.0
2021-03-26 12	29.4	289	51.1
2021-03-26 18	26.2	289	40.0
2021-03-27 00	18.7	274	30.9
2021-03-27 06	21.0	224	35.0
2021-03-27 12	26.8	214	40.1
2021-03-27 18	26.8	221	39.5
2021-03-28 00	24.4	232	31.8
2021-03-28 06	24.1	218	34.4
2021-03-28 12	27.3	221	37.0
2021-03-28 18	24.8	218	34.2

Table Buoy M3 wind data (6 hourly averages) for period 24 - 28 March-2021

Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

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Appendix 1a continued Observations Buoy M3

time_6hr	sig_wav_height_m	wavedir_degrees	max_maxwaveheight_m	waveperiod_sec
2021-03-24 00	3.0	274	5.3	7
2021-03-24 06	3.3	281	5.4	7
2021-03-24 12	3.5	275	6.9	7
2021-03-24 18	3.3	281	5.4	7
2021-03-25 00	3.1	284	5.5	7
2021-03-25 06	3.1	280	5.2	7
2021-03-25 12	2.8	276	4.7	7
2021-03-25 18	3.3	269	5.7	7
2021-03-26 00	3.4	271	5.7	6
2021-03-26 06	4.2	287	6.6	7
2021-03-26 12	5.9	296	10.0	8
2021-03-26 18	7.7	301	13.6	10
2021-03-27 00	7.2	305	12.8	10
2021-03-27 06	6.1	304	10.3	10
2021-03-27 12	5.5	288	9.4	9
2021-03-27 18	5.9	258	10.0	8
2021-03-28 00	5.3	257	8.1	8
2021-03-28 06	5.0	255	7.9	8
2021-03-28 12	5.0	258	9.1	8
2021-03-28 18	5.7	270	9.6	9

Table Buoy M3 wave data (6 hourly averages) for period 24 - 28 March-2021

Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

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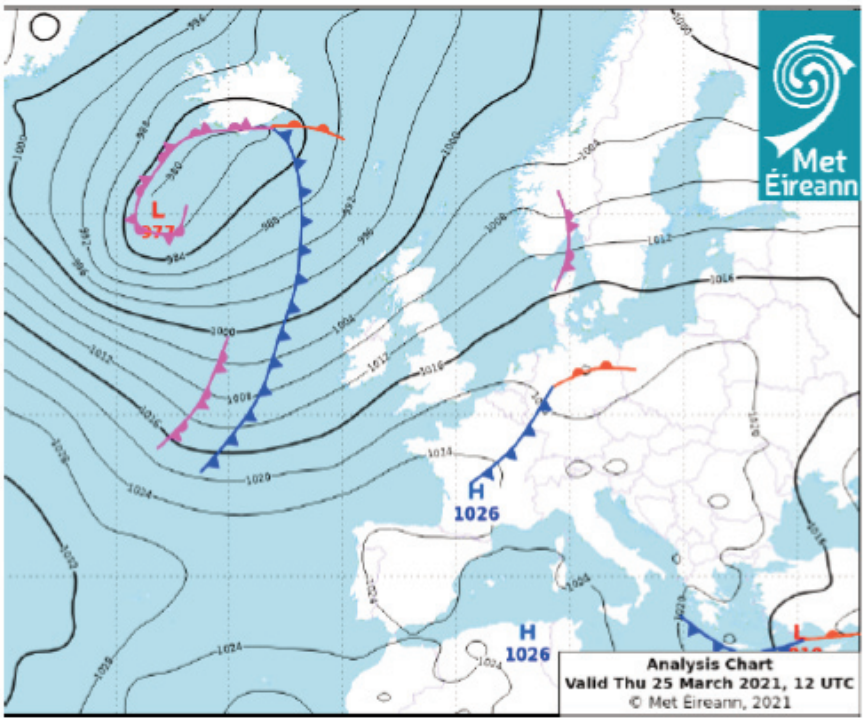
Appendix 1c Analysis Chart 25-March-2021 12:00UTC



Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

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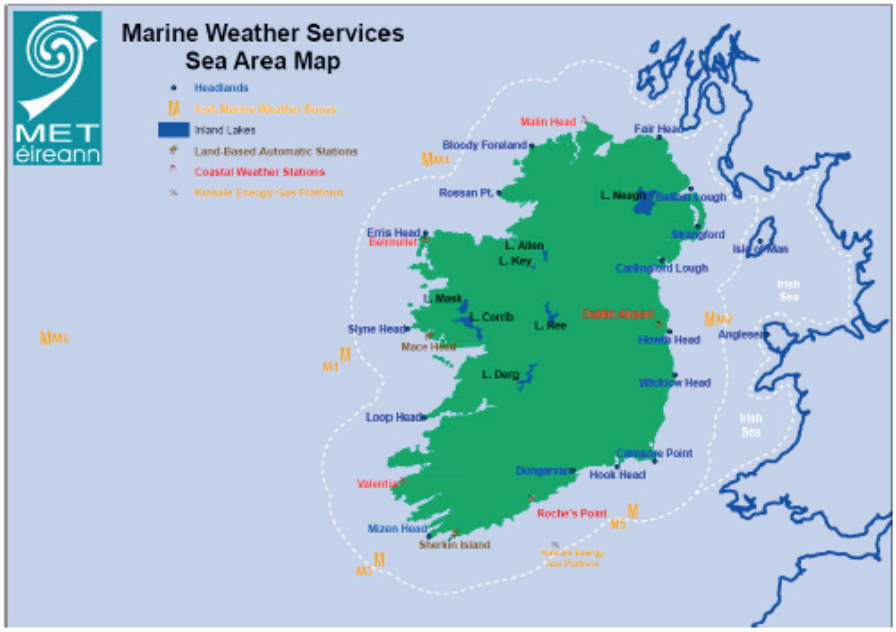
Appendix 3a Terminology Sea Area Map & Beaufort Scale of Wind



Beaufort Scale of Wind

Force	Description	Speed* knots	Speed* km/hr	Specification -sea	Wave height** (metres)
0	Calm	<1	<1	Sea like mirror	
1	Light air	1-3	1-5	Ripples	0.1 (0.1)
2	Light breeze	4-6	6-11	Small wavelets	0.2 (0.3)
3	Gentle breeze	7-10	12-19	Large wavelets, crests begin to break	0.6 (1)
4	Moderate breeze	11-16	20-28	Small waves becoming longer, frequent white horses	1 (1.5)
5	Fresh breeze	17-21	29-38	Moderate waves, many white horses, chance of spray	2 (2.5)
6	Strong breeze	22-27	39-49	Large waves, white foam crests, probably some spray	3 (4)
7	Near gale	28-33	50-61	Sea heaps up, streaks of white foam	4 (5.5)
8	Gale	34-40	62-74	Moderately high waves of greater length	5.5 (7.5)
9	Strong gale	41-47	75-88	High waves, dense streaks of foam, spray may reduce visibility	7 (10)
10	Storm	48-55	89-102	Very high waves, long overhanging crests, visibility affected	9 (12.5)
11	Violent storm	56-63	103-117	Exceptionally high waves, long white foam patches cover sea	11.5 (16)
12	Hurricane	64+	117 & over	Air filled with foam and spray, sea completely white	14 (-)

*Speed = mean speed at a standard height of 10 metres.
**Wave height is only intended as a guide to what may be expected in the open sea. Bracketed figures indicate the probable maximum wave height.

Appendix 7.10 Met Éireann Weather Report: Weather and Sea State Conditions for 25 March 2021

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Appendix 3b Terminology Sea State & Visibility

Wave Heights / State of Sea:
The wave height is the vertical distance between the crest and the preceding or following trough. The table below gives a description of the wave system associated with a range of significant wave heights.

The Significant wave height is defined as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

Sea State (Descriptive)	Significant Wave height in meters
Calm	0 – 0.1
Smooth(Wavelets)	0.1 – 0.5
Slight	0.5 – 1.25
Moderate	1.25 – 2.5
Rough	2.5 – 4
Very rough	4 – 6
High	6 – 9
Very high	9 – 14
Phenomenal	Over 14

Individual waves in the wave train will have heights in excess of the significant height. **The highest wave of all will have a height about twice the significant height**.

Visibility Descriptions:

Visibility (Descriptive)	Visibility in nautical miles (kilometres)
Good	More than 5 nm (> 9 km)
Moderate	2 – 5 nm (4 – 9 km)
Poor	0.5 – 2 nm (1 – 4 km)
Fog	Less than 0.5 nm (< 1km)

Please Note:

If there are no measurements or observations available for an exact location, then the estimated conditions in this report are based on all available meteorological measurements and observations which have been correlated on the routine charts prepared by Met Éireann.

Appendix 3. Copy of Archived Sea Area Forecast as was issued on 25-March-2021

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 0000 Friday, 26 March 2021
Issued at 0000 Thursday, 25 March 2021

1. Gale warning: Nil
Small craft warning: In operation

2. Meteorological situation at 2100: A moderate to strong west to southwest airflow covers Ireland with trailing occluded fronts associated with a weakening wave depression of 997hPa positioned to the northeast of Scotland clearing eastwards over the country. A deepening depression of 985hPa positioned east of southern Greenland will track eastwards during Thursday, generating an increasingly unstable west to southwest airflow over the country, with frontal troughs embedded in the flow.

3. Forecast for Irish coastal waters from Mizen Head to Erris Head to Malin Head

Wind: Southwest force 5 or 6 and gusty. Soon increasing force 5 to 7 and gusty. Later increasing force 6 or 7 and gusty, with gale force 8 possible locally in the northwest. Veering southwest to west and decreasing force 5 to 7 and gusty on Thursday night.

Weather: Scattered showers becoming frequent and heavy later with a risk of hail and isolated thunderstorms. Rain developing by the end of period.

Visibility: Reducing moderate or poor in showers or rain, otherwise good.

Forecast for Irish coastal waters from Malin Head to Wicklow Head to Mizen Head and for the Irish Sea

Wind: West to southwest force 4 or 5. Soon increasing southwest force 5 or 6 and gusty. Later increasing force 6 or 7 and gusty.

Weather: Fair to cloudy with isolated showers at first. Scattered showers developing later. Rain spreading from the west by the end of the period.

Visibility: Reducing moderate or poor in showers or rain, otherwise good.

Warning of Heavy Swell: Nil

4. Outlook for a further 24 hours until 0000 Saturday 27 March 2021: Strong to gale force westerly winds, with strong gale possible locally in western sea areas during Friday. Weather; Rain clearing eastwards on Thursday night, followed by widespread heavy showers, with a risk of hail, sleet and Thunderstorms.

Text of Gale Warning
Nil

Text of Small Craft Warning
Southwesterly winds will reach force 6 or higher overnight on Irish Coasts from Mizen Head to Erris Head to Malin Head, extending to all Irish Coasts on Thursday morning.

Coastal Reports	11 PM Wednesday, 24 March 2021
Malin Head Automatic	Southwest, 13 Knots, Cloudy, 8 Miles, 1011, Steady
Dublin Airport	West-Southwest, 7 Knots, Fine, 16 Miles, 1015, Steady
Buoy M5 51° 41'N 6° 42'W	Southwest, 17 Knots, Wave ht: 2 m, The visibility at Tuskar is greater than 10 Miles, 1017, Falling slowly
Roches Point Automatic	West, 5 Knots, Fair, 8 Miles, 1017, Steady
Sherkin Island Automatic	Southwest, 10 Knots, Fair, 9 Miles, 1018, Steady
Valentia Automatic	South, 7 Knots, Cloudy, 13 Miles, 1017, Steady
Mace Head Automatic	South-Southwest, 13 Knots, Rain shower, 4 Miles, 1014, Falling slowly
Belmullet Automatic	Southwest, 12 Knots, Fair, 7 Miles, 1012, Falling slowly
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	Southwest, 14 Knots, Wave ht: 1.3 m, 1015, Steady
Buoy M3 51° 13'N, 10° 33'W	West-Southwest, 16 Knots, Wave ht: 3 m, 1018, Steady
Buoy M4 55° 0'N 10° 0'W	West-Southwest, 20 Knots, Wave ht: 3.8 m, 1010, Falling slowly
Buoy M6 53° 4'N 15° 56'W	Southwest, 20 Knots, Gust 30 Knots, Wave ht: 3.4 m, 1010, Falling slowly

Disclaimer: buoy locations are approximate and are not for navigational purposes

Sea Crossings	State of sea until 0000 Saturday 27 March 2021
Dublin - Holyhead	Moderate, decreasing slight overnight. Increasing moderate again forenoon Thursday. Occasionally rough later.
Rosslare - South Wales	Moderate, increasing rough later. Occasionally very rough Friday night and early Saturday.
Cork - South Wales	Moderate, increasing rough on Thursday night. Further increasing rough to very rough on Friday evening.
Rosslare - France	Moderate to rough, increasing rough on Thursday night. Further increasing very rough on Friday afternoon and becoming high for a time in the west Friday night and early Saturday.
Cork - France	Moderate to rough, increasing rough on Thursday night. Further increasing very rough on Friday afternoon and becoming high for a time in the west Friday night and early Saturday.

Next update before 0700 Thursday, 25 March 2021

Appendix 7.11 Met Éireann: 24-hour Sea Area Forecasts 00.00 hrs on 25, 26, 27 and 28 March 2021

Met Éireann

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 0000 Saturday, 27 March 2021
Issued at 0000 Friday, 26 March 2021

1. **Gale warning:** In operation
Small craft warning: In operation

2. **Meteorological situation at 2100:** Ireland lies in a strong southwest airflow generated by a depression of 977 hPa centred south of Iceland. The airflow will become unstable tonight as an associated cold front moves eastwards across Ireland.

3. **Forecast for Irish coastal waters from Roches Point to Slyne Head to Malin Head**

Wind: West force 6 or 7 and gusty imminent, soon increasing southwest to west force 7 or gale force 8 and gusty. Later veering west to northwest and decreasing force 6 or 7 by the end of the period, occasionally reaching gale force 8 in the northwest.

Weather: Heavy rain. Heavy frequent showers imminent with the risk of isolated thunderstorms.

Visibility: Moderate or poor in precipitation, otherwise good.

Forecast for Irish coastal waters from Malin Head to Howth Head to Roches Point and for the Irish Sea

Wind: Southwest force 6 or 7 and gusty, veering southwest to west and decreasing force 5 or 6 and gusty imminently. Later increasing force 6 or 7 and gusty, occasionally reaching gale force 8.

Weather: Heavy rain imminent, soon clearing to scattered heavy showers with the risk of isolated thunderstorms.

Visibility: Moderate or poor in precipitation, otherwise good.

Warning of Heavy Swell: On Atlantic coasts Friday evening and night

4. **Outlook for a further 24 hours until 0000 Sunday 28 March 2021:** Strong to near gale force westerly winds, easing fresh to strong overnight Friday. Veering southwest and gradually increasing near gale force to gale force through Saturday. Weather: Mainly fair with isolated showers. Rain spreading from the west on Saturday.

Met Éireann

Text of Gale Warning

Westerly winds will reach gale force 8 at times tomorrow (Friday) on Irish coastal waters from Wicklow Head to Loop Head to Malin Head and on the south Irish Sea.

Text of Small Craft Warning

Southwest to west winds will reach force 6 or higher tonight (Thursday night) and tomorrow (Friday) on Irish coasts from Malin Head to Strangford Lough to Wicklow Head.

Coastal Reports	11 PM Thursday, 25 March 2021
Malin Head Automatic	South-Southwest, 15 Knots, Moderate rain, 5 Miles, 997, Falling slowly
Dublin Airport	South-Southwest, 14 Knots, Fine, 13 Miles, 1003, Falling
Buoy M5 51° 41'N 8° 42'W	South-Southwest, 20 Knots, Wave ht. 2.4 m, The visibility at Tuskar is 8 Miles, 1007, Falling
Roches Point Automatic	South-Southwest, 25 Knots, Mist, 4 Miles, 1004, Falling
Sherkin Island Automatic	South-Southwest, 24 Knots, Heavy rain, 1.4 Miles, 1004, Falling
Valentia Automatic	Southwest, 13 Knots, Gust 25 Knots, Recent rain, 10 Miles, 1002, Falling
Mace Head Automatic	West-Southwest, 16 Knots, Rain shower, 6 Miles, 999, Falling
Belmullet Automatic	West-Southwest, 13 Knots, Gust 29 Knots, Recent rain, 11 Miles, 997, Falling
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	South-Southwest, 23 Knots, Wave ht. 1.7 m, 1003, Falling slowly
Buoy M3 51° 13'N, 10° 33'W	West-Southwest, 21 Knots, Wave ht. 3.6 m, 1003, Falling
Buoy M4 55° 0'N 10° 0'W	West-Southwest, 20 Knots, Wave ht. 3.3 m, 995, Falling
Buoy M6 53° 4'N 18° 56'W	West, 22 Knots, Gust 42 Knots, Wave ht. 3.9 m, 1001, Rising slowly

Disclaimer: buoy locations are approximate and are not for navigational purposes

Sea Crossings	State of sea until 0000 Sunday 28 March 2021
Dublin - Holyhead	Moderate to rough
Rosslare - South Wales	Mainly rough, increasing very rough for a time Friday evening
Cork - South Wales	Mainly rough, increasing rough to very rough on Friday afternoon.
Rosslare - France	Rough, increasing very rough to high on Friday afternoon. Decreasing rough to very rough on Saturday.
Cork - France	Rough, increasing very rough to high on Friday afternoon. Decreasing rough to very rough on Saturday.

Next update before 0700 Friday, 26 March 2021

Copy of Archived Sea Area Forecast

Weather Forecast From Met Eireann

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 0000 Sunday, 28 March 2021
Issued at 0000 Saturday, 27 March 2021

1. Gale warning: In operation
Small craft warning: In operation

2. Meteorological situation at 2100: A depression of 972 hPa centred to the southeast of Iceland, generates a strong to gale force unstable westerly airflow over the area. A ridge is building from the southwest overnight.

3. Forecast for Irish coastal waters from Bloody Foreland to Belfast Lough to Carnsore Point and for the Irish Sea

Wind: West force 6 to gale force 8 and gusty, imminently decreasing force 5 or 6. Soon backing southerly force 5 or 6. Later increasing force 6 to gale force 8 and gusty.

Weather: Occasional frequent heavy showers in northern areas at first, some of hail, soon becoming isolated. Mainly fair elsewhere. Later becoming cloudy with outbreaks of rain and drizzle spreading eastwards.

Visibility: Moderate to poor in showers or rain, otherwise good.

Forecast for Irish coastal waters from Carnsore Point to Roches Point to Mizen Head

Wind: West force 5 to 7, imminently decreasing mostly force 5. Soon backing southwest and increasing force 6 or 7. Later increasing force 7 to gale force 8 and gusty.

Weather: Mainly fair. Soon becoming cloudy. Rain and drizzle spreading eastwards later.

Visibility: Mostly good, later decreasing moderate to poor in rain.

Forecast for Irish coastal waters from Mizen Head to Slyne Head to Bloody Foreland

Wind: West force 5 to 7, imminently decreasing force 4 or 5. Soon backing south and increasing force 7 to gale force 8 and gusty, touching strong gale force 9 at times in the northwest later.

Weather: Scattered showers. Imminently becoming fair. Soon becoming cloudy with rain and drizzle.

Visibility: Mostly good, moderate in showers. Soon becoming moderate to poor in rain.

Warning of Heavy Swell: On western and northern coasts tonight and on Saturday

4. Outlook for a further 24 hours until 0000 Monday, 29-Mar-2021: Strong to gale force and gusty southwest winds, decreasing fresh to near gale force on Saturday night, but increasing strong to gale force southwest again on Sunday. Weather: Cloudy, with outbreaks of rain.

Weather Forecast From Met Eireann

Text of Gale Warning
(1) Westerly winds will occasionally reach gale force 8 for a time tonight on Irish coastal waters from Bloody Foreland to Malin Head to Fair Head and also on the Irish sea. (2) Southerly winds will reach gale force 8 on Saturday on Irish coastal waters from Mizen Head to Erris Head to Malin Head, extending to all Irish coastal waters and the Irish sea early on Saturday night.

Text of Small Craft Warning
(1)Westerly winds will reach force 6 or higher for a time tonight on Irish coasts from Fair Head to Roches Point to Bloody Foreland. (2) Southerly winds will reach force 6 or higher on Saturday on Irish coasts from Malin Head to Carnsore Point to Mizen Head

Coastal Reports	12 Midnight Saturday, 27 March 2021
Malin Head Automatic	West-Northwest, 23 Knots, Gust 40 Knots, Rain shower, 7 Miles, 1003, Rising
Dublin Airport	West-Southwest, 9 Knots, Gust 23 Knots, Fair, 16 Miles, 1010, Rising
Buoy M5 51° 41'N 6° 42'W	West, 22 Knots, Wave ht: 3.3 m, The visibility at Tuskar is greater than 10 Miles, 1015, Rising
Roches Point Automatic	Southwest, 14 Knots, Fair, 26 Miles, 1016, Rising
Sherkin Island Automatic	West, 21 Knots, Recent rain, 9 Miles, 1017, Rising
Valentia Automatic	West, 17 Knots, Fair, 13 Miles, 1017, Rising slowly
Mace Head Automatic	West, 29 Knots, Gust 39 Knots, Rain shower, 4 Miles, 1012, Rising
Belmullet Automatic	West-Northwest, 16 Knots, Gust 32 Knots, Rain shower, 5 Miles, 1010, Rising
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	West, 25 Knots, Wave ht: 2 m, 1009, Rising
Buoy M3 51° 13'N, 10° 33'W	West-Northwest, 23 Knots, Wave ht: 6.7 m, 1018, Rising slowly
Buoy M4 55° 0'N 10° 0'W	West-Northwest, 31 Knots, Gust 39 Knots, Wave ht: 8 m, 1007, Rising rapidly
Buoy M6 53° 4'N 15° 56'W	West, 11 Knots, Wave ht: 6.5 m, 1013, Steady

Disclaimer: buoy locations are approximate and are not for navigational purposes

Sea Crossings	State of sea until 0000 Monday, 29-Mar-2021
Dublin - Holyhead	Moderate to rough, increasing mostly rough on Sunday.
Rosslare - South Wales	Mostly rough, increasing very rough for a time this evening and again on Sunday morning.
Cork - South Wales	Rough to very rough.
Rosslare - France	Rough to very rough, occasionally high tonight.
Cork - France	Rough to very rough, occasionally high tonight.

Next update before 0700 Saturday, 27 March 2021
A detailed forecast may be obtained by dialing *Weatherdial* on 1550 123 855.

Appendix 7.11 Met Éireann: 24-hour Sea Area Forecasts 00.00 hrs on 25, 26, 27 and 28 March 2021

Met Éireann

24-hour Sea Area Forecast

Updated at 0000 / 0600 / 1200 / 1800

Sea Area Forecast until 0000 Monday, 29 March 2021
Issued at 0000 Sunday, 28 March 2021

1. Gale warning: In operation
   Small craft warning: In operation

2. Meteorological situation at 2100: Ireland lies in a strong to gale force southwest airflow, generated by a mature low of 948hpa positioned to the southwest of Iceland. Its associated weather fronts are moving over Ireland.

Warning of Heavy Swell: Developing in western areas on Saturday night and extending to northwestern areas
3. Forecast for Irish coastal waters from Mizen Head to Slyne Head to Malin Head.

Wind: Southwest force 6 to gale force 8 and gusty, imminently decreasing force 5 or 6. Soon increasing southwest force 6 to gale force 8 and gusty and later increasing force 7 to gale force 8 and gusty.

Weather: Outbreaks of rain, heavy at times.

Visibility: Mostly moderate in rain, but poor at times.

Forecast for Irish coastal waters from Malin Head to Fair head to Strangford Lough.

Wind: Southwest force 6 or 7, imminently decreasing southwest force 4 or 5. Soon backing southerly force 4 to force 6. Later increasing force 6 or force 7 and gusty.

Weather: Outbreaks of rain, heavy at times. Imminently becoming cloudy. Soon rain returning.

Visibility: Mostly moderate in rain, poor at times. Becoming mostly good for a while.

Forecast for Irish coastal waters from Strangford Lough to Carnsore Point to Mizen Head and for the Irish Sea.

Wind: Southwest force 6 to gale force 8 and gusty. Imminently decreasing southwest force 5 to force 7. Later increasing southwest force 6 to gale force 8 and gusty

Weather: Outbreaks of rain, heavy at times. Soon becoming mostly cloudy. Rain returning later.

Visibility: Mostly moderate in rain, poor at times. Soon becoming mostly good. Later becoming moderate to poor.

on Sunday morning.

4. Outlook for a further 24 hours until 0000 Tuesday, 30-Mar-2021: Strong to gale force and gusty southwest winds, soon easing southwest fresh to near gale force. Weather: Rain, becoming confined to the northwest, with patchy drizzle and mist elsewhere.

Met Éireann

Text of Gale Warning

1. Southwest winds will continue to reach gale force for a time on Saturday night on Irish Coastal Waters from Strangford Lough to Roches Point to Malin Head and on the Irish Sea.

2. Southwest winds will reach gale force on Sunday on Irish Coastal waters from Mizen Head to Slyne Head to Malin Head and on the Irish Sea.

Text of Small Craft Warning

(1)Southwest winds will reach force 6 or higher on Saturday night on Irish coasts from Malin Head to Fair Head to Strangford Lough. (2) Southwest winds will reach force 6 or higher on Sunday on Irish coasts from Malin Head to Howth Head to Mizen Head

Coastal Reports	23 PM Saturday, 27 March 2021
Malin Head Automatic	South-Southwest, 23 Knots. Recent drizzle. 9 Miles, 999, Falling slowly
Dublin Airport	South-Southwest, 17 Knots. Gust 33 Knots. Light rain. 10 Miles, 1008, Falling slowly
Buoy M5 51° 4'N 6° 42'W	Southwest, 26 Knots. Gust 34 Knots. Wave ht: 3.7 m, The visibility at Tuskar is 5 Miles, 1014, Falling slowly
Roches Point Automatic	Southwest, 30 Knots. Gust 43 Knots. Rain shower, 1.7 Miles, 1012, Steady
Sherkin Island Automatic	South-Southwest, 28 Knots. Gust 41 Knots. Recent rain, 2 Miles, 1012, Steady
Valentia Automatic	South-Southwest, 19 Knots. Gust 37 Knots. Cloudy, 5 Miles, 1010, Rising slowly
Mace Head Automatic	South-Southwest, 28 Knots. Gust 36 Knots. Mist, 3 Miles, 1004, Rising slowly
Belmullet Automatic	Southwest, 27 Knots. Gust 46 Knots. Mod rain shower, 2 Miles, 1000, Steady
Buoy M1 53° 8'N, 11° 12'W	Report not available
Buoy M2 53° 29'N, 5° 26'W	South-Southwest, 29 Knots. Gust 38 Knots. Wave ht: 2.8 m, 1008, Falling
Buoy M3 51° 13'N, 10° 33'W	Southwest, 25 Knots. Wave ht: 6.4 m, 1012, Rising slowly
Buoy M4 55° 0'N 10° 0'W	Southwest, 23 Knots. Wave ht: 5.5 m, 998, Rising slowly
Buoy M6 53° 4'N 15° 56'W	West, 22 Knots. Gust 36 Knots. Wave ht: 5.7 m, 1002, Rising rapidly

Disclaimer: buoy locations are approximate and are not for navigational purposes

Sea Crossings	State of sea until 0000 Tuesday, 30-Mar-2021
Dublin - Holyhead	Rough. Decreasing moderate later Monday.
Rosslare - South Wales	Rough to very rough, decreasing to mostly rough on Sunday. Further decreasing moderate on Monday afternoon..
Cork - South Wales	Rough to very rough, decreasing to mostly rough on Sunday night. Further decreasing mostly moderate later on Monday.
Rosslare - France	Rough to very rough, decreasing mainly rough on Monday morning.
Cork - France	Rough to very rough, decreasing mainly rough later Monday.

Next update before 0700 Sunday, 28 March 2021

Appendix 7.12 Marine Rescue Sub Centre Valentia SITREP1/UIIN0469/21 26 0936Z Mar 21 – FV Ellie Adhamh Broken Down

Irish Coast Guard GARDA COSTA na hÉIREANN OVERSEE

F/V ELLIE ADHAMH BROKEN DOWN

UIIN0469/21

MRSC Valentia

SITREPs

SITREP1/UIIN0469/21

Transmission	ROUTINE
Entry Date	26 0936Z Mar 21
From	MRSC Valentia
To	MRSC VALENTIA SITREP GROUP
SITREP Number	ONE
Incident	F/V ELLIE ADHAMH BROKEN DOWN
Reference Number	SITREP1/UIIN0469/21

A. ID of Casualty	ELLIE ADHAMH
B. Position	51°37.00'N 011°54.30'W
C. Situation	FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W
D. Number of Persons	7
E. Assistance Required	TOW TO C.T.BERE
F. Coordinating RCC	MRSC Valentia
G. Description of Casualty	22MT FV
H. Weather On Scene	Wind: 7, W / Sea: Very rough / Swell: Moderate wave / Air Temp: 8°C / Water Temp: 11°C / Vis: Moderate / Cloud Cov: Scattered / Precip: Slight / Sitrep Weather-Time: 26 0800Z Mar 21
J. Initial Actions Taken	ORGANISE TOW
K. Search Area	N/A
L. Coordinating Instructions	MONITOR TO TO C.T.TBERE
M. Future Plans	N/A
N. Additional Information	0800,FV ELLIE ADHAMH BKN DOWN 51 37N011 54W,ENG FAILURE,REQ ASSIST,FV MONICA ATTEMPT TOW, UNABLE TO ASSIST,WX POOR 0905,NAVAL OPPS ADV LE G/B SHAW WILL ASSIST.ETA 6HRS 0912,TUG OCEAN BANK WILL ASSIST VESSEL,ETA 8HR,NAVAL OPPS ADVISED WITH THANKS.EJK MON VL ON AIS.

Appendix 7.12 Marine Rescue Sub Centre Valentia SITREP2/UIINO469/21 26 1258Z Mar 21 – FV Ellie Adhamh Reported Position and Chart

Irish Coast Guard GARDA CÓSTA na hÉIREANN OVERSEE

F/V ELLIE ADHAMH BROKEN DOWN

UIIN0469/21

MRSC Valentia

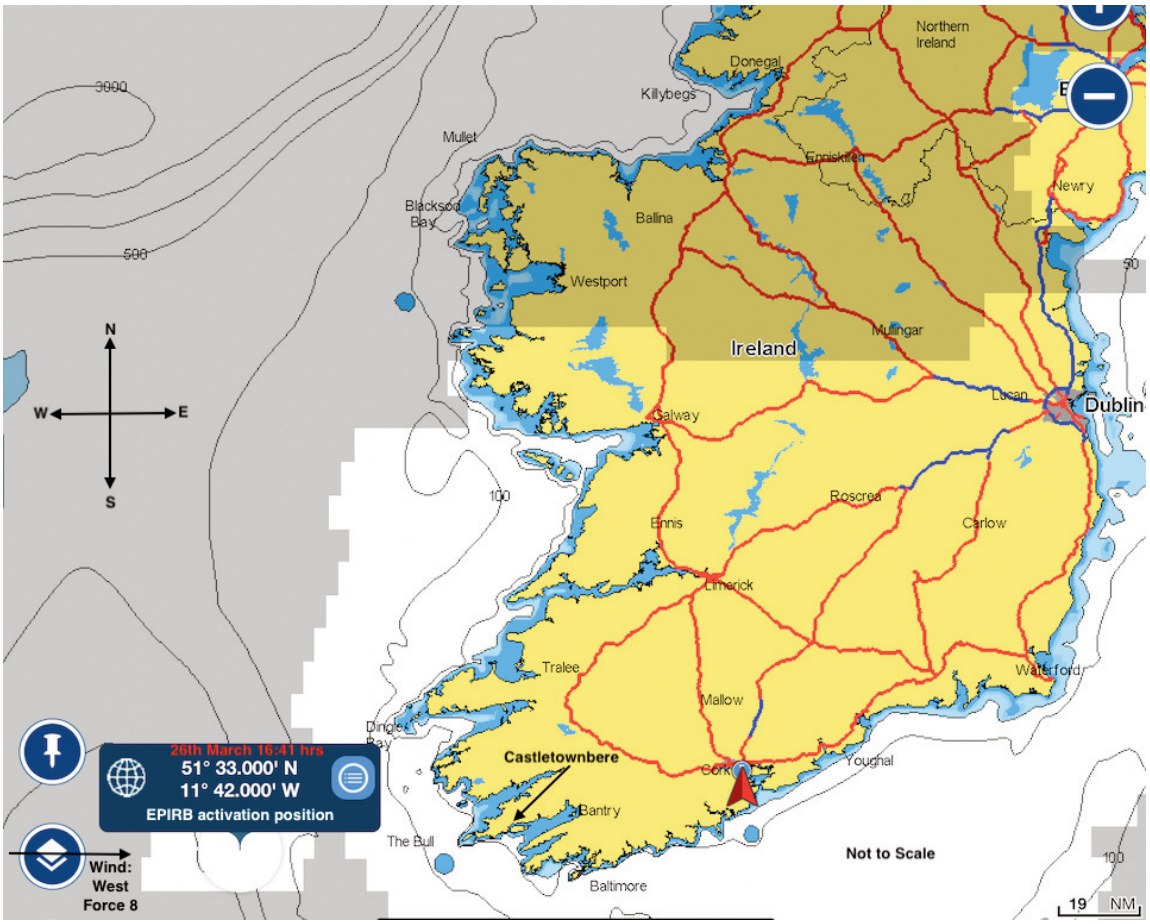
SITREPs

SITREP2/UIIN0469/21

Transmission	ROUTINE
Entry Date	26 1258Z Mar 21
From	MRSC Valentia
To	MRSC VALENTIA SITREP GROUP
SITREP Number	TWO
Incident	F/V ELLIE ADHAMH BROKEN DOWN
Reference Number	SITREP2/UIIN0469/21

A. ID of Casualty	ELLIE ADHAMH
B. Position	51°37.00'N 011°54.30'W
C. Situation	FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W
D. Number of Persons	7
E. Assistance Required	TOW TO C.T.BERE
F. Coordinating RCC	MRSC Valentia
G. Description of Casualty	22MT FV
H. Weather On Scene	Wind: 8, W / Sea: High / Swell: Low wave / Water Temp: 11°C / Sitrep Weather-Time: 26 1258Z Mar 21
J. Initial Actions Taken	ORGANISE TOW
K. Search Area	N/A
L. Coordinating Instructions	TOW
M. Future Plans	None
N. Additional Information	1102,FV MONICA 2 ADV WX VERY POOR,LEAVING TO STEAM ASHORE,OK 1200,ELLIE ADHAMH ADV WX VERY POOR 1209,TUG OCEAN BANK STOVE IN TWO WINDOWS UNABLE TO PROCEED,RTN CTB 1214,NAVAL OPS,REQ GB SHAW TO ASSIST 1306,GB SHAW PROCEEDING,ETA 6HR,ELLIE ADHAMH ADVISED 1326,R115 A/BRN ETA 1HR 18MINS 1444,R115 ON SCENE,COMMS WITH VL 1452,R115 ADV CREW NOT REQ EVAC,HAPPY TO STAY ONBOARD,R115 RELEASED TO CT BERE PAD 1453,GBS ADV WILL BE UNABLE TO TOW VL WHEN ON SCENE DUE TO WX 1513,OWNER TALKING TO TUG COMPANY AND REVERT ASAP

Appendix 7.12 Marine Rescue Sub Centre Valentia SITREP2/UIINO469/21 26 1258Z Mar 21 – FV Ellie Adhamh Reported Position and Chart



Appendix 7.12 National Maritime Operations Centre Dublin SITREP1/UIIN0476/21 26 1832Z Mar 21 – Emergency Position Indicating Radio Beacon Activation

ROUTINE
26 1832Z MAR 21
FROM NMOC DUBLIN
TO MRCC DUBLIN SITREP GROUP

BT
IRISH EPIRB ALERT ELLIE ADHAMH
UIIN0476/21
SAR SITREP 1

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°34.83'N 011°32.48'W

C - SITUATION
EPIRB ACTIVATION

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
INVESTIGATE

F - COORDINATING RCC
NMOC DUBLIN

G - DESCRIPTION OF CASUALTY
FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, W / SEA: HIGH / SWELL: MODERATE WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 26 1641Z MAR 21
J - INITIAL ACTIONS TAKEN
ALERT VALENTIA MRSC

K - SEARCH AREA
55NM WEST OF CTB

L - COORDINATING INSTRUCTIONS
MRSC VALENTIA/ MRCC DUBLIN

Appendix 7.12 National Maritime Operations Centre Dublin SITREP1/UIIN0476/21 26 1832Z Mar 21 – Emergency Position Indicating Radio Beacon Activation

M - FUTURE PLANS
NIL

N - ADDITIONAL INFORMATION
1640Z IRISH EPIRB ACTIVATION, F/V ELLIE ADHAMH. F/V NUC WITH 7POB 55NM WEST OF CTB
1641Z [redacted] ADVISED. (UIIN 0469/21)
1731Z R115 ADVISE EPIRB ACTIVATED INTENTIONALLY TO GIVE POSITION. ALL POWER LOST ON F/V. UKMCC ADVISED.
INCIDENT ON-GOING
BT

Kind Regards

[redacted]
MRCC Dublin

National Maritime Operations Centre
Marine Rescue Coordination Centre Dublin
Irish Coast Guard

An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Lána Líosain, Baile Átha Cliath, D02 TR60
Leeson Lane, Dublin, D02 TR60

Appendix 7.13 Marine Rescue Sub Centre Valentia Search and Rescue SITREP3/UIINO469/21 26 1647Z Mar 21 – Emergency Position Indicating Radio Beacon Activation Reported Position and Chart

Irish Coast Guard GARDA CÓSTA na hÉIREANN OVERSEE

F/V ELLIE ADHAMH BROKEN DOWN

UIIN0469/21

MRSC Valentia

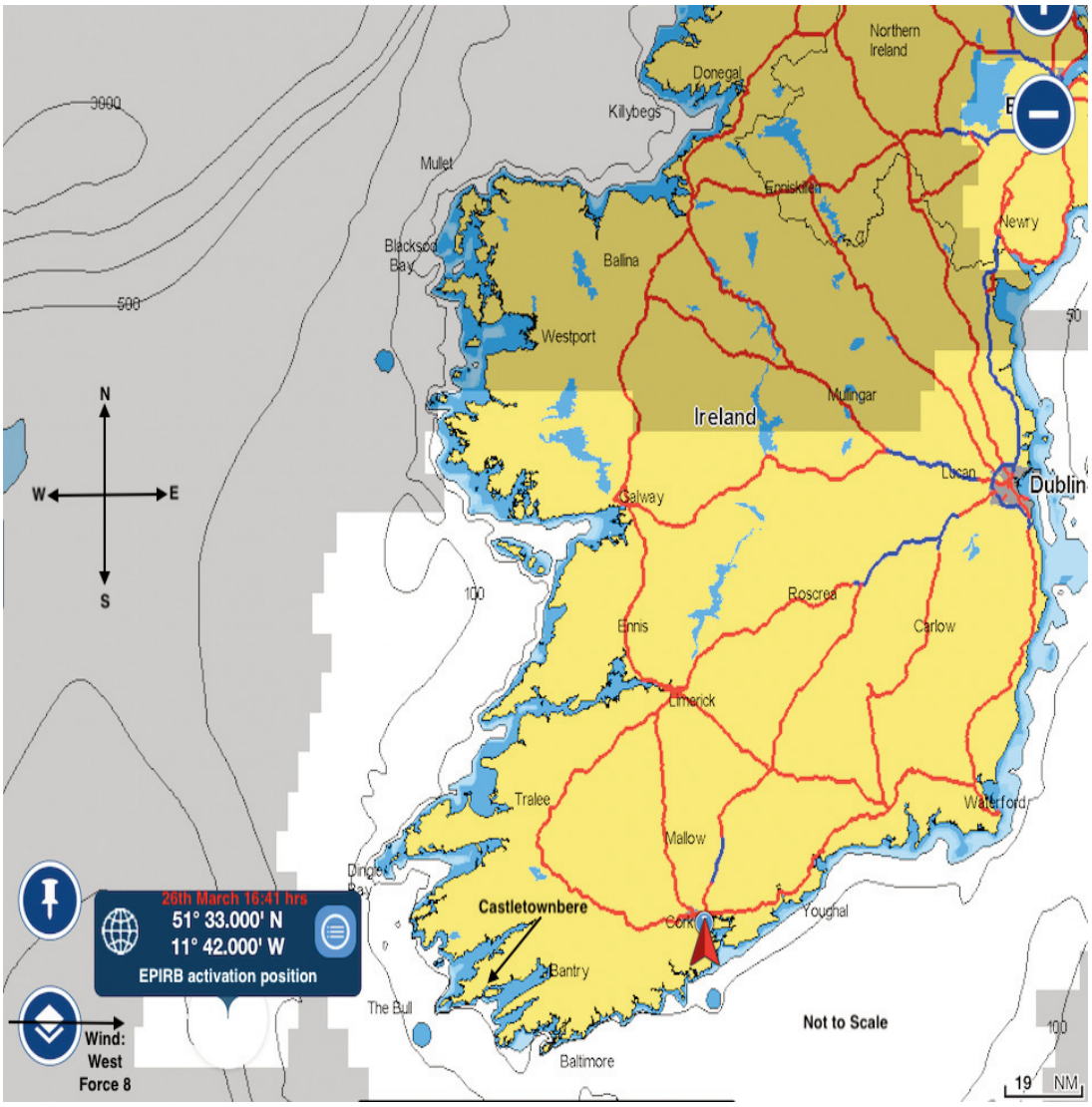
SITREPs

SITREP3/UIIN0469/21

Transmission	ROUTINE
Entry Date	26 1647Z Mar 21
From	MRSC Valentia
To	MRSC VALENTIA SITREP GROUP
SITREP Number	THREE
Incident	F/V ELLIE ADHAMH BROKEN DOWN
Reference Number	SITREP3/UIIN0469/21

A. ID of Casualty	ELLIE ADHAMH
B. Position	51°37.00'N 011°54.30'W
C. Situation	FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W
D. Number of Persons	7
E. Assistance Required	TOW TO C.T.BERE
F. Coordinating RCC	MRSC Valentia
G. Description of Casualty	22MT FV
H. Weather On Scene	Wind: 8, W / Sea: High / Swell: Moderate wave / Water Temp: 11°C / Sitrep Weather-Time: 26 1647Z Mar 21
J. Initial Actions Taken	ORGANISE TOW
K. Search Area	N/A
L. Coordinating Instructions	SAR
M. Future Plans	None
N. Additional Information	1641,NMOC ADV EPIRB ALERT FV ELLIE ADHAMH,51 33N,011 42W R115 TASKED FROM CT BERE 1643,LE GB SHAW ADVISED, ETA 2300 DUE TO WX 1652,DSC,MAYDAY RELAY 1657,GB SHAW APPOINT OSC 1707,R115 A/BRN TO EPIRB POS 1726,ADV NMOC TO TASK R117 TO ROUTE TO CT BERE,TASKED [redacted] ADVD 1731,R115 ON SCENE,COMMS WITH VL,SELF ACTIVATED EPIRB ONBOARD. SKIPPER ADV ALL HANDS STAYING ONBOARD.TOW BRIDAL READY 1804,R117 A/BRN TO CTB,ETA 1HR 1833,R115 RTB DUE TO FUEL CONST VL POS 51 34N,011 31W,GBS ADV

Appendix 7.13 Marine Rescue Sub Centre Valentia Search and Rescue SITREP3/UIINO469/21 26 1647Z Mar 21 – Emergency Position Indicating Radio Beacon Activation Reported Position and Chart



Appendix 7.14 Marine Rescue Sub Centre Valentia Search and Rescue SITREP4/UIIN0469/21 26 1837 Z Mar 21

Irish Coast Guard GARDA CÓSTA na hÉIREANN OVERSEE

F/V ELLIE ADHAMH BROKEN DOWN

UIIN0469/21

MRSC Valentia

SITREPs

SITREP4/UIIN0469/21

Transmission	ROUTINE
Entry Date	26 1837Z Mar 21
From	MRSC Valentia
To	MRSC VALENTIA SITREP GROUP
SITREP Number	FOUR
Incident	F/V ELLIE ADHAMH BROKEN DOWN
Reference Number	SITREP4/UIIN0469/21

A. ID of Casualty	ELLIE ADHAMH
B. Position	51°37.00'N 011°54.30'W
C. Situation	FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W
D. Number of Persons	7
E. Assistance Required	TOW TO C.T.BERE
F. Coordinating RCC	MRSC Valentia
G. Description of Casualty	22MT FV
H. Weather On Scene	Wind: 7, W / Sea: High / Swell: Moderate wave / Water Temp: 11°C / Sitrep Weather-Time: 26 1837Z Mar 21
J. Initial Actions Taken	ORGANISE TOW,LE GBS ST/BY DISABLED VL
K. Search Area	N/A
L. Coordinating Instructions	SAR
M. Future Plans	N/A
N. Additional Information	1847,ETA GBS 1--2HRS,F/FORWIN 1HR,WX 270x 35kts,high sw,good vis 1902,R117 SHUT DN,CTB 1917,FRIO FORWIN ON SCENE WITH ELLIE ADHAMH,COMMS EST 1919,R115 RTB,CLOSE 1922,R117 ON PAD CTB FOR NIGHT,ON ST/BY 2004,GBS RADAR CONTACT AND COMMS WITH VL

Appendix 7.15 Marine Rescue Sub Centre Valentia Search and Rescue SITREP5/UIINO469/21 26 2258Z Mar 21

ROUTINE
26 2258Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP
BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP FIVE
A - IDENTITY OF CASUALTY:
ELLIE ADHAMH
B - POSITION
51°37.00'N 011°54.30'W
C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W D - NUMBER OF PERSONS
7
E - ASSISTANCE REQUIRED
TOW TO C.T.BERE
F - COORDINATING RCC
MRSC VALENTIA
G - DESCRIPTION OF CASUALTY
22MT FV
H - WEATHER ON SCENE
WIND: 7, W / SEA: HIGH / SWELL: HIGH WAVE / WATER TEMP: 11°C / SITREP WEATHER-TIME: 26 2258Z MAR 21 J - INITIAL ACTIONS TAKEN ORGANISE TOW K - SEARCH AREA N/A L - COORDINATING INSTRUCTIONS LOCATE AND ASSIST M - FUTURE PLANS GB SHAW TO ESTABLISH TOW AT 0530 N - ADDITIONAL INFORMATION
2200 LE GEORGE BERNARD SHAW ON SCENE WITH F/V ELLIE ADHAMH, ADVZ ALL OK ON BOARD F/V - WX CONDITIONS WESTERLY 30KTS, GUSTING 40KTS, VIS GOOD, SWELL OVER 15 MTRS - WILL ESTABLISH TOW AT 0530
R117 ON CTB HELI PAD FOR THE NIGHT, CASTLETOWNBERE L/B OFF STBY FOR THE NIGHT NR 1 AND NR 2 ON CALL ADVZ INCIDENT ON-GOING [redacted]

Appendix 7.16 Marine Rescue Sub Centre Valentia Search and Rescue SITREP6/UIINO469/21 27 0818Z Mar 21

ROUTINE
27 0818Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP
BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP SIX
A - IDENTITY OF CASUALTY:
ELLIE ADHAMH
B - POSITION
51°37.00'N 011°54.30'W
C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W D - NUMBER OF PERSONS
7
E - ASSISTANCE REQUIRED
TOW TO C.T.BERE
F - COORDINATING RCC
MRSC VALENTIA
G - DESCRIPTION OF CASUALTY
22MT FV
H - WEATHER ON SCENE
WIND: 6, SW / SEA: VERY ROUGH / SWELL: HIGH WAVE / WATER TEMP: 11°C / SITREP WEATHER-TIME: 27 0818Z MAR 21 J - INITIAL ACTIONS TAKEN ORGANISE TOW K - SEARCH AREA N/A L - COORDINATING INSTRUCTIONS LOCATE AND ASSIST M - FUTURE PLANS INCIDENT ON-GOING N - ADDITIONAL INFORMATION
0510 LE GB SHAW ADVZ COMMS RE-ESTABLISHED WITH F/V ELLIE ADHAMH
0625 CASTLETOWNBERE CGU DELIVERED HAND-HELD VHF'S AND PUMP TO R117
0639 R117 ADVZ THEY WILL NOT TAKE PUMP AS IT'S NOT CHC APPROVED STOOD DOWN R117 AND TASKED R115 GB SHAW ADVZ TRYING TO ESTABLISH TOW
0800 CASTLETOWNBERE L/B TASKED
0801 R115 ENROUTE, 4 HRS ENDURANCE, WITH TWO BILGE PUMPS AND VHF FOR F/V, ETA 0900
0810 R117 BACK AT BASE
GB SHAW ADVZ STILL TRYING TO ATTACH TOW
0840 NR 1 ONCALL ADVZ
0847 CASTLETOWNBERE L/B LAUNCHED
ETA 3H15M
0902 R115 ON SCENE AND DEPLOYING PUMPS TO F/V INCIDENT ON-GOING[redacted]

Appendix 7.17 Marine Rescue Sub Centre Valentia Search and Rescue SITREP7/UIINO469/21 27 1117Z Mar 21 - FV Ellie Adhamh Taken in Tow

ROUTINE
27 1117Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP SEVEN

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW TO C.T.BERE

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22MT FV

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: HIGH WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 27 1117Z MAR 21
J - INITIAL ACTIONS TAKEN
ORGANISE TOW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
TOW TO HARBOUR LIMITS

Appendix 7.17 Marine Rescue Sub Centre Valentia Search and Rescue
SITREP7/UIINO469/21 27 1117Z Mar 21 - FV Ellie Adhamh Taken in Tow

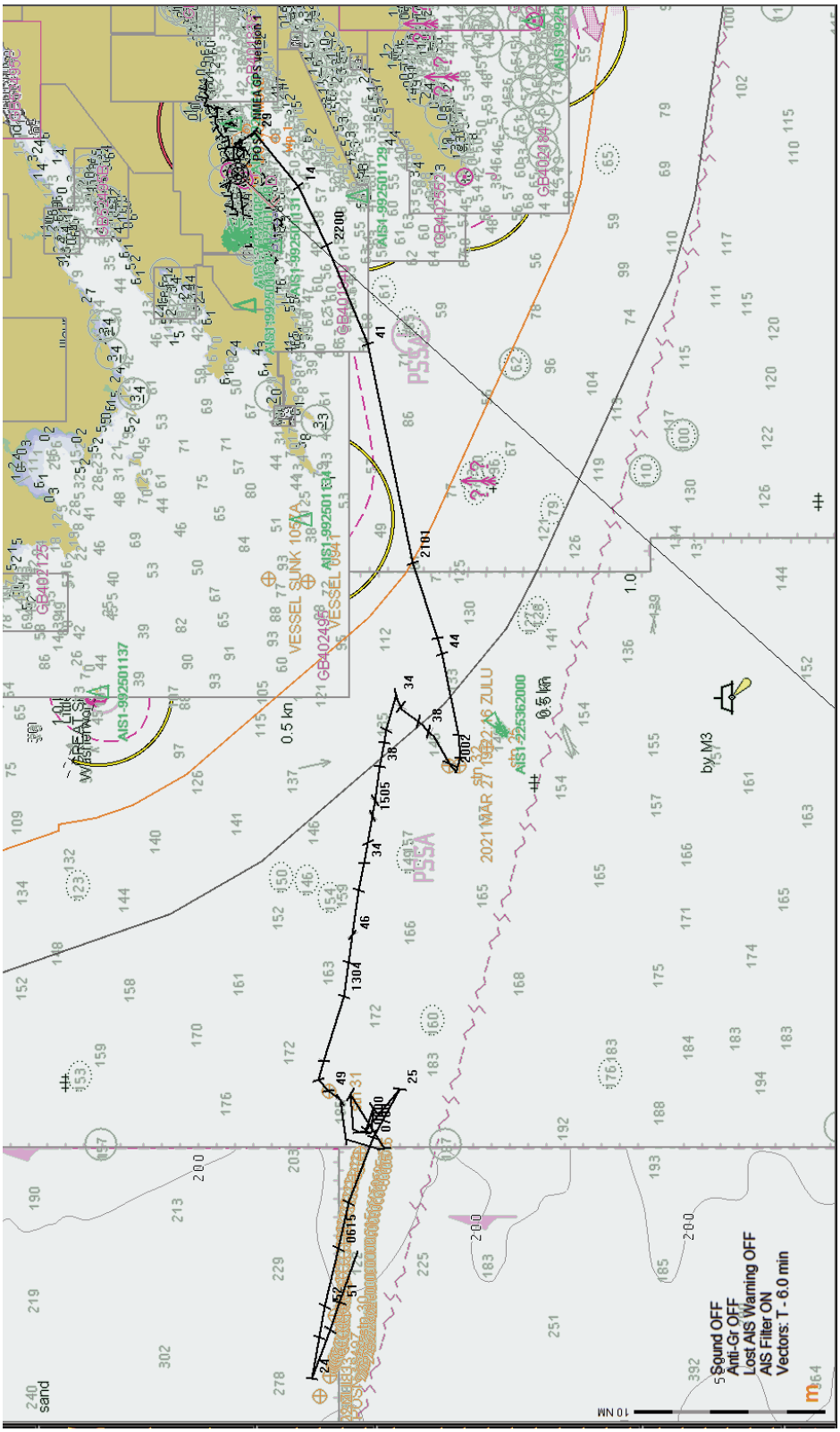
M - FUTURE PLANS
MONITOR

N - ADDITIONAL INFORMATION
0918 R115 HAVE PUT 2 SALVAGE PUMPS ON BOARD CASUALTY, MID DECK PUMPED OUT AND VESSEL STABLE FOR THE MOMENT.
1004 GEORGE BERNARD SHAW ATTEMPTING TO ESTABLISH TOW.
1048 GBS HAS THE VESSEL UNDER TOW MAKING 5.5/6 KN, R115 RELEASED. OWNERS CONTACTED TO ARRANGE A TOW WHEN VESSEL WITHIN HARBOUR LIMITS. ETA FOR EASTERN ENTRANCE CASTLETOWNBERE IS 2200 TONIGHT

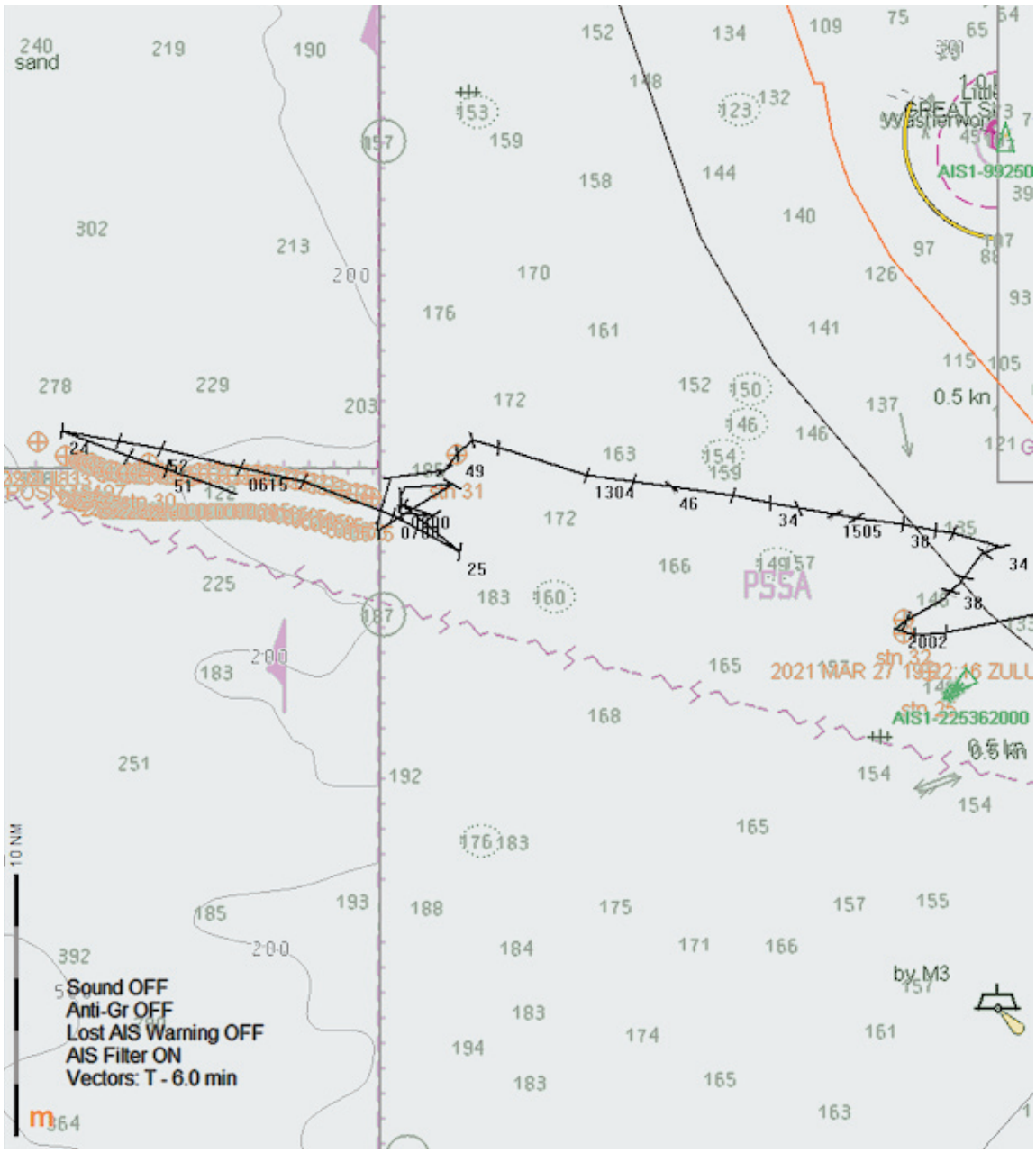
Brgds [redacted]

[redacted]

Appendix 7.18 Naval Vessel Warship Electronic Chart Display and Information System Towing Operation Plot



Appendix 7.19 FV Ellie Adhamh Taken in Tow Position (screengrab from the Warship Electronic Chart Display and Information System onboard the Naval Vessel)



Appendix 7.20 Marine Rescue Sub Centre Valentia Search and Rescue SITREP8/UIINO469/21 27 1356Z Mar 21

ROUTINE
27 1356Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP EIGHT

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW CASUALTY TO CASTLETOWN FOR REPAIRS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22 METER STEEL FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: HIGH WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 27 1356Z MAR 21
J - INITIAL ACTIONS TAKEN
ORGANISE TOW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
MONITOR

M - FUTURE PLANS
TOW VESSEL TO SHELTER AND HAND OVER TO TUG NOMAD

Appendix 7.20 Marine Rescue Sub Centre Valentia Search and Rescue SITREP8/UIINO469/21 27 1356Z Mar 21

N - ADDITIONAL INFORMATION
1048 GEORGE BERNARD SHAW HAS THE VESSEL UNDER TOW MAKING 5.5/6 KN, R115 RELEASED FOR THE MOMENT. OWNERS HAVE ARRANGED FOR TUG NOMAD TO MEET THE GBS AT THE WESTERN ENTRANCE OF CASTLETOWN TO ASSIST, AND TAKE OVER THE TOW WHEN IN THE SHELTER OF THE BAY AT THE EASTERN ENTRANCE TO THE HARBOUR.

CASTLETOWNBERE RNLI IS SHADOWING CASUALTY IN CASE OF PROBLEMS.
ETA FOR EASTERN ENTRANCE CASTLETOWN IS 2200
BT

Brgds [redacted]

[redacted]

Appendix 7.21 Marine Rescue Sub Centre Valentia Search and Rescue SITREP9/UIINO469/21 27 1732Z Mar 21

ROUTINE
27 1732Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP NINE

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW CASUALTY TO CASTLETOWN FOR REPAIRS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22 METER STEEL FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / WATER TEMP: 11° [*]

J - INITIAL ACTIONS TAKEN
ORGANISE TOW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
WINCH CREW

M - FUTURE PLANS
UNKNOWN

Appendix 7.21 Marine Rescue Sub Centre Valentia Search and Rescue SITREP9/UIINO469/21 27 1732Z Mar 21

N - ADDITIONAL INFORMATION
1448 ELLIE ADHAMH HAS TAKEN A SIGNIFICANT LIST AND THE PUMPS ARE FAILING. GBS REQUESTING R115 ON SCENE TO REMOVE THE CREW IF THINGS GO BAD, AND CONTINUE TOWING WITHOUT THE CREW

1516 WX WORSENING AND THE PUMPS ONLY WORKING SPORADICALLY
1535 GBS HEAVE TO INTO THE WEATHER AND SUGGESTING CREW ABANDON IF THEY CANT GET THE PUMPS WORKING.
1602 ACCOMMODATION IS FLOODING, ELLIE ADHAMH DEPLOYS LIFERAFT TO THE STERN
1616 LIFERAFT LOST
1630 R115 ON SCENE AND ATTEMPTING TO WINCH CREW
1657 R115 RECOVERS WINCH MAN WITHOUT ANY OF THE CREW. CONDITIONS VERY POOR. ANOTHER LIFERAFT LOST. GBS DEPLOYS ANOTHER RAFT, [*]

, also lost 1726 Castletown LB attempting to get another liferaft on board

Brgds [redacted]

[redacted]

Appendix 7.22 Marine Rescue Sub Centre Valentia Search and Rescue SITREP10/UIINO469/21 27 1751Z Mar 21

ROUTINE
27 1751Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP TEN

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW CASUALTY TO CASTLETOWN FOR REPAIRS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22 METER STEEL FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 27 1751Z MAR 21
J - INITIAL ACTIONS TAKEN
DEPLOY A RAFT OR WINCH CREW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
MONITOR

M - FUTURE PLANS
TBD

Appendix 7.22 Marine Rescue Sub Centre Valentia Search and Rescue SITREP10/UIINO469/21 27 1751Z Mar 21

N - ADDITIONAL INFORMATION
1740 R117 ON SCENE, R115 RETURNING TO CTB FOR FUEL. R117 ATTEMPTING TO HI-LINE A LIFERAFT DOWN TO CASUALTY
1822 LIFERAFT ON BOARD CASUALTY, ATTEMPTING TO WINCH NOW
1837 WM ON DECK OF CASUALTY.
1843 FIRST 2 CASUALTIES LIFTED
1855 R117 ADVISES ALL 7 CASUALTIES AND WM ON BOARD THE HELO, HEADING FOR EICK.
CASTLETOWN LB STOOD DOWN, R115 RTB
BT

Brgds [redacted]

[redacted]

Appendix 7.23 Marine Rescue Sub Centre Valentia Search and Rescue SITREP11/UIINO469/21 27 1859Z Mar 21

ROUTINE
27 1859Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP ELEVEN

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW CASUALTY TO CASTLETOWN FOR REPAIRS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22 METER STEEL FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 27 1859Z MAR 21
J - INITIAL ACTIONS TAKEN
DEPLOY A RAFT OR WINCH CREW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
MONITOR TOW

M - FUTURE PLANS
LOCATE VESSEL

Appendix 7.23 Marine Rescue Sub Centre Valentia Search and Rescue
SITREP11/UIINO469/21 27 1859Z Mar 21

N - ADDITIONAL INFORMATION
1904 R117 EN ROUTE TO EINN WITH 7 CASUALTIES ON BOARD, ETA 1940
1908 GEORGE BERNARD SHAW ATTEMPTING TO TOW VESSEL INTO THE BAY
1922 GBS TRIED TO TURN CASUALTY FOR HOME BUT BRIDLE PARTED IN POSITION 51 27.23N 010 38.9W. UNABLE TO RECONNECT IN THE WX CONDITIONS.

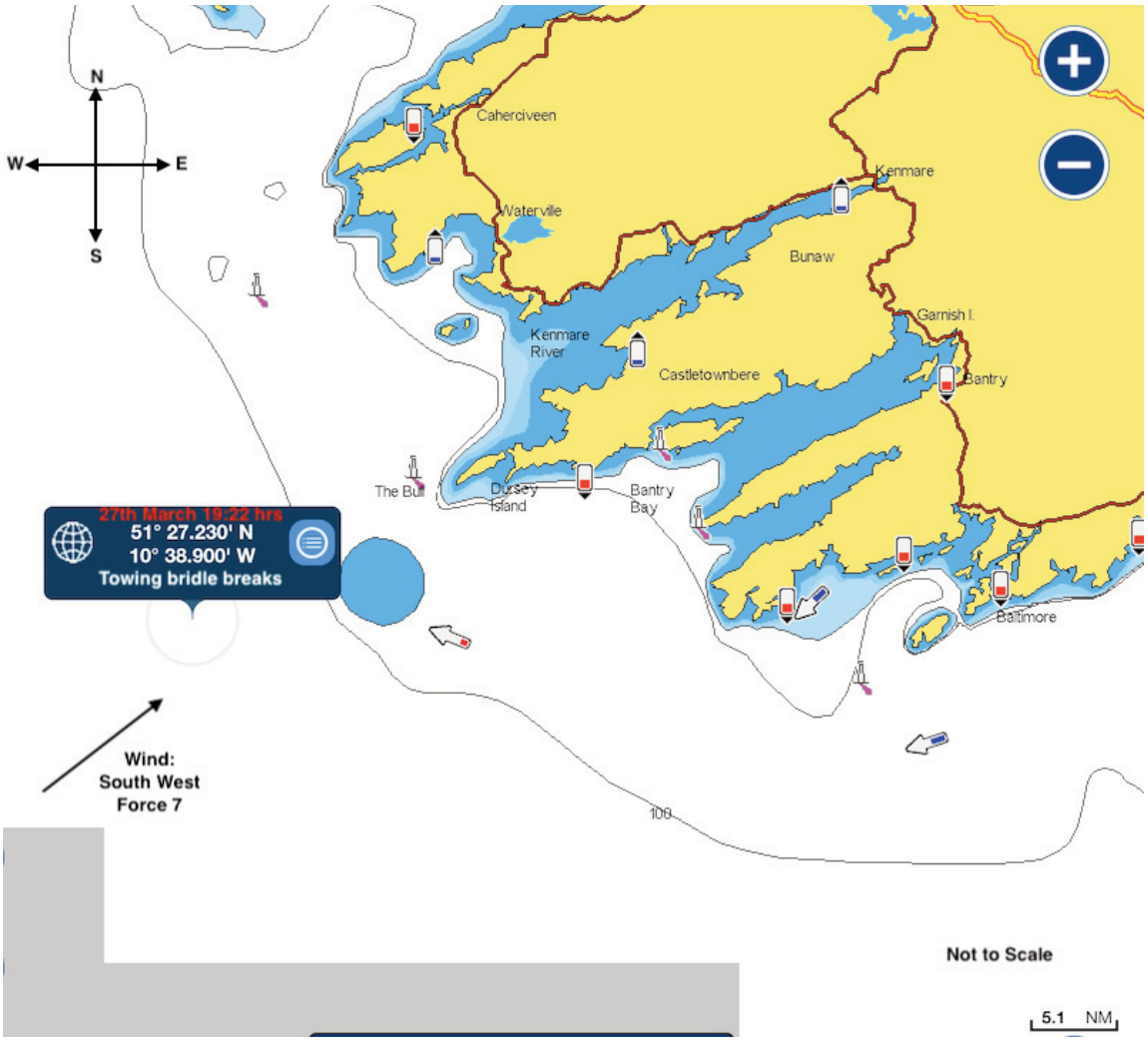
1923 TUG NOMAD HAS BEEN CONTACTED BY UNDERWRITERS TO SEE IF SHE CAN CONNECT A TOW BUT NOT IN THE CONDITIONS, WILL MONITOR TO SEE IF POSSIBLE. 7 TONS OF DIESEL FUEL ON BOARD. NO REMAINS OF A BRIDLE ON THE CASUALTY VESSEL

BT

Brgds [redacted]

[redacted]

Appendix 7.24 FV Ellie Adhamh Towline Breaks - Chart Position



Appendix 7.25 National Maritime Operations Centre Dublin SITREP1 and Final UIINO484/21 27 1953Z Mar 21

NOW
27 1953Z MAR 21
FROM NMOC DUBLIN
TO MRCC DUBLIN SITREP GROUP

BT
F/V ELLIE ADHAMH.
UIIN0484/21
SAR SITREP 1 & FINAL

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°27.00'N 010°37.00'W

C - SITUATION
F/V ELLIE ADHAMH DISABLED

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
MEDIVAC

F - COORDINATING RCC
NMOC DUBLIN

G - DESCRIPTION OF CASUALTY
FISHING VESSEL

H - WEATHER ON SCENE
WSW 7-8

J - INITIAL ACTIONS TAKEN
R117 TASKED

K - SEARCH AREA
SW COAST

Appendix 7.25 National Maritime Operations Centre Dublin SITREP1 and Final UIINO484/21 27 1953Z Mar 21

L - COORDINATING INSTRUCTIONS
MRSC VALENTIA

M - FUTURE PLANS
NIL

N - ADDITIONAL INFORMATION
1536Z: R117 PROCEEDING TO ASSIST WITH RECOVERY OF 7 CREW FROM F/V ELLIE ADHAMH.
1750Z: R117 ON SCENE.
1855Z: R117 REPORTED ALL CASUALTIES ABOARD AIRCRAFT.
2015Z: R117 LANDED CORK AIRPORT WITH ALL CASUALTIES.
INCIDENT CLOSED.
BT

Appendix 7.26 Marine Rescue Sub Centre Valentia Search and Rescue SITREP12/UIINO469/21 27 2057Z Mar 21

MRSC VALENTIA

ROUTINE
27 2057Z MAR 21
FROM MRSC VALENTIA
TO MRSC VALENTIA SITREP GROUP

BT
F/V ELLIE ADHAMH BROKEN DOWN
UIIN0469/21
SAR SITREP TWELVE

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°37.00'N 011°54.30'W

C - SITUATION
FV ELLIE ADHAMH BKN DOWN,POS 51 38N,011 48W

D - NUMBER OF PERSONS
7

E - ASSISTANCE REQUIRED
TOW CASUALTY TO CASTLETOWN FOR REPAIRS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
22 METER STEEL FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / WATER TEMP: 11°C / SITREP
WEATHER-TIME: 27 2057Z MAR 21
J - INITIAL ACTIONS TAKEN
DEPLOY A RAFT OR WINCH CREW

K - SEARCH AREA
N/A

L - COORDINATING INSTRUCTIONS
SAR PHASE CONCLUDED

Appendix 7.26 Marine Rescue Sub Centre Valentia Search and Rescue
SITREP12/UIINO469/21 27 2057Z Mar 21

M - FUTURE PLANS
MONITOR / POL / SAL

N - ADDITIONAL INFORMATION
1956Z R117 LANDS CORK AIRPORT CASUALTIES BEING ASSESSED BY HSE
2058Z LE GEORGE BERNARD SHAW RELEASED
2148Z CASTLETOWNBERE LB BACK AT BASE
2209Z TUG NOMAD BACK ON BERTH
2241Z R117 DEPARTS CORK AIRPORT BOUND BASE.
ALL SAR OPERATIONS COMPLETE.
BT

Appendix 7.27 Marine Rescue Coordination Centre Dublin Salvage and Recovery Operation SITREP/UIIN0485/21 28 0152Z Mar 21

ROUTINE
28 0152Z MAR 21
FROM MRCC DUBLIN
TO MRCC DUBLIN SITREP GROUP

BT
FV ELLIE ADHAMH SALVAGE OPERATION
UIIN0485/21
SAR SITREP 1

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°27.29'N 010°39.07'W

C - SITUATION
SALVAGE AND RECOVERY OPERATIONS FOR FV ELLIE ADHAMH

D - NUMBER OF PERSONS
0

E - ASSISTANCE REQUIRED
SPOC FOR ALL COMMUNICATIONS RE: SALVAGE OPERATIONS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / AIR TEMP: 11°C / WATER TEMP: 10°C / CLOUD COV: OVERCAST / SITREP WEATHER-TIME: 27 2159Z MAR 21

J - INITIAL ACTIONS TAKEN
UNKNOWN

K - SEARCH AREA
UNKNOWN

L - COORDINATING INSTRUCTIONS
UNKNOWN

M - FUTURE PLANS
MONITOR

Appendix 7.27 Marine Rescue Coordination Centre Dublin Salvage and Recovery Operation SITREP/UIIN0485/21 28 0152Z Mar 21

N - ADDITIONAL INFORMATION
272311Z LETTER OF DIRECTION SUBMITTED TO OWNER OF ELLIE AMDAMH
272331Z OWNERS ADVISE ATLANTIC TOWAGE CONTRACTED TO ASSIST
0627Z R115 PROCEEDING
0630Z CORRIB FISHER REPORTS VISUAL ON CASUALTY VESSEL.
0807Z R115 ONSCENE, CORRIB FISHER RELEASED. AWAITING ARRIVAL OF TUG NOMAD
0816Z NOMAD ONSCENE R115 RELEASED
0908Z NOMAD ADVISE V/L 30 DEGREE LIST TO PORT. OCEAN NAVIGATOR ONROUTE.
BT

Kind Regards

[redacted]
Station Officer

National Maritime Operations Centre
Marine Rescue Coordination Centre Dublin
Irish Coast Guard

An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Lána Líosain, Baile Átha Cliath, D02 TR60
Leeson Lane, Dublin, D02 TR60

Appendix 7.28 Marine Rescue Sub Centre Valentia Salvage and Recovery Operation for FV Ellie Adhamh SITREP UIIN0485/21 1250Z Mar 21

ROUTINE
28 1250Z MAR 21
FROM MRSC VALENTIA
TO MRCC DUBLIN SITREP GROUP

BT
FV ELLIE ADHAMH SALVAGE OPERATION
UIIN0485/21
SAR SITREP 2

A - IDENTITY OF CASUALTY:
ELLIE ADHAMH

B - POSITION
51°27.29'N 010°39.07'W

C - SITUATION
SALVAGE AND RECOVERY OPERATIONS FOR FV ELLIE ADHAMH

D - NUMBER OF PERSONS
UNKNOWN

E - ASSISTANCE REQUIRED
SPOC FOR ALL COMMUNICATIONS RE: SALVAGE OPERATIONS

F - COORDINATING RCC
MRSC VALENTIA

G - DESCRIPTION OF CASUALTY
FISHING VESSEL

H - WEATHER ON SCENE
WIND: 7, SW / SEA: VERY ROUGH / SWELL: MODERATE WAVE / AIR TEMP: 12°C / WATER TEMP: 10°C / CLOUD COV: OVERCAST / SITREP WEATHER-TIME: 28 1250Z MAR 21

J - INITIAL ACTIONS TAKEN
UNKNOWN

K - SEARCH AREA
UNKNOWN

Appendix 7.28 Marine Rescue Sub Centre Valentia Salvage and Recovery Operation for FV Ellie Adhamh SITREP UIIN0485/21 1250Z Mar 21

L - COORDINATING INSTRUCTIONS
MRCC DUBLIN

M - FUTURE PLANS
MONITOR
BROADCAST RNW

N - ADDITIONAL INFORMATION
1025Z TUG NOMAD REPORTS CASUALTY V/L LISTING 30/40 DEGREES. SMELL OF DIESEL IN THE AREA
1027Z NAVAL SERVICE REQUESTED TO ASSIST.
1055Z NOMAD REPORT V/L SUNK IN POSITION 51 37.20N 010 23.02W
1115Z CIL/GRANUAILE ADVISED. LE GB SHAW STOOD DOWN.
1212Z R115 TASKED FOR SWEEP OF AREA AFTERNOON
1300Z NEW RNW ISSUED FOR AREA
1346Z R115 STOOD DOWN DUE TO DETERIORATING WEATHER
BT

Kind Regards

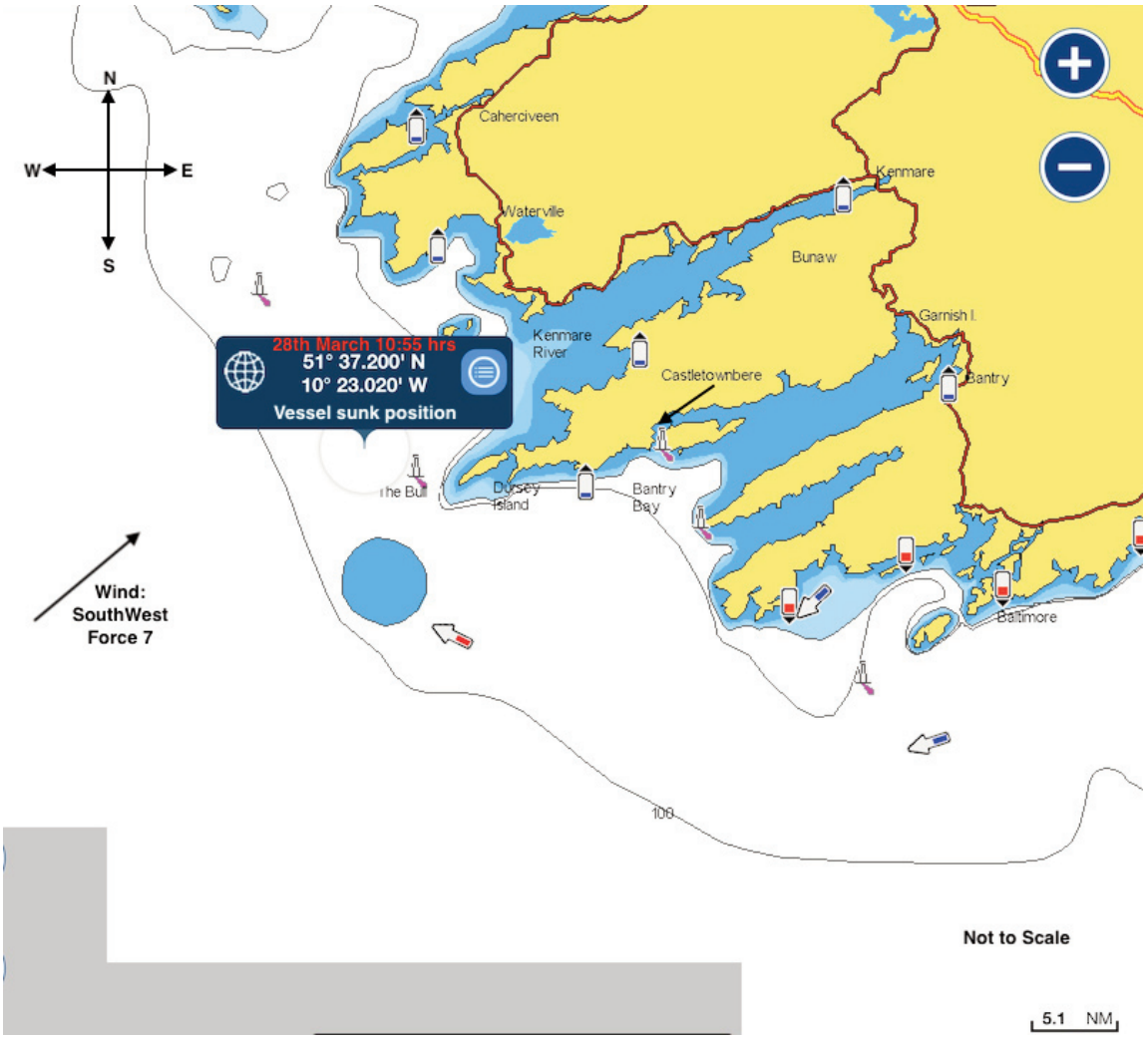
[redacted]
Station Officer

National Maritime Operations Centre
Marine Rescue Coordination Centre Dublin
Irish Coast Guard

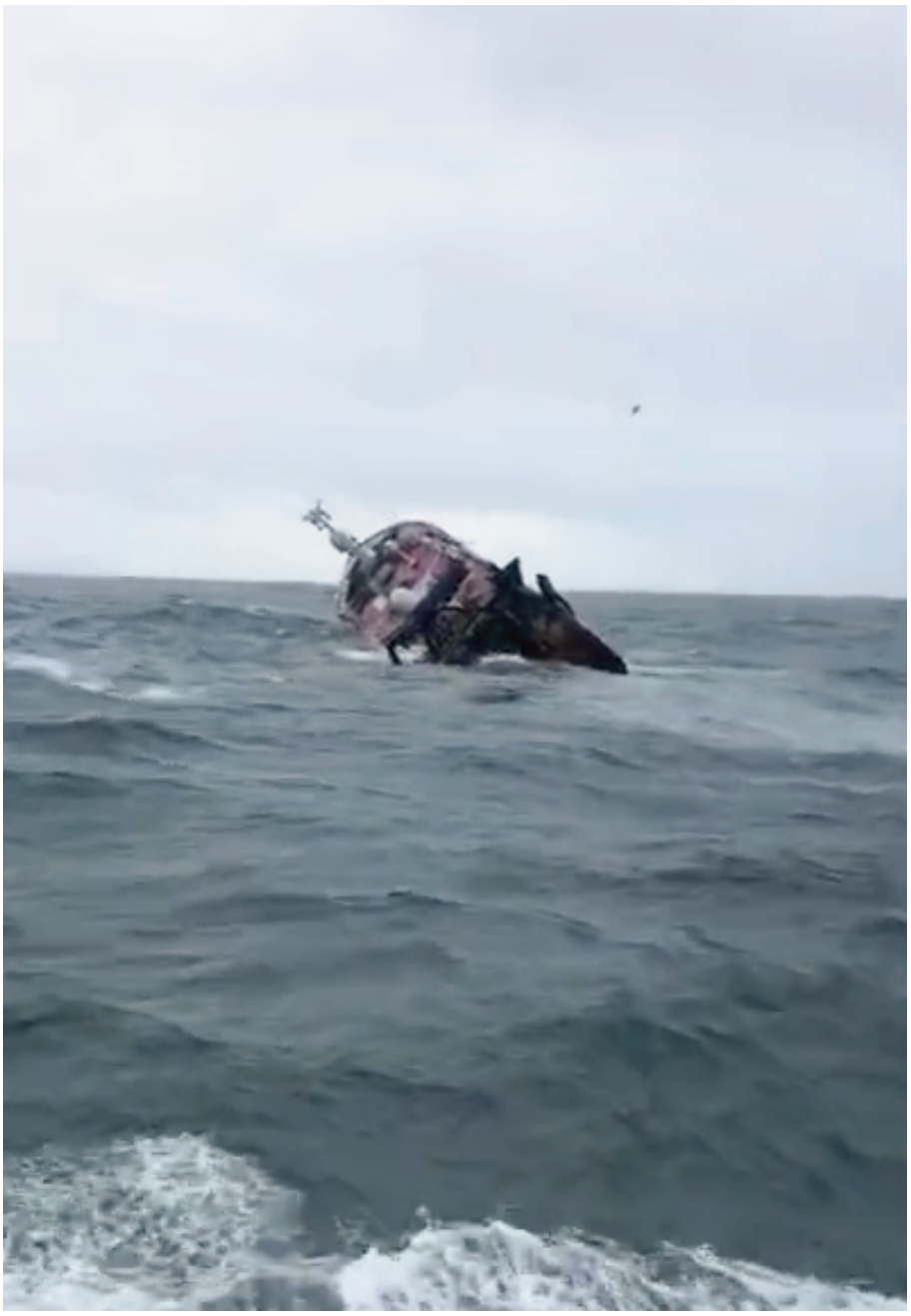
An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Lána Líosain, Baile Átha Cliath, D02 TR60
Leeson Lane, Dublin, D02 TR60

Appendix 7.29 FV Ellie Adhamh Reported Sunk - Chart Position



Appendix 7.30 FV Ellie Adhamh Sinking



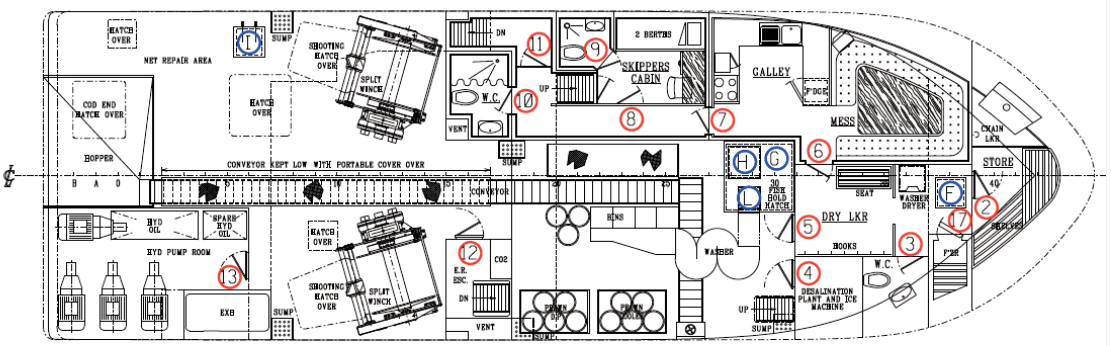
FV Ellie Adhamh Sinking

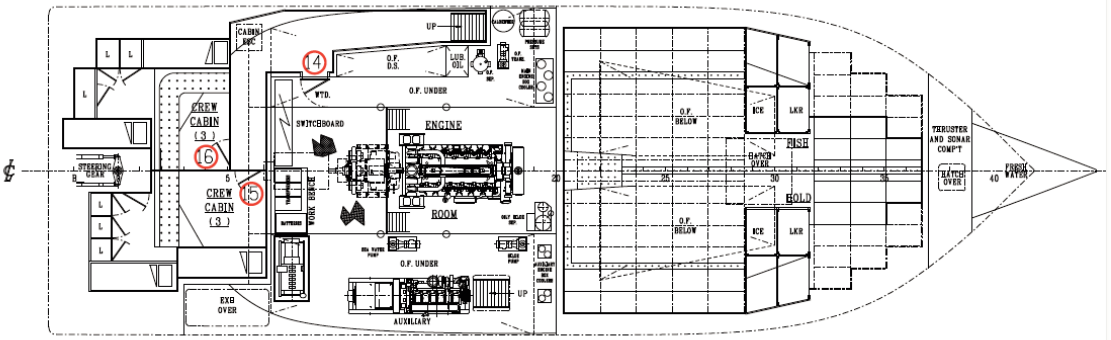
Appendix 7.31 Irish Coast Guard Photograph Taken 27 March 2021

Appendix 7.32 A. Photograph of FV Ellie Adhamh showing the Bulbous Bow's Bulb in the Air as the Vessel Sank

Appendix 7.32 B. Image of Point of Contact

Appendix 7.33 FV Ellie Adhamh Hatch Plan - Main Deck and Lower Deck





Appendix 7.34 FV Ellie Adhamh Hatch Plan – List of Hatches and Doors

DOOR	TYPE	DECK	LOCATION	BHD CONST.	DOOR CONST.	SIZE (C.O.)	COAM'G HEIGHT	HAND	COMMENTS
①	W.T.	UPPER	WHEELHOUSE	AL	S.S.	1800 x 600	-	RH	FITTED WITH FIXED WINDOW & LOCK
②	W.T.	MAIN DECK	FWD STORE	ST	S.S.	1800 x 600	460	RH	2 CLIPS
③	B15	MAIN DECK	W.C. ACCESS	ST	B15	1800 x 600	150	RH	KICK-OUT PANEL & VENT
④	W.T.	MAIN DECK	DESALINATION PLANT ACCESS	ST	S.S.	1800 x 600	460	RH	2 CLIPS
⑤	W.T.	MAIN DECK	DRY LKR ACCESS	ST	S.S.	1800 x 600	460	LH	2 CLIPS
⑥	A60	MAIN DECK	ACCOMM ACCESS	ST	A60	1800 x 600	200	LH	SELF-CLOSER
⑦	A60	MAIN DECK	GALLEY ACCESS	ST	A60	1800 x 600	150	RH	SELF-CLOSER
⑧	B15	MAIN DECK	SKIPPER'S CABIN	B15	B15	1800 x 600	* 150	RH	KICK-OUT PANEL & VENT
⑨	B15	MAIN DECK	SKIPPER'S W.C.	ST	B15	1800 x 525	150	LH	KICK-OUT PANEL & VENT
⑩	B15	MAIN DECK	W.C. ACCESS	ST	B15	1800 x 600	150	LH	KICK-OUT PANEL & VENT
⑪	B15	MAIN DECK	E.R./CABIN ACCESS	B15	B15	1800 x 600	* 150	LH	KICK-OUT PANEL & VENT
⑫	W.T.	MAIN DECK	E.R. ESC.	ST	S.S.	1600 x 600	460	RH	2 CLIPS
⑬	W.T.	MAIN DECK	PUMP ROOM ACCESS	ST	S.S.	1600 x 600	460	RH	2 CLIPS
⑭	W.T.	BELOW DECKS	E.R. ACCESS	ST	S.S.	1800 x 600	200	RH	4 CLIPS
⑮	B15	BELOW DECKS	3 MAN CABIN	B15	B15	1800 x 600	-	RH	KICK-OUT PANEL & VENT
⑯	B15	BELOW DECKS	3 MAN CABIN	B15	B15	1800 x 600	-	RH	KICK-OUT PANEL & VENT
⑰	INS.	MAIN DECK	FREEZER ACCESS	ST	-	1800 x 600	400	LH	INSULATED FREEZER DOOR
⑱	STEEL	SHELTER DECKS	AFT BULWARK	ST	ST. - SS FITTINGS	TO SUIT OPENING	-	DOUBLE DOOR	SAFETY DOOR HOLT AT SHIP TO SUIT MUST OPEN CLEAR OF NET DRUM
⑲	STEEL	SHELTER DECK	AFT BULWARK	ST	ST. - SS FITTINGS	TO SUIT OPENING	-	LH	SAFETY DOOR HOLT AT SHIP TO SUIT MUST OPEN CLEAR OF NET DRUM

* FINAL HEIGHT TO SUIT CEILING POSITION

HATCH	LOCATION	COAMING SIZE	COAMING HEIGHT	COAMING THK.	COMMENTS
Ⓐ	UPPER DECK UNLOADING	1650 x 1650	150	8mm ST	8 TOGGLES - LIFT OFF 8mm AL. COVER
Ⓑ	UPPER DECK FWD ACCESS	1000 x 650	300	8mm ST	4 CLIPS - HINGED INBOARD 8mm AL. COVER - OPERABLE BOTH SIDES
Ⓒ	UPPER DECK MID ACCESS	650 x 650	300	8mm ST	4 CLIPS - HINGED OUTBOARD 8mm AL. COVER - OPERABLE BOTH SIDES
Ⓓ	UPPER DECK NET HATCH	1400 x 1400	FLUSH	-	TOP TO BE COMPLETELY FLUSH 8 TOGGLES - LIFT OFF - RECESSED SOCKETS ON TOP 8mm GALVANISED COVER
Ⓔ	UPPER DECK COD END HATCH	1200 x 1200	FLUSH	-	TOP TO BE COMPLETELY FLUSH 6 TOGGLES - HINGED FWD - 8mm GALV. COVER - BYD HINGING
Ⓕ	THRUSTER ACCESS HATCH	600 x 600	FLUSH	-	BOMAR TYPE FLUSH ALUM LIFT OUT HATCH
Ⓖ	MAIN DECK FISH HATCH	1500 x 1500	460	10mm ST ON 2 SIDES	8 TOGGLES - HINGED AFT 6mm AL. COVER - ANGLE BAR COAMING ON SIDES
Ⓗ	FISH HATCH ACCESS HATCH	600 x 600	100	8mm AL	2 TOGGLES - HINGED TO PORT 6mm AL. COVER
Ⓘ	MAIN DECK CABIN ESC.	600 x 600	460	10mm ST	4 CLIPS - HINGED OUTBOARD 6mm AL. COVER - OPERABLE BOTH SIDES
Ⓙ	UPPER DECK WHEELHOUSE	1000 x 775	7080 ABOVE BASE	8mm ST	2 CLIPS - HINGED TO PORT 6mm AL. COVER - OPERABLE BOTH SIDES
Ⓚ	UPPER DECK AFT ACCESS	650 x 650	300	8mm ST	4 CLIPS - HINGED OUTBOARD 8mm AL. COVER - OPERABLE BOTH SIDES
Ⓛ	FISH HATCH LOADING HATCH	450 x 450	100	8mm ST	2 TOGGLES - HINGED FWD 6mm AL. COVER

NOTES:-

COAMING HEIGHTS FOR W.T. DOORS TO BE MEASURED FROM TOP OF STEEL/ALUM. DECK PLATE TO LOWEST POINT OF CLEAR OPENING.

WEATHERTIGHT CLOSURES TO COMPLY WITH REQUIREMENTS OF RELEVANT BRITISH STANDARD OR EQUIVALENT.

ALL TOGGLES, CLIPS, HINGES TO BE S.S. OR BRONZE. (TOGGLES FOR ONE SIDED OPERATION CLOSED LOOP TYPE - CLIPS FOR TWO SIDED OPERATION.)

HATCHES WHERE APPROPRIATE TO BE ARRANGED WITH PADLOCK FITTINGS.

FOLLOW SPECIFICATION FOR FULL DETAILS OF DOOR/HATCH FITTINGS.

ST - STEEL, S.S. - STAINLESS STEEL, AL - ALUMINIUM

Appendix 7.35 Still from Irish Coast Guard Footage – Vessel Under Tow

Appendix 7.36 Stills from Irish Coast Guard Footage – Vessel Listing to Port (28 March 2021)

Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

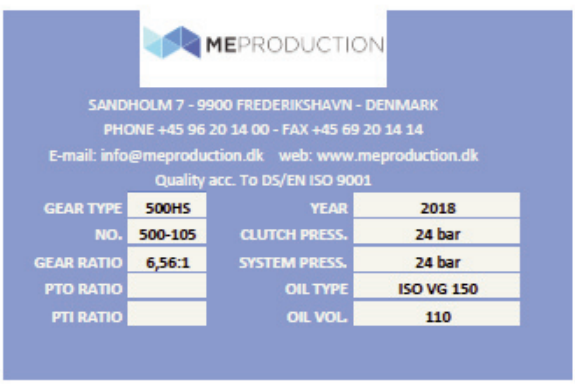
MEPRODUCTION

1.1 Data sheet

Gear no.	500-105
Gear type	500HS
Customer	Arklow Marine Services
Delivery address	North Quay, Arklow, Co. Wicklow, Ireland
Delivery date	Week 46 2018
Name of ship	Ellie Amhabh
New-build no.	X
Classification society	X
Engine type	Caterpillar 3512 1360HP @ 1600RPM

This gearbox has been supplied in accordance with our order acknowledgement.

Figure 1.1 shows a copy of the type plate on your gearbox. The type plate contains practical details such as oil type and volume, plus working pressure for oil system and clutch.
Please state gear number when contacting ME Production regarding the gearbox.



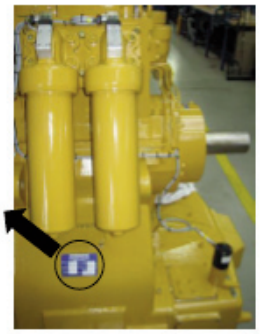


Figure 1.1 shows an example of the type plate affixed to all Mekanord gears.

This product is supplied with the following optional extras:

- Main clutch
- Oil cooler type: Pipe cooler
- Corrosion protection: standard method

When changing filter according to section 4 in this manual please list the following part numbers upon ordering:
Filter element: 1260886
O ring: 210165

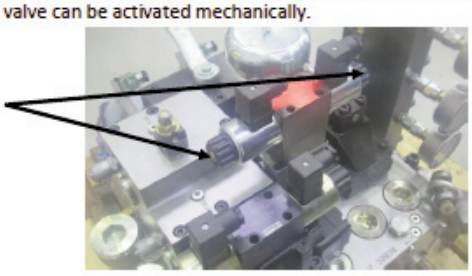
Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

MEPRODUCTION

5.4 Manual override of the hydraulic main clutch

The hydraulic main clutch can be manually overridden in two ways. The method selected will depend on the nature of the fault.

1. When the hydraulic main clutch is engaged, a fixed electric signal is sent to the hydraulic valve. If electric activation fails, the hydraulic valve can be activated mechanically.
   The hydraulic valve is fitted with an internal detent.
   Activation of the clutch is performed by pressing in the centre of the coil with an appropriate object. The detent function keeps the valve slides in the required position.
   Deactivation is performed by pressing the coil at the opposite end of the valve.



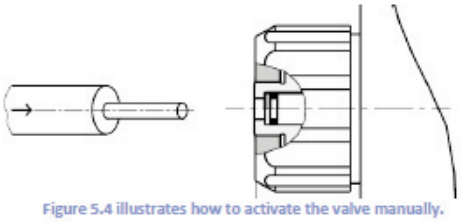


Figure 5.4 illustrates how to activate the valve manually.

Important information

The main hydraulic clutch must only be engaged or disengaged when the main engine is in idle and the propeller is in neutral. Failure to do so can damage the gearbox and reduce its service life.

Damage caused by incorrect operation of the hydraulic main clutch will not be covered by the warranty.

When the hydraulic main clutch is engaged, a fixed electric signal is sent to the hydraulic valve. If the electric/hydraulic activation fails, the main clutch can be mechanically engaged inside the gearbox.

Warning

- Before attempting mechanical engagement, the engine must be shut down and the entire system protected against start-up and rotation.

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Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

MEPRODUCTION

The clutch can be activated by pressing the clutch together mechanically. Mechanical pressure is applied by using 4 x M10 screws.
Engaging the clutch is achieved as follows:

1. Remove 4 x M27 plugs from the clutch cover. (12mm wrench).
2. Rotate the gearwheels until the 4 screws are aligned with the 4 holes.
3. Unscrew the screws (with their spacer bushings) and carefully extract them from the gearbox. (17mm socket).
4. Remove the spacer bushing, grease the screws and reposition them in the gearbox.
5. Gently tighten all 4 screws. Cross-tighten the screws in two passes to avoid misaligning the piston.
6. Continue cross-tightening until all 4 screws are torqued to 40Nm.
7. The clutch will now be mechanically activated.
8. Replace the M27 plugs.

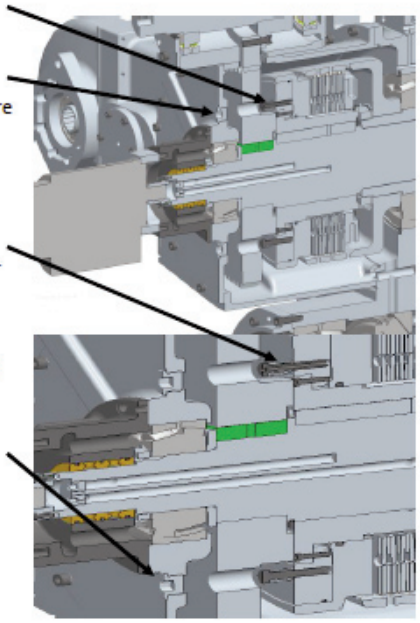

Figure 5.5 illustrates how to activate the clutch manually.

The gearbox is now mechanically engaged and ready for use.

Important information

To protect a mechanically engaged gearbox against damage, the following must be observed:

- Do not apply more than max. 25% of the engine's max. torque.
- Propeller pitch must be in neutral before starting engine.
- Start engine.
- Propeller pitch and motor can now be regulated by up to max. 25% of max. engine torque.
- Before engine stop: propeller pitch in neutral, engine revs reduced to idling.
- Engine can now be stopped.

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Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

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5.9 Description of the hydraulic system

The gearbox is fitted with a hydraulic system which operates the clutches, CP system and lubricates and cools the gearbox. The gearbox has been tested on a test bench before delivery. All components of the hydraulic system were calibrated during the test.

Important information

- Do not change any settings of hydraulic components without the written approval of ME Production. The components were sealed after testing. Do not break seals without the prior written approval of ME Production.
- The guarantee will be void if components are adjusted without the prior written agreement of Mekanord.
- Electronic logging of all hydraulic pressure settings was performed as part of the test.

5.10 Description of function of the hydraulic system

Introduction

To understand the functions of the hydraulic system, familiarity with hydraulic symbols and systems is required.
If in doubt, contact ME Production for further explanation.

System description

Hydraulic diagram 4-06805 Figure 5.7 is referred to in the following section, which shows standard components and optional extras. Please refer to Data sheet 1.1 for specification of the gear supplied.

Oil tank

The system consists of an oil tank (Pos. 1). The gearbox oil pan is usually used as the oil tank. Oil level is checked manually using a dipstick (Pos. 2). The oil level must be between the two marks.

Hydraulic pump

The oil tank and mechanical main pump are connected. An electric emergency/standby pump may also be fitted in parallel (Pos. 3).

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Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

MEPRODUCTION

Safety valve

The oil runs from the hydraulic pump to the system's safety valve (Pos. 5). This valve is not usually in use during normal operation as it is solely intended as a safety valve.

Filter

The oil passes from the oil pump to a double filter (Pos. 4). A manual valve is used to switch between filters. The filter system is designed with pressure equalisation valves facilitating switch from one filter to the other during operation.
The filters are fitted with a visual pressure indicator to warn of blockage and can be fitted with an electric switch (Pos. 4).

System pressure

The main supply line to the manometer (Pos. 6) runs from the filter for reading system pressure. System pressure is controlled by a pressure relief valve (Pos. 7) and a pilot-controlled pressure valve (Pos. 8).
The pressure relief valve (Pos. 7) is set to the highest possible working pressure, normally 69 bar.
The pilot-controlled pressure valve (Pos. 8) controls the pressure from standby pressure at 26 bar and up to 69 bar. The pressure depends on the pressure the servo cylinder (Pos. 9) needs to regulate the propeller pitch. The pressure runs from the servo cylinder pressure side, via an exchange valve to the pilot-controlled pressure valve.

Servo cylinder

The oil runs from the main supply line to the servo cylinder (Pos. 9) for propeller pitch regulation.
This is achieved through a slide (Pos. 10), which transfers the oil to the rotating servo cylinder.
The servo cylinder is controlled by a pilot-controlled proportional valve (Pos. 11). A large proportional valve is activated hydraulically by a smaller hydraulic valve (Pos. 12) at a lower pilot pressure.
The oil runs from the main supply line to the proportional valve via a pressure relieve valve (Pos. 13). This ensures that the servo cylinder cannot take in so much oil that the system pressure drops below 24 bar.
Servo cylinder pressure is read on the manometer (Pos. 6).

Main clutch

The oil runs from the main supply line to the main clutch (Pos. 14) to engage the gearbox.
This is achieved through a pressure reduction valve (Pos. 19), which ensures a coupling pressure of max. 24 bar.
Engaging and disengaging is controlled by a 2-way directional valve (Pos. 18), which ensures soft engagement of the main clutch via an accumulator (Pos. 16).
The clutch is fitted with a cooling system to provide a continuous supply of cooled oil, and hot oil is drained away (Pos. 20).

Main clutch pressure is read on a manometer (Pos. 15), and the main clutch can also be fitted with an electric safety switch (Pos. 17).

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Appendix 7.37 Meproduction Mekanord Gearbox Hydraulic Clutch Operating System Manual (Pages 5, 32, 33, 38, 39 and 41)

MEPRODUCTION

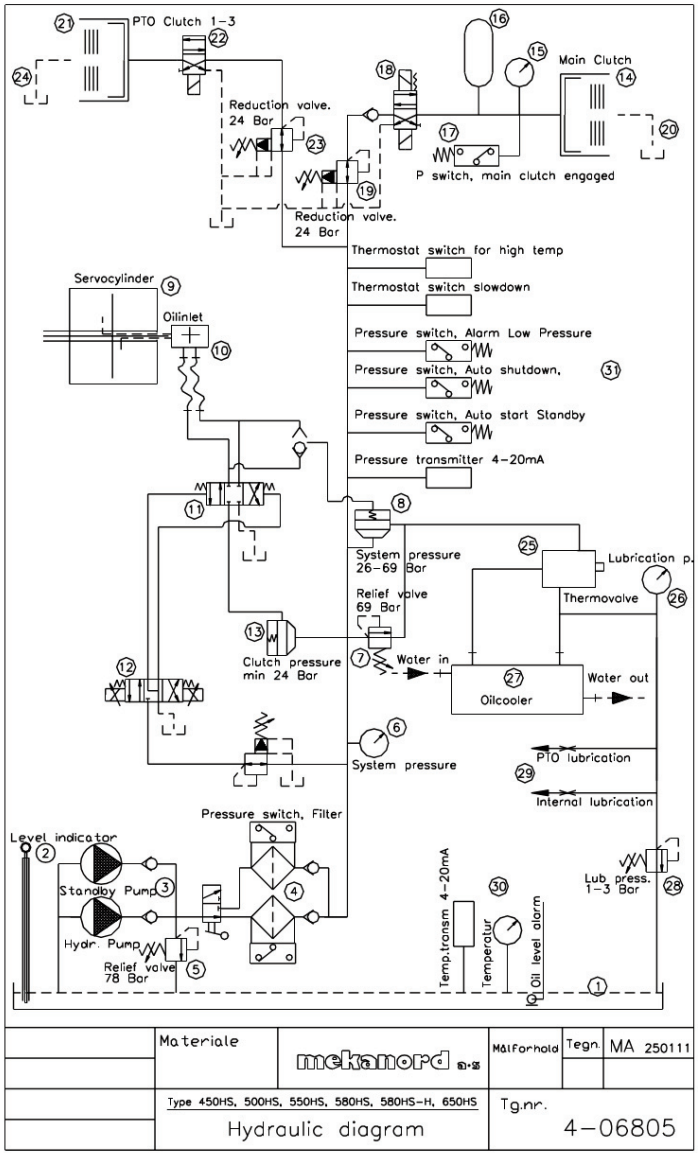

Figure 5:7 illustrates hydraulic diagram 4-06805

SECTION 36 PROCESS

Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000

It is a requirement under Section 36 that:

(1) Before publishing a report, the Board shall send a draft of the report or sections of the draft report to any person who, in its opinion, is likely to be adversely affected by the publishing of the report or sections or, if that person be deceased, then such person as appears to the Board best to represent that person's interest.

(2) A person to whom the Board sends a draft in accordance with subsection (1) may, within a period of 28 days commencing on the date on which the draft is sent to the person, or such further period not exceeding 28 days, as the Board in its absolute discretion thinks fit, submit to the Board in writing his or her observations on the draft.

(3) A person to whom a draft has been sent in accordance with subsection (1) may apply to the Board for an extension, in accordance with subsection (2), of the period in which to submit his or her observations on the draft.

(4) Observations submitted to the Board in accordance with subsection (2) shall be included in an appendix to the published report, unless the person submitting the observations requests in writing that the observations be not published.

(5) Where observations are submitted to the Board in accordance with subsection (2), the Board may, at its discretion -

(a) alter the draft before publication or decide not to do so, or

(b) include in the published report such comments on the observations as it thinks fit.

The Board reviews and considers all observations received whether published or not published in the final report. When the Board considers an observation requires amendments to the report, those amendments are made. When the Board is satisfied that the report has adequately addressed the issue in the observation, then no amendment is made to the report. The Board may also make comments on observations in the report.

Response(s) received following circulation of the draft report (excluding those where the Board has agreed to a request not to publish) are included in the following section.

The Board has noted the contents of all observations, and amendments have been made to the report where required.

8. MSA 2000 – SECTION 36 OBSERVATIONS RECEIVED

Note: The names and contact details of the individual respondents have been obscured for privacy reasons.

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Marine Casualty Investigation Board
Leeson Lane,
Dublin 2,
Ireland
Email: info@mcib.ie

29 August 2023

Re: Sinking of the Fishing Vessel Ellie Ádhamh

Dear Sir or Madam,

The owners of the Ellie Ádhamh understand the importance of reports made by the MCIB to prevent casualties in the future and to recommend safer working conditions.

I hope that some of the recommendations of this report can improve and prevent incidents in the future. However, I have found many false claims and inaccurate information while reviewing this report which are noted below. I also believe that in order to complete an accurate report that all relevant information should be obtained before giving thoughts as to why the Ellie Ádhamh sank on the 28th March 2021. I do not believe that the vessel ultimately sank due to the conclusions and reasons listed in this report. I believe the investigation into the sinking was not fully completed, and that important aspects of the incident were played down and not taken seriously.

Conflict

The Author of this report is [redacted] He is a former member of the Irish Naval Service. The company, through its Solicitor, objected to his appointment on the time as it is the belief of the company that the collision between the Ellie Adhamh and the LE George Bernard Shaw contributed in a meaningful way.

The report states that although there was hull contact, the unnamed On-scene co-ordinator) OSC "*recounted that there appeared to be no physical damage to the casualty vessel bows but some superficial damage to the e port side main deck railings of the naval vessel".* This is far from accurate.

We attach photograph and a video of the collision and the aftermath of the collision. The photographs are of damage sustained by the Naval Vessel and is evidently not restricted to the main deck railings.

There is a clear picture of internal damage to the naval vessel on the inside bulk head which tells a picture of a substantial collision. There is visible evidence of damage done to the casualty vessel after the collision.

The damage was far from superficial.

Further, the Naval vessel went to dry dock for repairs shortly after the collision.

In a phone call from the Captain of the Naval Vessel to the Master of the Ellie Ádhamh in the days after the sinking, the Captain stated that after towing the unmanned Ellie Ádhamh, he had to get his crew to safety as the navy ship was taking on water through it's fore locker.

It is our belief that the collision was deliberately downplayed and the history of the Surveyor now taints the report in full.

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

In terms of how the collision came to be is also ignored by the draft report which is of interest especially when one considers that the purpose of the investigation is to prevent such incidents from happening again.

The Circumstances were as follows:

LE George Bernard Shaw approached the casualty vessel under the cover of dark. The sea was about 25 to 30 feet with winds at 34/40 knots. The Master of the Casualty vessel requested if the Naval Vessel could dispatch a rib to bring over the tow line.

He was advised that this was not possible as it was too dangerous. The naval vessel approach the casualty vessel downwind. As the naval vessel approached the Ellie Ádhamh, as can be seen on the video, went up on a swell on the starboard side and the two vessels collided.

Electrical Circuit

There were no changes made to the electrical circuit of the main switchboard. There are several references to changes being made to the electrical circuit throughout this report. This is untrue. The owners confirm that no changes were made to the electrical circuits aboard the vessel.

The highly skilled and experienced certified electricians who worked aboard the Ellie Ádhamh can attest to the fact that no changes were made to the electrical circuits. The electrician regards the description of the electrical system in this report to be inconsistent with the electrical system that was aboard the Ellie Ádhamh from her date of construction.

The electrician requests to speak to the investigator regarding the claims made in this report. Furthermore, the electrician states that any electrical failures that occurred in the past were investigated thoroughly and resolved effectively.

The electrical system was inspected thoroughly by BV in 2019. See below section titled ‘BV’.

Therefore, any references to electrical system changes not being approved by BV and the MSO are irrelevant, and was not a factor in the sinking of the vessel. The owners agree that spare circuit breakers should be carried aboard vessels in case of a breaker failure.

Waste Discharge Chute

The original waste discharge chute was relocated to the port side of the working deck in 2012. The reason for the change was to create a safer and more efficient work space for the crew aboard the Ellie Ádhamh.

It was the same chute as was on the starboard side and therefore was the same type and mechanism. Therefore it is inaccurate to surmise, ‘that the flap or hatch on the Chute was of insufficiently robust construction and would have led to instructions for remedial work,’ as stated by the investigator in this report(4.6.10).

Furthermore, the results of thickness report in 2019 shows the assertion contained in the report to be inaccurate. See thickness report.

A drawing of the process flow diagram showing the location of the waste discharge chute was submitted and reviewed by the Sea Fisheries Protection Authority in 2016 and it was stated that ‘*the current facilities are working and are being well maintained’*. See SFPA diagram and report

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

In preparation for the MSO survey in January 2021, the chute was inspected by both the Owner and Skipper to ensure watertightness. This included opening and closing the top hatch cover and waste chute door, and spraying the hatch cover and door with a deck hose to detect any leaking. They concluded that the waste discharge chute was operating successfully at this time.

The owner, who built and skippered the trawler for 6 years after the chute had been relocated, insists that there was never any water ingress through the waste chute. The vessel was towed in in similar weather conditions, with the port side chute often being submerged and no water entering the deck from the discharge waste chute.

The owners have a great understanding of the importance of a weathertight ship, particularly in the weather the Ellie Ádhamh had to continuously work in. The trawler had been in much worse weather than the weather during the incident. Generally, when the trawler was in bad weather it would dodge, meaning it would power down and work only on the shore generator. The owner and skipper never recalls water coming through the water chute once the hatch was shut, even in storm force weather with heavy rolls to port, whilst dodging or steaming. In 2014, while the trawler was dodging during adverse weather conditions, a rogue wave hit the trawler on the port side. The wave broke the port side window on the wheelhouse. These sea swells and waves were worse than the conditions in March 2021, and yet no water came through the waste discharge chute.

If there were any issues that arouse from the relocating of the waste chute, the trawler would not have been sent to sea.

As the chute had been inspected by BV during her years in class and during MSO surveys, the owner believed that BV and the MSO were satisfied with the changes.

The chute was inspected by the MSO as part of initial and intermediate surveys from 2012 onwards. It was also inspected during Bureau Veritas surveys. See below Bureau Veritas and MSO.

The Skipper, at the time of the incident, denies that he told the investigator that the spindle of the waste chute was missing. He maintains that the water was entering via the lever of the chute- '*a gap no bigger than a garden hose*.'

Bilge Pumping

The report states that 3 deck pumps were removed and blocked off on the main deck influencing the stability of the vessel and resulting in a 60% reduction in pumping capacity. This is untrue. There were 4 deck pumps aboard the Ellie Ádhamh.

Two located on the port side and two located on the starboard side.

The starboard aft deck pump was not welded blocked and the owners, skipper and electrician can attest to the fact that the deck pump was operating prior to departure of the vessels final voyage.

The skipper denies ever saying, '*that three deck pumps on the starboard side had been considered redundant*'. The starboard fore deck pump was made redundant in 2012 as water never gathered in this area. Therefore, there was no reduction in the pumping capacity of the main decks. The removal of this deck pump never caused concern to BV or the MSO in surveys post 2012.

Crew Training

The report claims that none of the deckhands had safety training. This is untrue. Crew members A, B, C and D had safety training, Issued under the STCW Convention 1978 as amended, under the authority of the Government of the Republic of Poland by Maritime Office in Slupsk

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Crew member A safety training is as follows;

Certificate of Basic Safety Training in Personal Survival Techniques

Certificate of Basic Training in Fire Prevention and Fire Fighting

Certificate of Basic Training in Elementary First Aid

Certificate of Basic Safety Training in Personal Safety and Social Responsibilities

Crew member B safety training is as follows;

Certificate of Basic Safety Training in Personal Survival Techniques

Certificate of Basic Training in Fire Prevention and Fire Fighting

Certificate of Basic Training in Elementary First Aid

Certificate of Basic Safety Training in Personal Safety and Social Responsibilities

Crew member C safety training is as follows;

Certificate of Basic Safety Training in Personal Survival Techniques

Certificate of Basic Training in Fire Prevention and Fire Fighting

Certificate of Basic Training in Elementary First Aid

Certificate of Basic Safety Training in Personal Safety and Social Responsibilities

Crew member D had basic safety training.

Crew members A and B had their safety cards reviewed by the MSO in surveys

See attached CREW MEMBER A certs, Crew Member B certs

One of the Egyptian crew had showed [redacted] a copy of his safety training card when he started working on the trawler. [redacted] has since been made aware since that the card shown belonged to a different man with the same name.

The second Egyptian man confirmed he had sea safety training that was obtained in Italy and that he was trying to get it posted to Ireland.

I would recommend that a system be put in place where owners can require verification of training card numbers.

B.V

The owners of the Ellie Ádhamh found Bureau Veritas surveys to be very thorough inspections of the trawler.

Between 3 January 2019 to 15 February 2019 the Ellie Ádhamh was subject to a series of thorough surveys by Bureau Veritas. The gearbox was replaced in 2018 which resulted in the trawler being tied up for a period of 9months, the surveyor wanted to ensure the seaworthiness of the vessel.

The surveys included;

Hull Annual Survey, Machinery Annual Survey, Periodical Bottom Survey in Dry Dock, Hull special Survey, Machinery Special Survey, Centre Tail shaft Complete Survey.

Below are some of the items the surveyor advised would be inspected;

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

- "Megger" (electrical resistance) test results for all electrical alternators, motors switch board and sub systems
- Confirmation Battery starting arrangements & back-up battery for emergency supply is OK.
- Confirmation electrical system is in working order / as built. (e.g. Navigation lights)
- Confirmation engine (main & generator) control and safety systems are functional
- Bilge pumping
- Check of seals and condition of watertight hatches, doors & ventilation dampers.
- Satisfactory Thickness test results
- Engine and gearbox maintenance report
- Generator maintenance logs
- Outer shell plating above the waterline, relevant shell doors and accessible parts of the rudder(s).
- Sidescuttles and deadlights, chutes and other openings with their means of closure.
- Inlets, scuppers, and sanitary discharges, valves on discharge lines and their controls.
- Verification that no alterations have been made to the hull or superstructures that would affect the position of the load lines.
- Watertight integrity of the closures to any openings in the ship's side shell below the freeboard deck

A sea trial was also completed as part of the survey.

See attached BV items for inspection emails

The surveyor attended the trawler in drydock and over saw an ultrasonic inspection which included all bottom plating, all side shell/wind and water plating, transverse band at fr22(midships), all weatherdeck plating, main hatch covers and coamings, forward collision bulkhead, engine room bulkhead, sea chests and fire main. Results were found to be satisfactory, including areas of the waste chute.

On the 12th Feb the surveyor attended the trawler again with the two owners to inspect the remaining items listed above. This included examination of the overboard waste chute, which was found to be satisfactory.

The satisfactory meggar test results were also reviewed by the surveyor. See attached report analysis ***

It also shows that the two transformers and their circuits were operating successfully.

In total, the surveyor spent 11.5hrs inspecting and surveying the trawler, resulting in a cost of £15,710.03GBP to the owners from BV. See attached Invoice, working hours

The Ellie Ádhamh was granted a Certificate Of Classification from Bureau Veritas on the 19/02/2019 with an expiry of 10/10/2023. See attached BV COC.

An annual survey was conducted in the 20/01/2020 with a list of items to be dealt with. All items were corrected bar an engine order telegraph for the engine room. The item needed to be replaced but this specific type was proving difficult to source.

After speaking with BV in March 2020 they said the owner could seek an exemption for the telegraph and set up a working talk back system instead. By 25th March all items from the original list had been dealt with. Unfortunately, due to precautionary measures being taken by the vessel during the Covid 19 pandemic, we were prevented from arranging a survey to check the engine order telegraph and issue the certificate. The owner did not receive written notification from BV that classification had been withdrawn. I

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

t was planned that BV would attend the drydocking of the trawler in May 21, covid regulations permitting.

See attached BV annual survey defect list

See email from bv about exemption

The decision to allow withdrawal of BV certification in 2016 was due to major refurbishment works being carried out to the vessel that year. The main engine was overhauled, costing €194,788.68.

The vessel also returned to the Spanish shipyard in which it was built to undergo repairs, maintenance, painting and refurbishments, totalling €156,000.

All works were reviewed by Bureau Veritas when reinstating classification.

MSO

The owners of the Ellie Ádhamh found that surveys conducted by the MSO were always very thorough and demanding but welcomed these surveys as a means to keep the trawler and crew safe.

The Ellie Ádhamh underwent an 'initial survey' from the MSO in December 2012. At the time, the chute had been relocated to the port side and the deck pump had been decommissioned and welded shut. The owner recalls the waste chute being tested and examined by the surveyor for watertightness at this time. Below are requirements for an initial survey according to SI 640/2007 Regulation 7-

7. (1) Every vessel shall be subject to the following surveys—

> *(a) an initial survey before the vessel is put into service or before a Fishing Vessel Safety Certificate is issued for the first time, which shall—*
>
> *(i) include a complete survey of its structure, stability, machinery, fittings, arrangements and material, including the outside of the vessel's hull and the inside and outside of the boilers and equipment in so far as the vessel is covered by these Regulations,*
>
> *(ii) be such as to ensure that the arrangements, materials, and scantlings of the structure, boilers, and other pressure vessels and their appurtenances, main and auxiliary machinery, electrical installations, radio installations including those used in life-saving appliances, fire protection, fire safety systems and appliances, life-saving appliances and arrangements, ship borne navigation equipment, nautical publications and other equipment fully comply with the requirements of these Regulations,*
>
> *(iii) be such as to ensure that the workmanship of all parts of the vessel and its equipment is in all respects satisfactory and that the vessel is provided with the lights, means of making sound signals and distress signals, required by these Regulations and the International Regulations for Preventing Collisions at Sea currently in force, and ….*

The surveyor declared that, 'the survey showed that the vessel fully complies with the requirements of the Merchant Shipping (Safety of Fishing Vessels) Regulations 2007' See attached MSO initial survey report

No changes were made to the vessels hull following this survey.

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Intermediate surveys were carried out in 2015 and according to SI 640/2007 Regulation 7

(3) In addition to the periodical survey required in paragraph (1)(*b*)(i), intermediate surveys with regard to the structure and machinery of the vessel at intervals of 2 years shall be carried out. The survey shall ensure that alterations, which would adversely affect the safety of the vessel or the crew, have not been made.

The vessels Fishing Vessel Safety Certificate was renewed on the 08/03/2017.

Notes on Report Items-

1.4 It was approximately 06:00 on Friday 26 March that the trawler lost all power, not 04:00 as stated in the report.

1.5 Valentia coastguard was contacted by the owners at 08:30 on the 26th March to inform them of the vessels situation and current position. A tug was also being sourced and organised at this time. A tug was enroute to the Ellie Ádhamh by 09:00.

1.6 this paragraph is misleading and leads one to believe that there was a considerable amount of water entering the deck between the hours of 11:00am and the arrival of the Naval ship. There was water on deck from the abandoned fishing operations the night before. The deck pumps had become blocked from the catch debris. The water on board was of no concern to the skipper at this stage but he requested pumps as he had no means to clear the water from the deck.

1.7 It should be mentioned here that there was a collision between the LE George Bernard Shaw and the Ellie Ádhamh, as it is a significant detail that has been omitted from the 'summary'.

1.9 It is unclear if the towline broke at 19:22. According to VMS, The Ellie Ádhamh was still making way under tow by the naval ship after 20:00.

2.3.2 as stated previously, there were 4 deck pumps on the working deck. Appendix 7.2 Plan of The Main Deck post 2012 alteration is incorrect as the aft starboard bilge pump was not welded blocked.

2.4.6 the MCIB requested maintenance records of changes done to the electrical systems. There were no changes made to the electrical system.

2.4.33 This section is irrelevant. The authorities, contrary to the orders of the Harbour Master, ordered the skipper to dock in a berth that had insufficient water. She went aground and was hanging from the wall by ropes. The water could have entered from anywhere (bilges, doors, hatches) as they were ashore and not expected to be battened down. The vessel was inspected by the MSO on return to Ireland and was allowed to return to sea.

2.5 See crew training in the owners comments above.

Crew agreements were completed the end of January 2021 when the crew returned to the trawler after their holidays.

The vessel was insured.

2.5.8.2 crew members C and D had a good command of the English language. Crew members E and F had an adequate understanding of spoken English.

2.5.8.3 Crew members A and B were not responsible for the operation of the ship and fishing operations. Those were the responsibilities of the skipper. Crew members A and B were responsible for the quality of the catch and ensuring packing weights were correct, they worked on the factory deck with the rest of the crew.

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

2.5.11 the skipper was waiting to complete his oral examinations which had been postponed due to the Covid 19 pandemic.

2.6 The Ellie Ádhamh never fished for scallops

2.6.2 the spindle for the waste chute was not missing at the time of the incident. The bush orifice was allowing water leak in around the lever. The skipper states he never told the investigator that a spindle was missing. He said the rubber bushing was missing

2.9.3 It was approximately 06:00 on Friday 26 March that the trawler lost all power, not 04:00 as stated in the report.

2.9.4 There was water on deck from the abandoned fishing operations the night before. The deck pumps had become blocked from the catch debris. The water on board was of no concern to the skipper at this stage but he requested pumps as he had no means to pump the water from the deck.

The spindle was not missing.

The discharge chutes top hatch was watertight.

2.9.5 it was the skipper of the FV Monica who contacted the owners, as the skipper onboard the Ellie Ádhamh had no way of contacting the owners.

The coastguard was notified of the vessel's situation at 08:30 by the owners.

The skipper had no means of relaying messages to the owners once the Monica headed for port.

2.10.3

12.58hrs- the trawler was less than 55nm from Castletownbere at this stage as stated in 1.5 of this report and confirmed by the skipper of the Monica, who took the vessels position before returning to port.

16:41 the skipper was instructed to activate the EPIRB by the coastguard earlier, so that they could find the vessels position. The position given from the EPIRB was 51 33N, 011 42W

18:33 it should be added that the vessel was within 45nm of the Bullrock

06:39 they were not trying to establish a tow line at this time. They were doing some manoeuvres to make sure no vessesl were in the vicinity.

08:39 it should be noted that two tonnes of water on board the working deck of the Ellie Ádhamh was not a significant amount of water.

10:40 appendix 7.19- FV Ellie Adhamh taken in Tow Position should be disregarded. The navy states they established a tow on 27 March 10:48 at position 51 38.00N 11 48.00W. The EPIRB let off the previous evening at 16:41 established the Ellie Ádhamh was at 51 33N, 011 42W. Rescue 115 established the Ellie Ádhamh was at position 51 34N, 011 31W at 18:33 on the 26th March. This is 11nm east from where the Navy say they established a tow.

16hrs past between the position Rescue 117 gave of the vessel to when the Navy established a tow. The winds were constantly blowing from the west, pushing the vessel towards the coast in an easterly direction.

Therefore, the plotting information given by the Navy to the investigator is incorrect and should be disregarded.

15:23 The skipper requested the naval officer to slow the tow so that the water could settle and he could pump the water from the deck. The naval officer refused and instead brought the towing course

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

around into the weather. At this time, the coastguard and VMS show that the vessel was only 10nm from the Bullrock.

16:02 the skipper stated that he had pumped out the water on the main deck to a low level of about 1 to 2 foot. He requested the naval officer to "make haste" for Castletownbere. The naval officer overruled his decision and ordered him to abandon ship.

19:22 VMS records from the Ellie Ádhamh show that she was moving at 4knts at approx. 20:00 at position 51 28.59N 010 38W

3.4 any electrical problems aboard the Ellie Ádhamh were always investigated thoroughly and repaired. This can be confirmed by the boats contracted electrician.

The Skipper did not make this request to the owner to procure a spare breaker switch. The skipper denies having said this.

3.5 The Skipper requested a breaker switch from the coastguard, he also requested a breaker switch from the naval vessel.

3.10 "although power was still being supplied to the chute", there was no power supply to the chute.

The skipper had been instructed by the coastguard earlier in the day to activate the EPIRB so the coastguard could see their position.

3.15 at approx. 05:30 the morning of the 27 March, the skipper requested that they begin attempting to secure a towline as the weather had become more calm and was forecast to worsen. The Navy commander refused and stated that the ship had to preform some operations that required passing up and down the Ellie Ádhamh to ensure the area was free of traffic. These manoeuvres continued for at least an hour before the navy vessel decided to attempt passing a line to the Ellie Ádhamh.

The Captain of the Navy ship also stated that there was damage done to his ships fore locker. There is also obvious damage to the bow of the Ellie Ádhamh.

The Captain of the navy ship instructed that he was going to try the manoeuvre again but the skipper of the Ellie Ádhamh advised against it.

3.17 The skipper did not state that the spindle on the waste chute was missing.

3.18 The vessel also had two starboard side deck pumps.

3.22 It was a crew member on the Ellie Ádhamh that came up with the idea to get the towline attached, and that should be mentioned here. A rope, connected to the bridle from the Ellie Ádhamh was attached to a float and thrown into the water. When the Ellie Ádhamh drifted from the float it was safe for the crew of the navy vessel to approach the float and pick up the bridle and attach it to their towline.

3.23 The water on the main deck of the Ellie Ádhamh had been cleared. It was only when the towing commenced, after the collision, that the trawler began to list to port and take on more water. The bulbous bow had been damaged after the collision and may have been creating a drag while being towed by the Navy.

3.26 The sill plating that divided the deck was about 0.5m high. Water may very wel have breached the sill as the vessel was leaning to port. The statement from the crew that 'he thought the fish hold was flooding from this small hatch' cannot be true. The hatch cover to the fishhold was located at the port aft side of the working deck and was at a height of at least .7m. The skipper confirmed that the hatch door was secured closed. This hatch was tested for watertightness by the owner and skipper in

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

January 2021 as part of the MSO survey. If there was water entering the fish hold it was entering from another location.

The cabin escape hatch was also tested for watertightness in preparation for the MSO survey in January 2021. If there was water in the accommodation area, the crew were either using the hatch to get from the deck to the cabins, or vica versa, or there was water entering the accommodation from another area other than the watertight cabin escape hatch.

3.28 it should be noted that the skipper of the Ellie Ádhamh should not have been ordered by the Naval commander to launch the vessel life rafts. The vessel was under tow at the time and life rafts should not be launched on a moving vessel- hence why the life raft was lost. When the skipper reported the lost life raft to the Navy commander he was ordered by the commander to launch the second life raft, which was also lost, leaving the vessel with no life rafts. A recommendation should be made in this report pertaining to the common practices of launching a life raft aboard a moving vessel.

The skipper also advised the Navy ship that he had successfully resumed pumping and that the water from the main deck was cleared. The skipper insisted on staying aboard the vessel to continue monitoring the water situation and resume pumping if necessary. The Navy commander overruled this decision and ordered the skipper to abandon ship. The skipper was hoisted from the trawler unwillingly.

3.29 The skipper claims he never told the investigator of the MCIB that the dry locker door was left open on his departure of the vessel.

3.30 By 18:55 the crew had all been airlifted from the vessel and the George Bernard Shaw continued to tow the vessel west, away from the coast.

VMS records from the Ellie Ádhamh show that she was moving at 4knts towards the coast after the turn was made at position 51 28.59N 010 38W, sometime after the Navy reported the tow line departed. At 23:00 she was traveling at .9knts.

At 20:30 Valentia contacted the owners to say the tow line had departed.

3.31 the only way the vessel could be bow down is if there was water in the fore peak, located in an area behind the bulbous bow

4. the analysis fails to mention the damage done to the Ellie Ádhamh after the collision.

4.1 & 4.2 There were no changes made to the electrical circuit of the vessel. Any issues were always thoroughly investigated and repaired. See comments ‘Electrical Circuit’ above.

4.4 see comments titled ‘waste discharge chute’ above.

4.5 see comments titled ‘crew training’ above.

4.6 see Bureau Veritas comments above

4.6.1 reference is made to a hole. The hole was very small and not capable of sinking a vessel.

4.6.4 the vessel had undergone an interim survey. Watertightness is tested which would have included the bolts used to secure the closing.

4.6.5 a single bilge pump was removed. This was at the bow of the boat. There were two bilge pumps on the port and two on the starboard.

4.6. the use of the phrase “it is feasible” is not appropriate. In 2019 a Hull thickness test was carried out. Please see attached. A reference is made to an incident in Cornwall. The authorities ordered the skipper to dock in a berth that had insufficient water. She went aground and was hanging from the

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

wall by ropes. The water could have entered from anywhere (bilges, doors, hatches) as they were ashore and not expected to be battened down. It is not relevant.

4.6.8 There is a claim made that there was a 60% reduction in bilge pump capacity. As indicated there was 5 pumps on board when the company acquired the vessel and after the removal of the forward pump, 4 remained. Nothing was done to the port side.

4.6.9 this would appear to be speculation as the pumps stopped working because of the power loss.

4.6.10 BV carried out annual surveys and reviews. They were always to the highest standard. Everything was examined and it is not the case that they only look changes made. They look at everything. See comments titled 'Bureau Veritas' above.

4.7 see comments titles 'MSO' above.

4.7.1 See 'Bilge Pumping' comments above

4.7.3 The MSO carried out surveys as required 2 and 4 years. They were always to the highest standard. Everything was examined and it is not the case that they only look changes made. They look at everything.

4.8 see 'Bureau Veritas' and 'MSO' comments above

4.8.1 if there is an opening on a vessel BV check that opening.

4.8.2 the MSO are a competent Authority who know their business. They do not perform inspection on the basis of any other bodies survey. They do their own.

4.8.4 in 2020 the vessel had been inspected by BV and a list of defects were provided. They were remedied but COVID meant that the return survey was not carried out. Please see emails attached.

4.8.7 it is denied that the Skipper said that there was a leak though a lid. It was through the leaver.

4.11

One would not consider a bent bulbous bow and pierced hull and structure to be 'minor damages'.

4.11.3 it should be noted that The tow rope from the LE George Bernard Shaw was recovered, intact, by a local fishing vessel. If it was the tow line from the Ellie Ádhamh that broke it should have been still attached to the Navy vessel rope or still attached to the Ellie Ádhamh

Conclusion

The vessel had little to no water aboard for 33hrs after the power was lost. From the time of the power failure to the time that the Navy took the vessel under tow, the Ellie Ádhamh had travelled over 110nm towards the coast. The situation only began to deteriorate after the Navy collided with the Ellie Ádhamh. The persons who reviewed the footage of the collision and decided that it could not be a causative factor in the sinking of the Ellie Ádhamh, should not be investigating marine casualties.

The determination of the Skipper of the Ellie Ádhamh and efforts of the crew were commendable, the skill from the skipper of the Monica 2 in quickly attaching a tow line was valiant, the efforts from Castletownbere RNLI, rescue 115 and rescue 117 were greatly appreciated. The offers from the Irish trawlers to take over the tow will never be forgotten and the owners regret that they were stood down by the Navy

Signed:[redacted]

For and on behalf of R&E Fishing Limited

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Sea Fisheries Protection Authority Flow Chart and Report

AN t-ÚDARÁS UM CHOSAINT IASCAIGH MHARA | SEA-FISHERIES PROTECTION AUTHORITY

Establishment Inspection Report

Inspection of a Food Business establishment in accordance with Regulation (EC) No 852/2004 on the hygiene of foodstuffs; Regulation (EC) No 853/2004 laying down specific rules for food of animal origin; Regulation (EC) No 854/2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption as transposed by S.I. No. 432 of 2009, European Communities (Food and Feed Hygiene) Regulations 2009.

Establishment Name:	Marine fishing Vessel (MFV) Ellie Adhamh WD 206			
Approval Number:	IE WX 0024 EC			
Type of Inspection:	Approval/Re- Approval	X	Full Audit	
	Routine		Follow up	
	Complaints		Other	
Company Representative/s:	[redacted]			
SFPA Representative/s:	[redacted]			
Inspection Date:	20 – 05 - 2016			
Products Processed:	Freezing Prawns			
Product On Approval Certificate	Nephrops			
Risk Category:	High		Medium	Low X

Legislative Provision

The Sea Fisheries Protection Authority is a contract agency to the Food Safety Authority of Ireland (FSAI), and as an official agency is enacted with the powers of the Food Safety Authority of Ireland

F A05 Ver.8 04/02/2016 1

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Sea Fisheries Protection Authority Flow Chart and Report

1998 S.I No. 29 of 1998. The Minister of DCMNR under section 49 of the said Act, has appointed Sea Fishery Protection Officers, as Authorised Officers for the purposes of exercising all powers available to Authorised Officers under the Food Safety of Ireland Act 1998.

All premises approved under Sea Fisheries Protection Authority and issued with an approval number permits those premises to engage in processing of Seafood products, in conformance with EU Hygiene Regulations as adopted into national law S.I. 432 of 2009.

If a premises fails to adhere to the legislative requirements that premises is in contravention of the legislative requirements and does not meet the requirements, as assigned with an approval number. Should a premises be in contravention of the legislative requirements the owner / Director is required to correct the non compliance immediately, or cease production until such time as the non-compliance is corrected. Failure to address any non-compliance may result in the approval number been revoked under S.I 432 of 2009 or the issuing of enforcement instruments under the Food Safety of Ireland Act 1998.

REPORT

SECTION 1: **NON-COMPLIANCES FROM PREVIOUS INSPECTION REPORT**
Non Compliance(s) with reference to relevant legislation:

There were no non-compliances from the previous inspection

SECTION 2: INSPECTION FINDINGS
Summary of the inspection findings:

This vessel was inspected in January 2016 (Clonakilty Port) with the completion of an inspection checklist for re-approval of a Freezer vessel, the owner also sent in an application form to retain their approval as a freezer vessel (attached).

This inspection was a routine follow-up inspection to complete the above process.

HACCP

A review of their HACCP procedures was conducted with an examination of their records and documents. This included:

Cleaning Schedule, temperature records, Daily trip records, Dispatch log, Equipment Maintenance records, Visitors Log, Label details, Dipping procedures, calibration certs and FETAC level 5 food safety training Cert for the Skipper etc.

Good documentation of the procedures is being maintained and the HACCP plan is being implemented.

Food safety training was been completed by the Skipper and together with his experience this information is relayed to any current or new crew that come on-board.

F A05 Ver.8 04/02/2016 2

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Sea Fisheries Protection Authority Flow Chart and Report

Equipment and vessel layout

This vessel is scheduled for refurbishment this August and will be tied up for six weeks. The current facilities are working and are being well maintained. However the refurbishment should reduce the current workload required.

The freezer had some build-up of ice around the door, the skipper explained that this would sometimes happen during a long trip and that the freezer is defrosted after each trip.

The dipping tank has a timer system with an alarm built in, this helps ensure that the prawns are not over exposed to the solution of Melacide SC20 which is in use.

The frozen prawns are packed and wrapped in consignments for dispatch. Each consignment gets a label and any other information required is sent with the transporter to Sofrimar.

SECTION 3: NON COMPLIANCES
Non-compliance(s) with reference to relevant legislation:
(Please specify time frame for completion of corrective action(s))

No non-compliances were observed during this inspection

SECTION 4: CONCLUSION

Both the skipper and owner are experienced in the production of frozen prawns and have been maintaining their facilities and implementing their HACCP plan to-date.

Again this vessel is due to be refurnished this summer and I would recommend that it should be inspected again by the SFPA when the works are completed.

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Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Sea Fisheries Protection Authority Flow Chart and Report

SECTION 5: SEA-FISHERIES PROTECTION OFFICER RECOMMENDATION

Applicable only in case of approval/re-approval inspection.

Approval Granted [X]

Conditional Approval [ ]

Approval not Granted [ ]

Signed: [redacted]

Sea-Fisheries Protection Officer

Date: 10-06-2016

Signed [redacted]

Sea-Fisheries Protection Officer

Date: 10/06/2016

For Office Use Only (Senior Port Officer)
Comments:

on Annual Leave

Signed: _____ **Date:** _____

For Office (Food Safety Unit) Use Only
Comments:

Full approval to issue

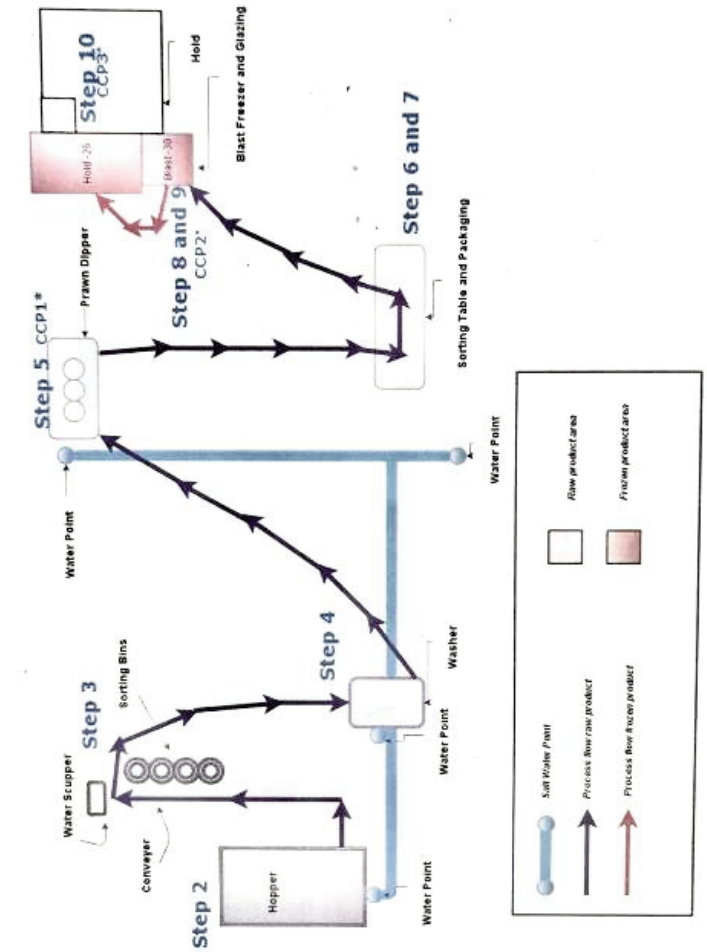
Signed: [redacted] **Date:** 21/07/2016

F A05 Ver.8 04/02/2016 4

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Sea Fisheries Protection Authority Flow Chart and Report

Food Safety Management System
HACCP Based Principles

Process Flow Diagram



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Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

ENGINEERING INSPECTION SPECIALISTS LIMITED
UNIT 734 NORTHWEST BUSINESS PARK KILSHANE DRIVE, BLANCHARDSTOWN, DUBLIN 15
TEL 01 861 2011 FAX 01 861 2024 www.eisl.ie

ULTRASONIC INSPECTION REPORT

EIS FORM No.17-003 Rev. 0

REPORT No:	10001	**DATE:**	04-Jan-19
CLIENT:	R & E FISH	**CLIENT ORDER No / NDT REQ No:**	T.B.C.
	[redacted]	**CONTRACT No:**	NOT APPLICABLE
ATTENTION:	[redacted]	**PROJECT REF / No:**	CLASS RENEWAL SURVEY
EIS JOB No:	22837		

SITE:	BERE ISLAND BOATYARD	**ITEM:**	HULL SURVEY
WELD IDENT:	NOT APPLICABLE	**SKETCH:**	YES ☒ NO ☐ PHOTO ☐
WELDING METHOD:	NOT APPLICABLE		
WELD PROCEDURE No:	NOT APPLICABLE	**EIS NDE PROCEDURE No:**	QC 9.2
DESIGN CODE:	B.V.	**ACCEPTANCE CRITERIA:**	B.V. CORROSION ALLOWANCE
MATERIAL:	CARBON STEEL	**SURFACE CONDITION:**	PAINTED
HOLD TIMES:	NOT APPLICABLE	**PWHT:**	NOT APPLICABLE
TEMP AT TIME OF TEST:	AMBIENT		

EQUIPMENT:	KRAUTKRAMER USM36	**SERIAL No:**	15027566	**CALIBRATED IN ACCORDANCE WITH:**	BS EN 12668-1:2013
PROBES:	KRAUTKRAMER	**COUPLANT:**	WATER	**CALIBRATION BLOCKS:**	IIW V1 & V2

ANGLE	FREQUENCY	DIMENSIONS	CRYSTAL Twin	CRYSTAL Single	CHECK IN ACCORDANCE WITH BS EN 12668-2:2013
0°	5MHz	10mm DIA	☒	☐	Yes
0°	10MHz	7mm DIA	☒	☐	Yes

SENSITIVITY:	COMPRESSION – DAC FROM 3mm SDH + 8dB	SHEAR – DAC FROM 3mm SDH + 14dB	
SCAN PLAN:	GRID SYSTEM	**% OF INSPECTION**	AS LISTED BELOW

VESSEL: ELLIE ABHAMH – BV 03890F – HULL SURVEY JAN 2019

Inspected items:

1. All bottom plating
2. All side shell / wind & water plating
3. Transverse band @ Fr22 (midships)
4. All weather deck plating
5. Main hatch covers & coamings
6. Forward collision bulkhead at Fr 39
7. Engine room bulkhead at Fr 19
8. Sea chests
9. Fire main

Please see the following pages for full inspection results.

TECHNICIAN:	[redacted]	**QUALIFICATION:** PCN LEVEL II	**DATE:** 04-Jan-19
SIGNATURE:		**FIRM OFFICAL STAMP:**	
INSPECTION AUTHORITY:	BUREAU VERITAS		
CLIENT WITNESS:			

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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General Particulars

Ship's name	ELLIE ADHAMH
IMO number	9299238
Ship type	TRAWLER
Class identity number	03890F
Port of registry	WEXFORD
Gross tons	230
Deadweight	
Date of build	10/03/2004
Classification society	BUREAU VERITAS
Name of firm performing thickness measurement	E.I.S. LIMITED
Thickness measurement firm certified by	BUREAU VERITAS
Approval No.	LDRO/PRO/20170712120222
Approval valid from	12/07/2017
Approval valid to	19/06/2020
Place of measurement	BERE ISLAND BOATYARD
First date of measurement	04/01/2019
Last date of measurement	04/01/2019
Type of survey	renewal
Cap survey	○ Yes ◉ No
Ships length less than 90 m	◉ Yes ○ No
Details of measurement equipment	KRAUTKRAMER USM 36
Qualification of operator	ASNT & PCN LEVEL II
Report number	10001
Consisting of	33 sheets.
Date	05/01/2019

Name of operator [redacted] Name of surveyor [redacted]

Signature of operator [redacted] Report reviewed for consistency, measurements partly attended

Signature of surveyor

Firm official stamp

Classification Society Official Stamp

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Report preparation

If the ship doesn't have some of the following structural uncheck them

- ☐ Inner bottom
- ☑ Inner deck
- ☐ Topside sloping plating
- ☐ Hopper plating
- ☐ Forecastle deck
- ☐ Trunk deck
- ☐ Poop deck
- ☑ Transverse bulkhead
- ☐ Longitudinal bulkhead
  - ☐ Longitudinal bulkhead
  - ☐ Outer longitudinal bulkhead
  - ☐ Inner Longitudinal bulkhead
  - ☐ Centreline Longitudinal bulkhead

If the ship doesn't have some of the following spaces uncheck them

- ☐ Upper stool
- ☐ Lower stool

Please indicate the location of transverse belts where UTM have been taken

first transverse belt at frame	MIDSHIPS
second transverse belt at frame	
third transverse belt at frame	
fourth transverse belt at frame	

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Thickness Report 2019

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Report analysis

Zone	mm Original	mm Gauged diminution	D%	Permissible wastage
Deck	561	19.2	3.4	10
Neutral axis	498	14.5	2.9	15
Bottom	1088	32.8	3	10

Groups

Deck				
Main deck	561	19.2	3.4	10
Neutral axis				
Side shell plating	498	14.5	2.9	15
Bottom				
Bilge and bottom strakes	1088	32.8	3	10
Other items				
Transverse bulkheads plating	340	8.2	2.4	15

Area of excessive corrosion

Double click to open a form	n° form	Type form

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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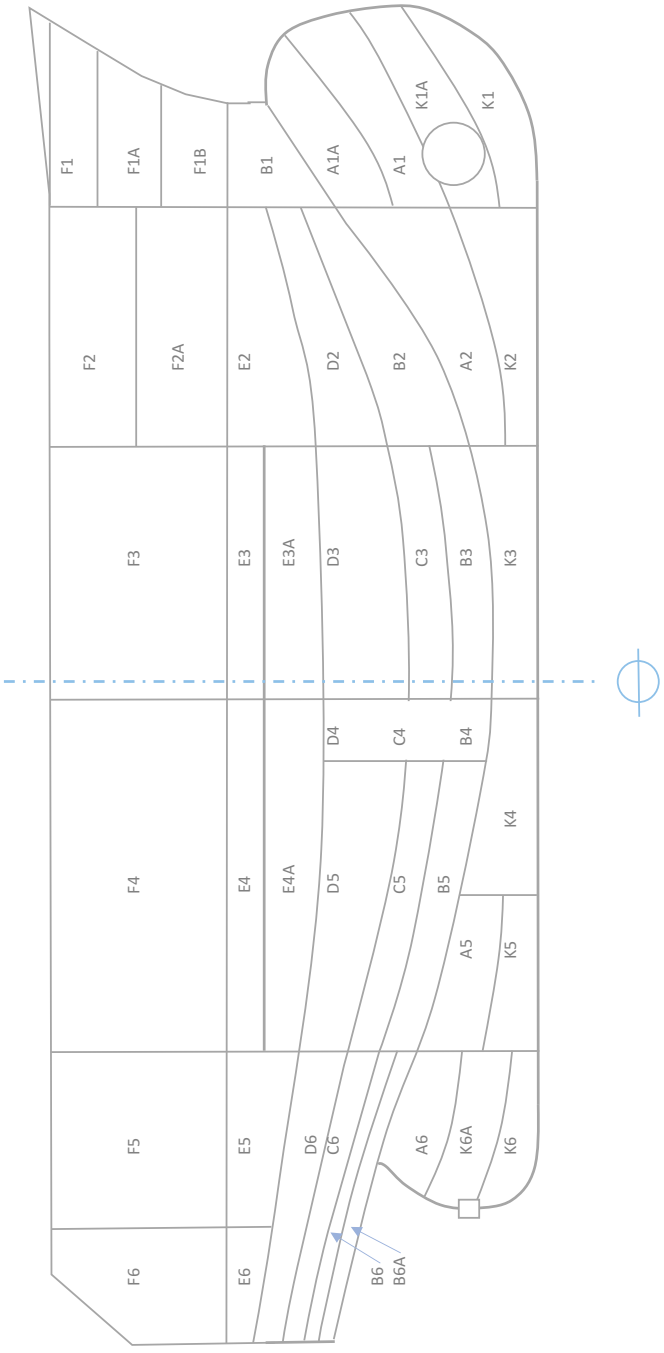
Sketch 1 – Hull plating (Keel, Bottom & Side Shell)



Company Reg. No. 342482. Reg. Office: Unit 734, Northwest Business Park, Kilshane Drive, Blanchardstown, Dublin 15, D15 F8PW
V.A.T. No: IE 6362482U

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TEL 01 861 2011 FAX 01 861 2024 www.eisl.ie

Report on THICKNESS MEASUREMENT of ALL BOTTOM PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		KEEL PLATING															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
11th fwd																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3																	
2	K1A	8	7.8	7.9	0.2	2.5	0.1	1.3	7.7	7.8	0.3	3.8	0.2	2.5	3.1	1.9	2.0
2	K1	10	9.7	9.7	0.3	3	0.3	3	9.8	9.7	0.2	2	0.3	3	2.5	3	2.5
1	K2	10	9.7	9.8	0.3	3	0.2	2	9.7	9.7	0.3	3	0.3	3	3	2.5	2.5
Amidships	K3	10	9.8	9.7	0.2	2	0.3	3	9.8	9.6	0.2	2	0.4	4	2	3.5	2.5
1st aft	K4	10	9.5	9.7	0.5	5	0.3	3	9.7	9.7	0.3	3	0.3	3	4	3	2.5
2nd	K5	10	9.5	9.6	0.5	5	0.4	4	9.7	9.6	0.3	3	0.4	4	4	4	2.5
3	K6	10	9.8	9.5	0.2	2	0.5	5	9.6	9.2	0.4	4	0.8	8	3	6.5	2.5
3	K6A	10	9.6	9.5	0.4	4	0.5	5	9.7	9.4	0.3	3	0.6	6	3.5	5.5	2.5
3																	
4																	
5																	
6th																	
7th																	
8th																	
9th																	
10th																	

[redacted]

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Report on THICKNESS MEASUREMENT of ALL BOTTOM PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		BOTTOM PLATING 1st OUTBOARD FROM KEEL															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
10th																	
9th																	
8																	
7																	
6																	
5																	
4																	
4																	
3																	
2	A1A	8	7.7	7.8	0.3	3.8	0.2	2.5	7.7	7.7	0.3	3.8	0.3	3.8	3.8	3.1	2.0
2	A1	8	7.8	7.8	0.2	2.5	0.2	2.5	7.7	7.8	0.3	3.8	0.2	2.5	3.1	2.5	2.0
1	A2	8	7.8	7.9	0.2	2.5	0.1	1.3	7.8	7.8	0.2	2.5	0.2	2.5	2.5	1.9	2.0
Amidships																	
1st Aft																	
2nd	A5	10	9.6	9.7	0.4	4	0.3	3	9.7	9.7	0.3	3	0.3	3	3.5	3	2.5
3rd	A6	10	9.9	9.8	0.1	1	0.2	2	9.8	9.8	0.2	2	0.2	2	1.5	2	2.5
4																	
5																	
6																	
7																	
8																	
9																	
10th																	
11th																	
12th																	

[redacted]

ENGINEERING INSPECTION SPECIALISTS LIMITED
UNIT 734 NORTHWEST BUSINESS PARK KILSHANE DRIVE, BLANCHARDSTOWN, DUBLIN 15
TEL 01 861 2011 FAX 01 861 2024 www.eisl.ie

Report on THICKNESS MEASUREMENT of ALL BOTTOM PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		BOTTOM PLATING 2nd OUTBOARD FROM KEEL															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3																	
2	B1	8	7.8	7.7	0.2	2.5	0.3	3.8	7.8	7.8	0.2	2.5	0.2	2.5	2.5	3.1	2.0
1	B2	8	7.9	7.9	0.1	1.3	0.1	1.3	7.8	7.7	0.2	2.5	0.3	3.8	1.9	2.5	2.0
Amidships	B3	10	9.8	9.7	0.2	2	0.3	3	9.6	9.5	0.4	4	0.5	5	3	4	2.5
1st aft	B4	12	11.4	11.7	0.6	5	0.3	2.5	11.6	11.5	0.4	3.3	0.5	4.2	4.2	3.3	3.0
2nd	B5	8	7.5	7.8	0.5	6.3	0.2	2.5	7.8	7.7	0.2	2.5	0.3	3.8	4.4	3.1	2.0
3rd	B6	8	7.7	7.7	0.3	3.8	0.3	3.8	7.8	7.9	0.2	2.5	0.1	1.3	3.1	2.5	2.0
3rd	B6A	8	7.8	7.7	0.2	2.5	0.3	3.8	7.8	7.8	0.2	2.5	0.2	2.5	2.5	3.1	2.0
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	

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Report on THICKNESS MEASUREMENT of ALL BOTTOM PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		BOTTOM PLATING 3rd OUTBOARD FROM KEEL															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3																	
2																	
1																	
Amidships	C3	8	7.8	7.7	0.2	2.5	0.3	3.8	7.6	7.5	0.4	5	0.5	6.3	3.8	5	2.0
1st aft	C4	12	11.6	11.5	0.4	3.3	0.5	4.2	11.7	11.9	0.3	2.5	0.1	0.8	2.9	2.5	3.0
2nd	C5	8	7.8	7.9	0.2	2.5	0.1	1.3	7.9	7.9	0.1	1.3	0.1	1.3	1.9	1.3	2.0
3rd	C6	8	7.8	7.7	0.2	2.5	0.3	3.8	7.8	7.8	0.2	2.5	0.2	2.5	2.5	3.1	2.0
4																	
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10																	
11																	
12																	

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Report on THICKNESS MEASUREMENT of ALL BOTTOM PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		BOTTOM PLATING 4th OUT FROM KEEL (BILGE PLATING)															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3																	
2	B1	8	7.7	7.8	0.3	3.8	0.2	2.5	7.7	7.8	0.3	3.8	0.2	2.5	3.8	2.5	2.0
1	D2	8	7.8	7.9	0.2	2.5	0.1	1.3	7.8	7.8	0.2	2.5	0.2	2.5	2.5	1.9	2.0
Amidships	D3	8	7.8	7.7	0.2	2.5	0.3	3.8	7.7	7.7	0.3	3.8	0.3	3.8	3.1	3.8	2.0
1st aft	D4	12	11.7	11.6	0.3	2.5	0.4	3.3	11.9	11.8	0.1	0.8	0.2	1.7	1.7	2.5	3.0
2nd	D5	8	7.8	7.9	0.2	2.5	0.1	1.3	7.7	7.8	0.3	3.8	0.2	2.5	3.1	1.9	2.0
3rd	D6	8	7.8	7.8	0.2	2.5	0.2	2.5	7.9	7.7	0.1	1.3	0.3	3.8	1.9	3.1	2.0
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

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Report on THICKNESS MEASUREMENT of ALL SIDE SHELL PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		SHEAR STRAKE PLATING															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
9th																	
8																	
7																	
6																	
5																	
4																	
3																	
2	F1B	8	7.8	7.9	0.2	2.5	0.1	1.3	7.8	7.8	0.2	2.5	0.2	2.5	2.5	1.9	2.0
2	F1A	8	7.9	7.9	0.1	1.3	0.1	1.3	7.8	7.9	0.2	2.5	0.1	1.3	1.9	1.3	2.0
2	F1	8	7.8	7.9	0.2	2.5	0.1	1.3	7.8	7.7	0.2	2.5	0.3	3.8	2.5	2.5	2.0
1	F2A	6	5.8	5.9	0.2	3.3	0.1	1.7	5.9	5.9	0.1	1.7	0.1	1.7	2.5	1.7	1.5
1	F2	6	5.8	5.9	0.2	3.3	0.1	1.7	6	5.8	0	0	0.2	3.3	1.7	2.5	1.5
Amidships	F3	6	5.9	6	0.1	1.7	0	0	5.8	5.8	0.2	3.3	0.2	3.3	2.5	1.7	1.5
1st aft	F4	6	5.7	5.8	0.3	5	0.2	3.3	5.8	5.7	0.2	3.3	0.3	5	4.2	4.2	1.5
2nd	F5	6	5.6	5.7	0.4	6.7	0.3	5	5.7	5.7	0.3	5	0.3	5	5.8	5	1.5
3rd	F6	10	9.6	9.5	0.4	4	0.5	5	9.7	9.6	0.3	3	0.4	4	3.5	4.5	2.5
4																	
5																	
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11																	
12																	

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Report on THICKNESS MEASUREMENT of ALL SIDE SHELL PLATING

Excessive corrosion | Substantial corrosion | Repaired

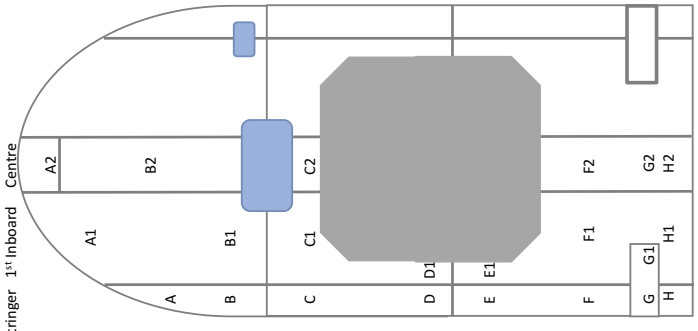
Ship's name ELLIE ADHAMH | **Class Identity N°03890F** | **Report N° 10001**

Strake position		1st BELOW SHEAR STRAKE															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
10th Fwd																	
9																	
8																	
7																	
6																	
5																	
4																	
3																	
3																	
2																	
2																	
1	E2	8	7.6	7.8	0.4	5	0.2	2.5	7.7	7.7	0.3	3.8	0.3	3.8	4.4	3.1	2.0
Amidships	E3	8	7.8	7.8	0.2	2.5	0.2	2.5	7.9	7.8	0.1	1.3	0.2	2.5	1.9	2.5	2.0
Amidships	E3A	8	7.8	7.7	0.2	2.5	0.3	3.8	7.6	7.7	0.4	5	0.3	3.8	3.8	3.8	2.0
1st aft	E4	8	7.8	7.9	0.2	2.5	0.1	1.3	7.7	7.8	0.3	3.8	0.2	2.5	3.1	1.9	2.0
1st aft	E4A	8	7.7	7.8	0.3	3.8	0.2	2.5	7.9	7.7	0.1	1.3	0.3	3.8	2.5	3.1	2.0
2nd	E5	8	7.8	7.7	0.2	2.5	0.3	3.8	7.8	7.8	0.2	2.5	0.2	2.5	2.5	3.1	2.0
3rd	E6	10	9.7	9.8	0.3	3	0.2	2	9.7	9.7	0.3	3	0.3	3	3	2.5	2.5
4																	
5																	
6																	
7																	
8																	
9																	
10																	

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

Sketch 2 – Weather Deck Plating



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Company Reg. No. 342482. Reg. Office: Unit 734, Northwest Business Park, Kilshane Drive, Blanchardstown, Dublin 15, D15 F8PW
V.A.T. No: IE 6362482U

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Report on THICKNESS MEASUREMENT of ALL DECK PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Strake position		STRINGER PLATE															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3	A	6	5.9	6	0.1	1.7	0	0	5.9	5.9	0.1	1.7	0.1	1.7	1.7	0.8	1.5
2	B	6	5.8	5.8	0.2	3.3	0.2	3.3	5.8	6	0.2	3.3	0	0	3.3	1.7	1.5
1	C	6	5.9	5.7	0.1	1.7	0.3	5	5.8	6	0.2	3.3	0	0	2.5	2.5	1.5
Amidships	D	6	6	5.9	0	0	0.1	1.7	5.9	5.8	0.1	1.7	0.2	3.3	0.8	2.5	1.5
1st aft	E	6	6	5.9	0	0	0.1	1.7	5.8	5.7	0.2	3.3	0.3	5	1.7	3.3	1.5
2nd	F	6	5.8	5.6	0.2	3.3	0.4	6.7	5.7	5.6	0.3	5	0.4	6.7	4.2	6.7	1.5
3rd	G	8	7.6	7.5	0.4	5	0.5	6.3	7.6	7.5	0.4	5	0.5	6.3	5.0	6.3	2.0
4	H	6	5.6	5.7	0.4	6.7	0.3	5	5.6	5.5	0.4	6.7	0.5	8.3	6.7	6.7	1.5
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

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Report on THICKNESS MEASUREMENT of ALL DECK PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Strake position		1st INBOARD															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3	A1	6	5.8	6	0.2	3.3	0	0	6	5.8	0	0	0.2	3.3	1.7	1.7	1.5
2	B1	6	5.9	5.8	0.1	1.7	0.2	3.3	5.8	5.9	0.2	3.3	0.1	1.7	2.5	2.5	1.5
1	C1	6	6	5.9	0	0	0.1	1.7	5.7	5.7	0.3	5	0.3	5	2.5	3.3	1.5
Amidships	D1	6	5.9	5.9	0.1	1.7	0.1	1.7	5.7	5.6	0.3	5	0.4	6.7	3.3	4.2	1.5
1st aft	E1	6	5.7	6	0.3	5	0	0	5.8	5.9	0.2	3.3	0.1	1.7	4.2	0.8	1.5
2nd	F1	6	5.7	6	0.3	5	0	0	5.7	5.9	0.3	5	0.1	1.7	5.0	0.8	1.5
3rd	G1	8	7.7	7.6	0.3	3.8	0.4	5	7.6	7.6	0.4	5	0.4	5	4.4	5.0	2.0
4	H1	6	5.6	5.6	0.4	6.7	0.4	6.7	5.6	5.6	0.4	6.7	0.4	6.7	6.7	6.7	1.5
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

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Report on THICKNESS MEASUREMENT of ALL DECK PLATING

Excessive corrosion | Substantial corrosion | Repaired

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Strake position		CENTRE LINE															
Plate position	No or Letter	Orig. Thk	Forward reading						Aft reading						Mean Diminution %		Maximum allowed diminution
			Gauged		Diminution P		Diminution S		Gauged		Diminution P		Diminution S				
		mm	P	S	mm	%	mm	%	P	S	mm	%	mm	%	P	S	mm
12th fwd																	
11th																	
10th																	
9																	
8																	
7																	
6																	
5																	
4																	
3	A2	8	7.8	7.9	0.2	2.5	0.1	1.3	7.9	7.8	0.1	1.3	0.2	2.5	1.9	1.9	2.0
2	B2	6	5.9	6	0.1	1.7	0	0	5.9	5.8	0.1	1.7	0.2	3.3	1.7	1.7	1.5
1	C2	6	5.8	6	0.2	3.3	0	0	5.9	6	0.1	1.7	0	0	2.5	0	1.5
Amidships																	
1st aft																	
2nd	F2	6	5.7	5.9	0.3	5	0.1	1.7	5.8	5.9	0.2	3.3	0.1	1.7	4.2	1.7	1.5
3rd	G2	6	5.6	5.7	0.4	6.7	0.3	5	5.5	5.7	0.5	8.3	0.3	5	7.5	5.0	1.5
4	H2	6	5.5	5.7	0.5	8.3	0.3	5	5.7	5.7	0.3	5	0.3	5	6.7	5.0	1.5
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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Report on THICKNESS MEASUREMENT OF SHELL AND DECK PLATING
(one, two, three or four transverse sections)

Ship's name : ELLIE ADHAMH **Class Identity N° : 03890F** **Report N° : 10001**

Excessive corrosion Substantial corrosion Repaired

		MIDSHIPS									0								
	Max Alw d Dim.	No or Letter	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S		No or Letter	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
Strake position	%		mm	mm	P	S	mm	%	mm	%		mm	mm	P	S	mm	%	mm	%
Stringer Plate	25	SP	6	1.5	5.8	5.9	0.2	3.3	0.1	1.7									
1st strake inboard	25	DP	6	1.5	5.9	5.9	0.1	1.7	0.1	1.7									
2nd	25																		
3rd	25																		
4	25																		
5	25																		
6	25																		
7	25																		
8	25																		
9	25																		
10	25																		
11	25																		
12	25																		
13	25																		
14th	25																		
Centre strake	25																		
Sheer strake	25	F3	6	1.5	5.9	6	0.1	1.7	0	0									

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Ship's name : ELLIE ADHAMH **Class Identity N° : 03890F** **Report N° : 10001**

Excessive corrosion | Substantial corrosion | Repaired

	MIDSHIPS										0								
	Max Alw d Dim.	No or Letter	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S		No or Letter	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
Strake position	%		mm	mm	P	S	mm	%	mm	%		mm	mm	P	S	mm	%	mm	%
1st below sheer strake	25	E3	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5									
2nd	25	E3A	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8									
3rd	25	D3	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8									
4	25	C3	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8									
5	25	B3	10	2.5	9.8	9.7	0.2	2	0.3	3									
6	25																		
7	25																		
8	25																		
9	25																		
10	25																		
11	25																		
12	25																		
13	25																		
14	25																		
15	25																		
16	25																		
17	25																		
18	25																		
19	25																		
20th	25																		
Keel strake	25	K3	10	2.5	9.8	9.7	0.2	2	0.3	3									

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Thickness Report 2019

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Report on THICKNESS MEASUREMENT OF LONGITUDINAL MEMBERS
(one, two or three transverse sections)

Ship's name : ELLIE ADHAMH **Class Identity N° : 03890F** **Report N° : 10001**

Excessive corrosion Substantial corrosion Repaired

Structural Member	Additional description	Max Alw'd Dim. %	MIDSHIPS 0																					
			Item No	Orig. Thk	Max Alw'd Dim.	Gauged		Diminution P		Diminution S		Item No	Orig. Thk	Max Alw'd Dim.	Gauged			Diminution P		Diminution S			
				mm	mm	P	S	mm	%	mm	%		mm	mm	P	S	mm	%	mm	%				
Other	Deck Trans Stiffner	25	DS1	10	2.5		9.8			0.2	2													
Side shell	Trans Stiffner	25	SS1	10	2.5		9.7			0.3	3													
Main deck	Corner Bracket	25	CB1	9	2.3		8.9			0.1	1.1													

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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Sketch 4 – Engine room bulkhead @ Frame 19
(Part of bulkhead also forms aft end of sea chest plating)

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Report on THICKNESS OF W.T./O.T. TRANSVERSE BULKHEADS

Ship's name : ELLIE ADHAMH	Class Identity N° : 03890F	Report N° : 10001

Space description	ENGINE ROOM BULKHEAD

Excessive corrosion Substantial corrosion Repaired

Location of structure	Engine room		Frame N°	19					
Structural Component (plating/stiffener)	Description	Max Alwd Dim.	Orig. Thk	Max Alwd Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Transverse BKD plating	A	25	7	1.8	6.8	6.9	0.2	2.9	0.1	1.4
Transverse BKD plating	B	25	7	1.8	6.9	6.8	0.1	1.4	0.2	2.9
Transverse BKD plating	C	25	7	1.8	6.9	6.9	0.1	1.4	0.1	1.4
Transverse BKD plating	D	25	7	1.8	6.8	6.8	0.2	2.9	0.2	2.9
Transverse BKD plating	E	25	7	1.8	6.9	6.8	0.1	1.4	0.2	2.9
Transverse BKD plating	F	25	7	1.8	6.9	6.9	0.1	1.4	0.1	1.4
Transverse BKD plating	G	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	H	25	8	2.0	7.7	7.9	0.3	3.8	0.1	1.3
Transverse BKD bracket	I	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	J	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	K	25	12	3.0	11.7	11.7	0.3	2.5	0.3	2.5
Transverse BKD plating	L	25	12	3.0	11.8	11.7	0.2	1.7	0.3	2.5

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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Sketch 5 – Collision Bulkhead @ Frame 39
(Forepeak tank / fresh water tank bulkhead)

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Report on THICKNESS OF W.T./O.T. TRANSVERSE BULKHEADS

Ship's name : ELLIE ADHAMH	Class Identity N° : 03890F	Report N° : 10001

Space description	FORWARD COLLISION BULKHEAD

Excessive corrosion Substantial corrosion Repaired

Location of structure	Forepeak / Fresh water tank		Frame N°	39					
Structural Component (plating/stiffener)	Description	Max Alwd Dim.	Orig. Thk	Max Alwd Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Transverse BKD plating	A	25	8	2.0	7.7	7.8	0.3	3.8	0.2	2.5
Transverse BKD plating	B	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	C	25	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8
Transverse BKD plating	D	25	8	2.0	7.7	7.9	0.3	3.8	0.1	1.3
Transverse BKD plating	E	25	8	2.0	7.8	7.9	0.2	2.5	0.1	1.3
Transverse BKD plating	F	25	8	2.0	7.9	7.8	0.1	1.3	0.2	2.5
Transverse BKD plating	G	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	H	25	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8
Transverse BKD bracket	I	25	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8
Transverse BKD plating	J	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Transverse BKD plating	K	25	8	2.0	7.7	7.8	0.3	3.8	0.2	2.5

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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Sketch 6 – Sea chest plating
(Port & Starboard at midships area)

[redacted]
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Report on THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURAL MEMBERS

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Sea Chest plating
Structural Member description	Sea Chests Port & Staboard
Location of Structure	Midships Area

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Sea Chest plating plating	A	25	12	3.0	11.7	11.9	0.3	2.5	0.1	0.8
Sea Chest plating plating	B	25	12	3.0	11.8	11.7	0.2	1.7	0.3	2.5
Sea Chest plating plating	C	25	12	3.0	11.5	11.6	0.5	4.2	0.4	3.3
Sea Chest plating plating	D	25	12	3.0	11.4	11.4	0.6	5	0.6	5
Sea Chest plating plating	E	25	12	3.0	11.7	11.6	0.3	2.5	0.4	3.3
Sea Chest plating plating	F	25	12	3.0	11.6	11.6	0.4	3.3	0.4	3.3

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Thickness Report 2019

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Sketch 7 – Hatch covers & Coamings
(Same layout of readings on each Hatch)

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Report on THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURAL MEMBERS

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Hatch coaming
Structural Member description	Main deck Hatch 1
Location of Structure	Central on Main deck

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Hatch coaming plating	A	25	8	2.0	7.7	7.9	0.3	3.8	0.1	1.3
Hatch coaming plating	B	25	8	2.0	7.8	7.9	0.2	2.5	0.1	1.3
Hatch coaming plating	C	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Hatch coaming plating	D	25	8	2.0	7.7	7.8	0.3	3.8	0.2	2.5
Hatch coaming plating	E	25	8	2.0	7.7	7.9	0.3	3.8	0.1	1.3
Hatch coaming plating	F	25	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8
Hatch coaming plating	G	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Hatch coaming plating	H	25	8	2.0	7.7	7.8	0.3	3.8	0.2	2.5

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Report on THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURAL MEMBERS

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Hatch cover
Structural Member description	Main deck Hatch 1
Location of Structure	Central on Main deck

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Hatch cover top plating	I	25	6	1.5	5.6	5.5	0.4	6.7	0.5	8.3
Hatch cover top plating	J	25	6	1.5	5.5	5.4	0.5	8.3	0.6	10
Hatch cover top plating	K	25	6	1.5	5.4	5.5	0.6	10	0.5	8.3
Hatch cover top plating	L	25	6	1.5	5.6	5.4	0.4	6.7	0.6	10

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Report on THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURAL MEMBERS

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Hatch cover
Structural Member description	Main deck Hatch 2
Location of Structure	Starboard side on Main Deck

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Hatch cover top plating	I	25	6	1.5	5.6	5.4	0.4	6.7	0.6	10
Hatch cover top plating	J	25	6	1.5	5.4	5.5	0.6	10	0.5	8.3
Hatch cover top plating	K	25	6	1.5	5.5	5.5	0.5	8.3	0.5	8.3
Hatch cover top plating	L	25	6	1.5	5.5	5.4	0.5	8.3	0.6	10

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Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Hatch coaming
Structural Member description	Main deck Hatch 2
Location of Structure	Starboard side on Main Deck

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Hatch coaming plating	A	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5
Hatch coaming plating	B	25	8	2.0	7.7	7.7	0.3	3.8	0.3	3.8
Hatch coaming plating	C	25	8	2.0	7.6	7.8	0.4	5	0.2	2.5
Hatch coaming plating	D	25	8	2.0	7.6	7.8	0.4	5	0.2	2.5
Hatch coaming plating	E	25	8	2.0	7.8	7.9	0.2	2.5	0.1	1.3
Hatch coaming plating	F	25	8	2.0	7.7	7.8	0.3	3.8	0.2	2.5
Hatch coaming plating	G	25	8	2.0	7.8	7.7	0.2	2.5	0.3	3.8
Hatch coaming plating	H	25	8	2.0	7.8	7.8	0.2	2.5	0.2	2.5

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Thickness Report 2019

Sketch 8 – Piping from Bilge Pumps
(Fish room inner working deck)

After removal of the blistered coatings, the pipe surfaces were found to be free of any signs of significant pitting or corrosion.

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Report on THICKNESS MEASUREMENT OF MISCELLANEOUS STRUCTURAL MEMBERS

Ship's name : ELLIE ADHAMH | **Class Identity N° : 03890F** | **Report N° : 10001**

Structural member	Piping line
Structural Member description	Piping from Bilge Pumps
Location of Structure	Fish Room / Mid working deck

Excessive corrosion
Substantial corrosion
Repaired

Item	Description	Max Alw d Dim.	Orig. Thk	Max Alw d Dim.	Gauged		Diminution P		Diminution S	
		%	mm	mm	P	S	mm	%	mm	%
Point	A	25	3.91	1.0	3.7	3.6	0.21	5.4	0.31	7.9
Point	B	25	3.91	1.0	3.8	3.7	0.11	2.8	0.21	5.4
Point	C	25	3.91	1.0	3.9	3.7	0.01	0.3	0.21	5.4
Point	D	25	3.91	1.0	3.7	3.6	0.21	5.4	0.31	7.9
Point	E	25	3.91	1.0	3.7	3.7	0.21	5.4	0.21	5.4

[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Bureau Veritas Items for Inspection Email 2019

FV Ellie Adhamh 03890F - Special Survey -
1 message

[redacted] Fri 4 Jan 2019 at 11:44

[redacted]

Here's some of the items I'll be looking at for the Special Survey and includes annual survey items.

1. "Megger" (electrical resistance) test results for all electrical alternators, motors switch board and sub systems
2. Confirmation Battery starting arrangements & back-up battery for emergency supply is OK.
3. Confirmation electrical system is in working order / as built. (e.g. Navigation lights)
4. Confirmation engine (main & generator) control and safety systems are functional
5. Check condition & confirm anchor ready for use
6. Fire alarm tests
7. Bilge alarm tests (all compartments, Eng Rm, Sonar room, Steering gear room, Hold etc.)
8. Fire Hose test,
9. Fire pump test
10. Emergency Fire pump test
11. Bilge pumping
12. Hose test of cargo hatch & inspection of Hold
13. Check of seals and condition of watertight hatches, doors & ventilation dampers.
14. Tank vent heads, - open and ready for inspection. (rubber seals may need to be renewed if perished)
15. Satisfactory Thickness test results
16. 5 Year - Fixed (CO2) & portable (extinguisher) fire-fighting equipment service certs.
17. Life Raft service up to date.
18. Antifouling paint specification from supplier
19. Prop shaft clearances from yard
20. Prop shaft inspection (by pulling out from shaft) / new seal.
21. Engine and gearbox maintenance report
22. Report of repair to propeller
23. Generator maintenance logs
24. Anchor Chain measurement (if applicable)
25. Sewage tank flushed & opened for inspection
26. Fore-peak opened & ventilated, ready for inspection
27. Rudder Stock & Pintle bearing clearances.
28. Sea Trial

List is not exhaustive and is based on the rules:

Please contact me if you have any questions.

Best Regards,

[redacted] | Marine Surveyor
e: [redacted]
t: [redacted]
w: www.bureauveritas.co.uk
Bureau Veritas UK | Suites 1 & 2, Keel House, Tyne Dock, South Shields, Newcastle Upon Tyne NE34 9PY

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Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas Items for Inspection Email 2019

SECTION 1 ANNUAL SURVEY

1 General

1.1

1.1.1 The requirements of this Section apply to annual surveys of all ships. The specific requirements for annual surveys related to service notations and additional class notations assigned to ships are addressed in Part A, Chapter 4 and Part A, Chapter 5, respectively.

Note 1: Ships assigned with the service notation **yacht** and having a length less than 24 m are not submitted to annual surveys for hull and machinery.

1.1.2 At the time of annual surveys, the ship is to be generally examined. The survey is to include a visual inspection of the hull, equipment and machinery of the ship and some tests thereof, so far as necessary and practicable in order to verify that the ship is in a acceptable general condition and is properly maintained.

1.1.3 Owners are reminded that, in compliance with the requirements in Ch 2, Sec 2, [6.4], any modification to the ship's hull, equipment and machinery affecting its classification is to be made known to the Society.

2 Hull

2.1 Hull and hull equipment

2.1.1 The survey is to include a general external examination and testing, where appropriate, of the following items, as applicable:

- outer shell plating above the waterline, relevant shell doors and accessible parts of the rudder(s)
- plating of freeboard deck and exposed decks, superstructures, with their openings and means of closure
- means of closing and securing the weathertightness of miscellaneous openings in freeboard, superstructure and exposed decks (cargo hatchways, other hatchways and other openings) (for details see [2.2])
- sidescuttles and deadlights, chutes and other openings with their means of closure
- bulwarks and, if applicable, the provision of freeing ports, special attention being paid to freeing ports with shutters
- guardrails, gangways, walkways, ladders and any other means provided for the protection of the crew and means for safe passage for crew
- inlets, scuppers and sanitary discharges, valves on discharge lines and their controls
- ventilators, air pipes, overflow pipes and gas vent pipes, with their coamings, means of closure and flame screens, where required
- flame screens on vents to all bunker tanks
- all air pipe heads installed on the exposed decks (i.e. those extending above the freeboard deck or superstructure decks)
- weld connection between air pipes and deck plating
- fittings and appliances for timber deck cargoes, where applicable
- verification of the position of the deck line (or reference line) and load lines and timber marks, if any, which, if necessary, are to be re-marked and re-painted
- deck equipment such as lifeboat davit foundations, bollards, fairleads, hawse pipes, etc., masts and associated rigging, including lightning conductors
- anchoring and mooring equipment, as far as practicable
- towing and mooring equipment properly marked with any restriction associated with its safe operation (only for ships built after 1st January 2007).
- watertight bulkheads, their watertight doors and associated local and remote controls, and their watertight penetrations
- main and auxiliary steering arrangements, including their associated equipment and control systems, and manoeuvring gear
- fire divisions and fire doors, dampers in ventilation ducts, means of closure of skylights and other openings
- confirmation, as far as practicable, that no significant changes have been made to the arrangement of the structural fire protection, including cargo spaces intended for the carriage of dangerous goods
- confirmation that emergency escape routes from accommodation and service spaces are satisfactory
- accessible cargo holds, in particular in areas likely to be damaged by cargo handling
- confirmation that the drainage from enclosed cargo spaces situated on the freeboard deck is satisfactory
- engine room
- where fitted, helicopter deck and its supporting structure, safety net and arrangements for the prevention of sliding
- availability of loading manual
- availability of electronic loading instrument, where required, and verification with standard test
- availability of approved stability documentation
- checking, in general, that there has been no deterioration in the strength of the hull
- verification that no alterations have been made to the hull or superstructures that would affect the position of the load lines
- superstructure end bulkheads and openings therein
- watertight integrity of the closures to any openings in the ship's side shell below the freeboard deck (particularly, cargo ports and other similar openings)

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Bureau Veritas Items for Inspection Email 2019

- garbage chutes, as far as practicable
- spurling pipes and cable lockers for verification that permanent devices are fitted to minimize water ingress
- if applicable, special requirements for ships permitted to sail with type "A" or type "B-minus" freeboard (machinery casing, gangway and access, hatchways and freeing arrangements)
- hull and its closing appliances, in general and as far as can be seen.

Note 1: Due attention is also to be given to fuel oil piping passing through ballast tanks, which is to be pressure tested where doubts arise.

2.1.2 Suspect areas identified at previous surveys are to be examined. Thickness measurements are to be taken of the areas of substantial corrosion and the extent of thickness measurements is to be increased to determine areas of substantial corrosion, in accordance with the requirements of Ch 3, Sec 3, Tab 4. These extended thickness measurements are to be carried out before the annual survey is credited as completed.

Note 1: These requirements are not applicable to cargo tanks of oil tankers, chemical tankers and double hull oil tankers surveyed in accordance with the requirements of Ch 4, Sec 3 and Ch 4, Sec 4.

2.1.3 Examination of ballast tanks when required as a consequence of the results of the class renewal survey and intermediate survey is to be carried out. When considered necessary by the Surveyor, or where extensive corrosion exists, thickness measurement is to be carried out. If the results of these thickness measurements indicate that Substantial Corrosion is found, then the extent of thickness measurements is to be increased to determine areas of substantial corrosion, in accordance with the requirements of Ch 3, Sec 3, Tab 4. These extended thickness measurements are to be carried out before the annual survey is credited as completed.

2.2 Hatch covers and coamings

2.2.1 The Owner or his representative is to declare to the attending Surveyor that no significant changes have been made to the hatch covers, hatch coamings and their securing and sealing devices without prior approval of the Society.

The survey of hatch covers and coamings is to include:

a) when fitted with portable covers, or wooden or steel pontoons, checking of the satisfactory condition, where applicable, of:
   - wooden covers and portable beams, carriers or sockets for the portable beams, and their securing devices
   - steel pontoons
   - tarpaulins
   - cleats, battens and wedges
   - hatch securing bars and their securing devices
   - loading pads/bars and the side plate edge
   - guide plates and chocks
   - compression bars, drainage channels and drain pipes (if any)

b) when fitted with mechanically operated steel covers, checking of the satisfactory condition, as applicable, of:
   - hatch covers
   - tightness devices of longitudinal, transverse and intermediate cross junctions (gaskets, gasket lips, compression bars, drainage channels and, if any, drain pipes)
   - clamping devices, retaining bars, cleating
   - chain or rope pulleys
   - guides
   - guide rails and track wheels
   - stoppers, etc.
   - wires, chains, gypsies, tensioning devices
   - hydraulic system essential to closing and securing
   - safety locks and retaining devices
   - the operation of hatch covers, by means of random examination: stowage and securing in open condition, proper fit, locking and efficiency of sealing in closed position, operational testing of hydraulic and power components, wires, chains and link drives

c) checking of the satisfactory condition of hatch coaming plating and its stiffeners, where applicable.

3 Machinery and systems

3.1 General machinery installations

3.1.1 The survey of general machinery installations is to cover the following items:

- confirmation that the machinery, boilers and other pressure vessels, associated piping systems and fittings are maintained so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards
- confirmation that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative
- confirmation that provisions are made so as to bring the machinery into operation from the dead ship condition without external aid
- confirmation that the means of escape from accommodation, machinery and other spaces are satisfactory
- general examination of the machinery, boilers, all steam, hydraulic, pneumatic and other systems and their associated fittings, for confirmation of their proper maintenance
- examination of the means for the operation of the main and auxiliary machineries essential for the safety of the ship (including the control, monitoring, reporting, alert and safety action)
- test of the means of remotely controlling the propulsion machinery from the navigation bridge, where applicable
- examination of the arrangements to operate the main and other machineries from a machinery control room, where applicable
- confirmation that the ventilation system for the machinery spaces works correctly

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

DECTWO PRZESZKOLENIA
W ZAKRESIE
INDYWIDUALNYCH TECHNIK RATUNKOWYCH

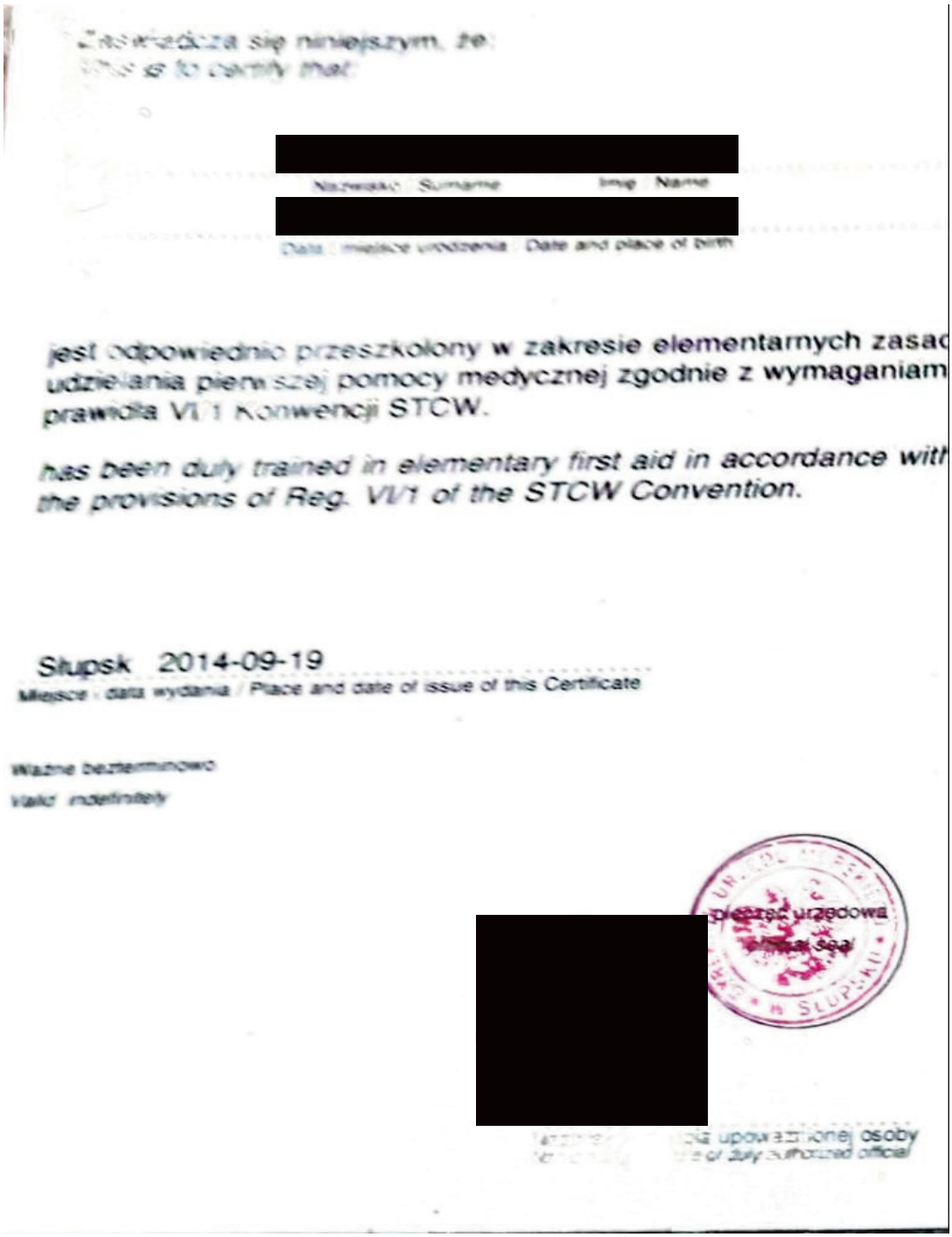
Certificate of Basic Safety Training in Personal Survival Techniques

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Szczecin

Nr/No. [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish



Zaświadcza się niniejszym, że
This is to certify that

[redacted]

Nazwisko / Surname Imię / Name

[redacted]

Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie elementarnych zasad udzielania pierwszej pomocy medycznej zgodnie z wymaganiam prawidła VI/1 Konwencji STCW.

has been duly trained in elementary first aid in accordance with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2014-09-19

Miejsce i data wydania / Place and date of issue of this Certificate

Ważne bezterminowo

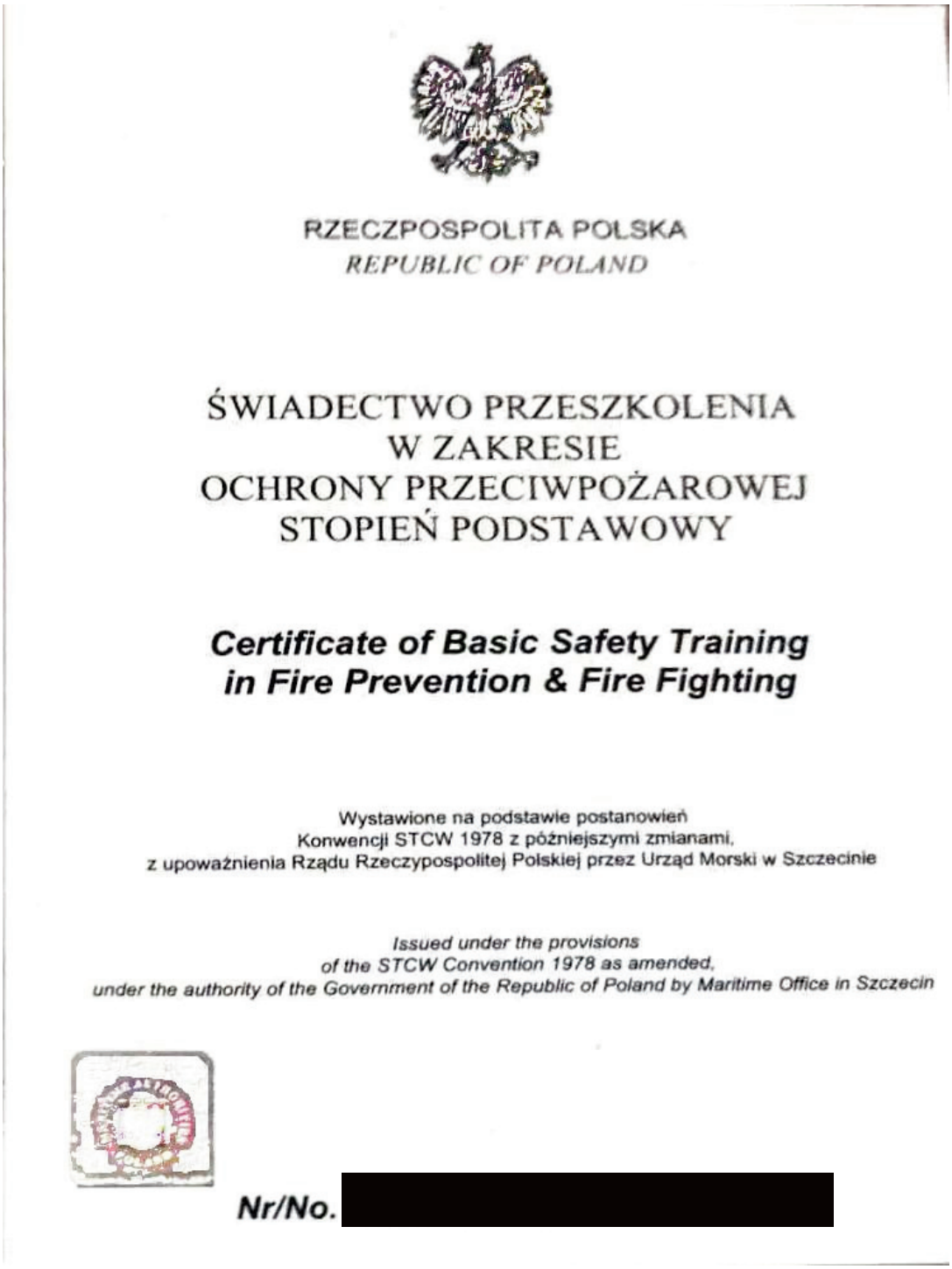
Valid indefinitely

pieczęć urzędowa
official seal

[redacted]

Podpis upoważnionej osoby
Signature of duly authorized official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
OCHRONY PRZECIWPOŻAROWEJ
STOPIEŃ PODSTAWOWY

Certificate of Basic Safety Training in Fire Prevention & Fire Fighting

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Szczecin

Nr/No. [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish

Zaświadcza się niniejszym, że
This is to certify that

[redacted]

jest odpowiednio przeszkolony w zakresie bezpieczeństwa osobistego i odpowiedzialności społecznej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW

has been duly trained in personal safety and social responsibilities in acc. with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2014-09-19
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne bezterminowo
Valid indefinitely

[redacted]

Nazwisko i podpis upoważnionej osoby
Name and signature of duly authorized official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA W ZAKRESIE ELEMENTARNYCH ZASAD UDZIELANIA PIERWSZEJ POMOCY MEDYCZNEJ

Certificate of Basic Safety Training in Elementary First Aid

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Słupsku

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Slupsk

Nr/*No.* [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish

Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]
Nazwisko/Surname Imię/Name

[redacted]
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie podstawowym z Indywidualnych Technik Ratunkowych zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

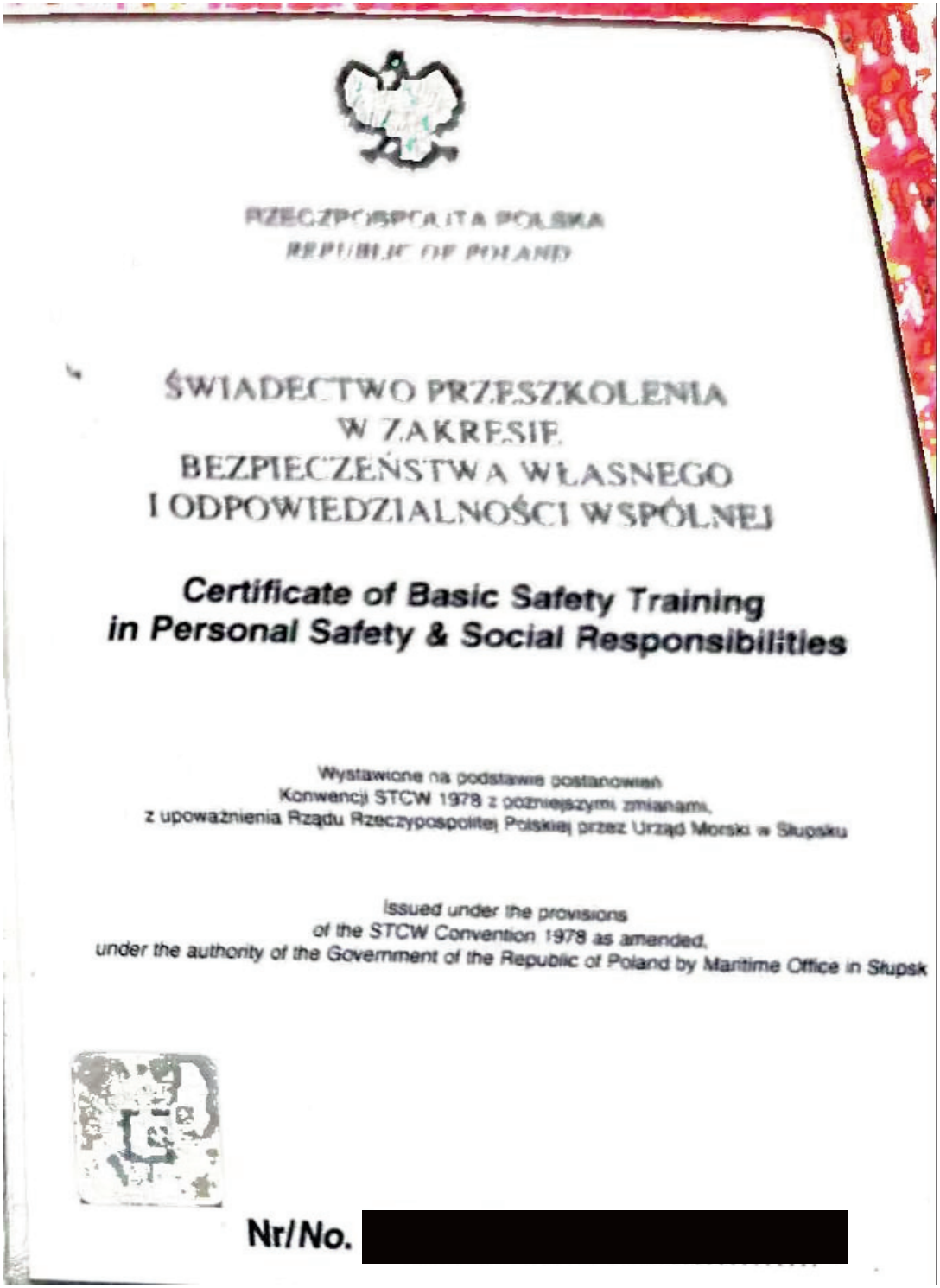
has been duly trained in Personal Survival Techniques in accordance with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2021-07-14
Miejsce i data wydania / Place and date of issue of this certificate

Ważne do
Valid till 2026-07-12

[redacted]
Nazwisko i podpis upoważnionej osoby

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
BEZPIECZEŃSTWA WŁASNEGO
I ODPOWIEDZIALNOŚCI WSPÓLNEJ

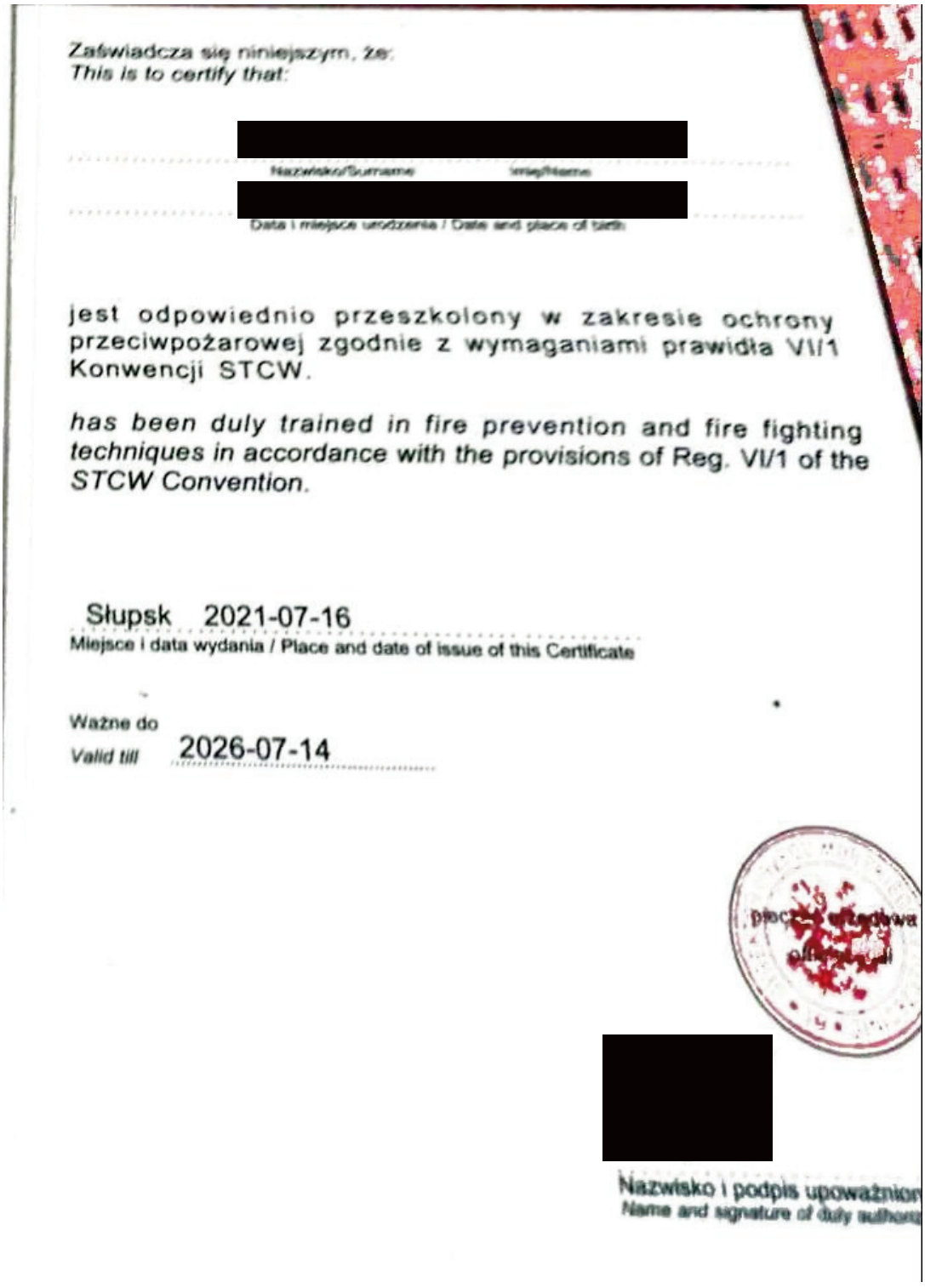
Certificate of Basic Safety Training
in Personal Safety & Social Responsibilities

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Słupsku

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Słupsk

Nr/No. [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember A Polish



Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]

Nazwisko/Surname Imię/Name

[redacted]

Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie ochrony przeciwpożarowej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

has been duly trained in fire prevention and fire fighting techniques in accordance with the provisions of Reg. VI/1 of the STCW Convention.

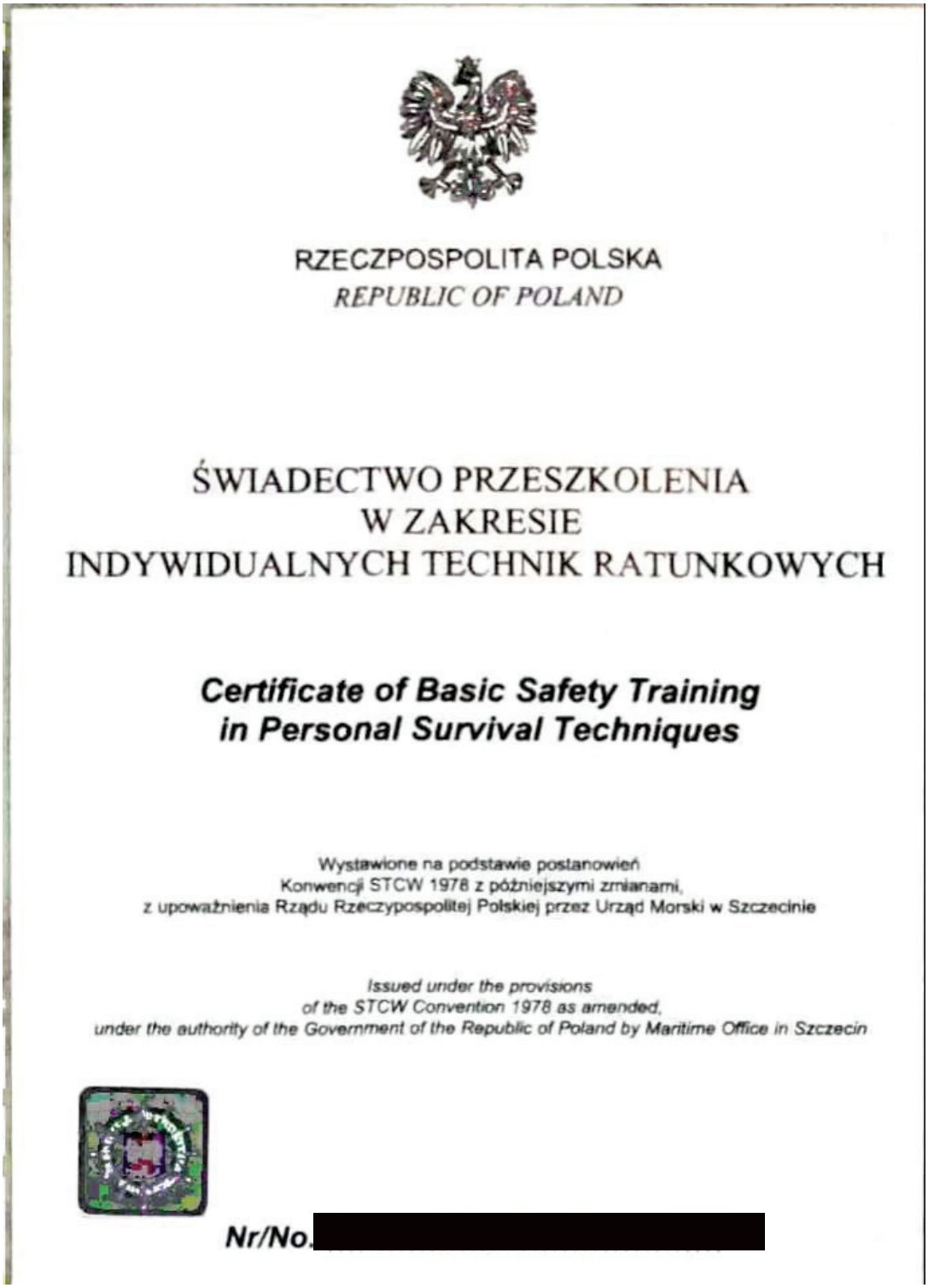
Słupsk 2021-07-16
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 2026-07-14

[redacted]

Nazwisko i podpis upoważnion
Name and signature of duly authoriz

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
INDYWIDUALNYCH TECHNIK RATUNKOWYCH

Certificate of Basic Safety Training in Personal Survival Techniques

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Szczecin

Nr/No. [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish

Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]
Nazwisko/Surname Imię/Name

[redacted]
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie podstawowym z Indywidualnych Technik Ratunkowych zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

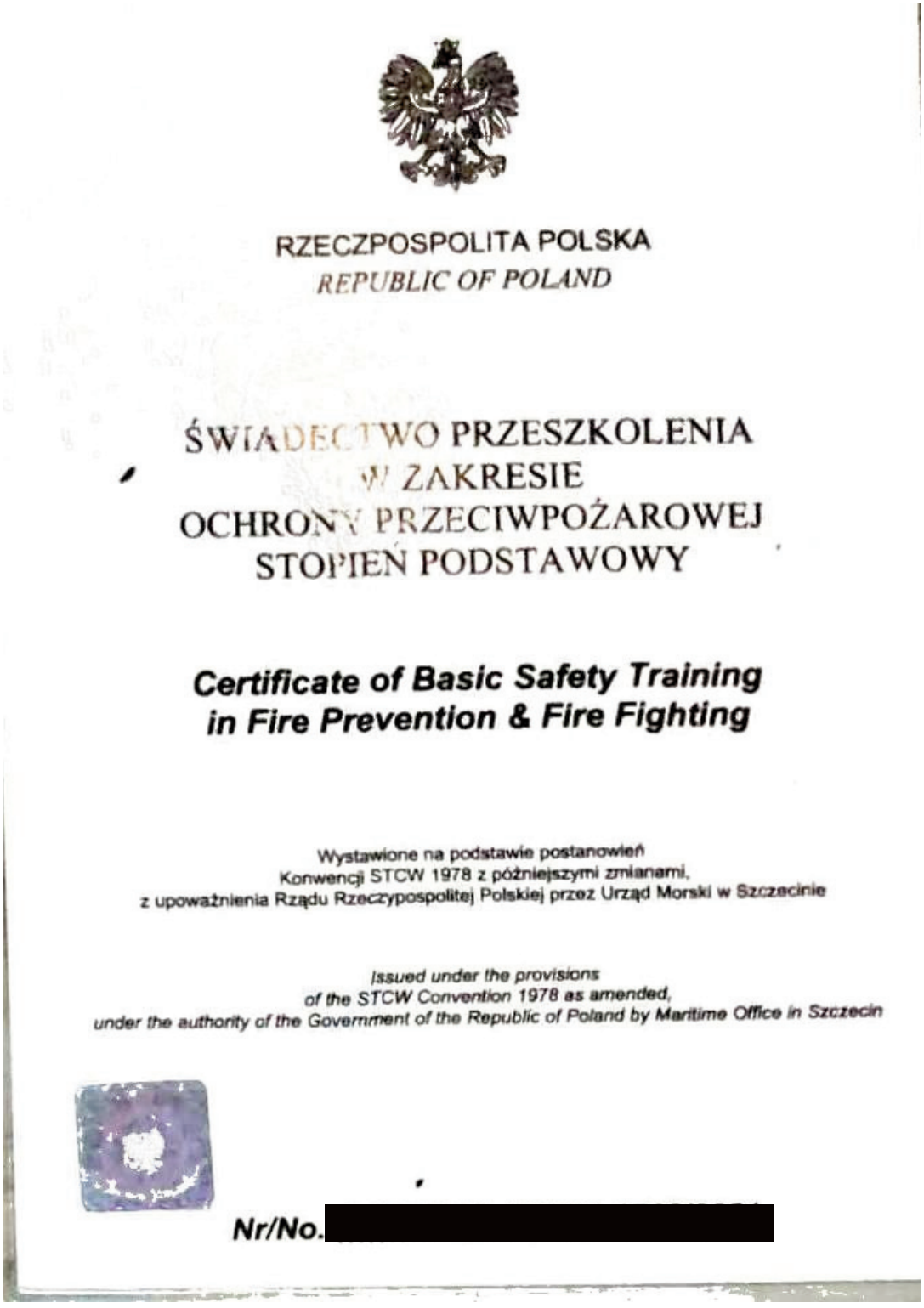
has been duly trained in Personal Survival Techniques in accordance with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2021-04-26
Miejsce i data wydania / Place and date of issue of this certificate

Ważne do
Valid till 2026-04-22

[redacted]
Nazwisko i podpis upoważnionej osoby
Name and signature of duly authorized official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
OCHRONY PRZECIWPOŻAROWEJ
STOPIEŃ PODSTAWOWY

Certificate of Basic Safety Training
in Fire Prevention & Fire Fighting

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Szczecinie

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Szczecin

Nr/No. [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish

Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]
Nazwisko/Surname Imię/Name
[redacted]
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie ochrony przeciwpożarowej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

has been duly trained in fire prevention and fire fighting techniques in accordance with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2021-04-30
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne do
Valid till 2026-04-28

[redacted]
Nazwisko i podpis upoważnionej osoby
Name and signature of duly authorized official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish

RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA W ZAKRESIE ELEMENTARNYCH ZASAD UDZIELANIA PIERWSZEJ POMOCY MEDYCZNEJ

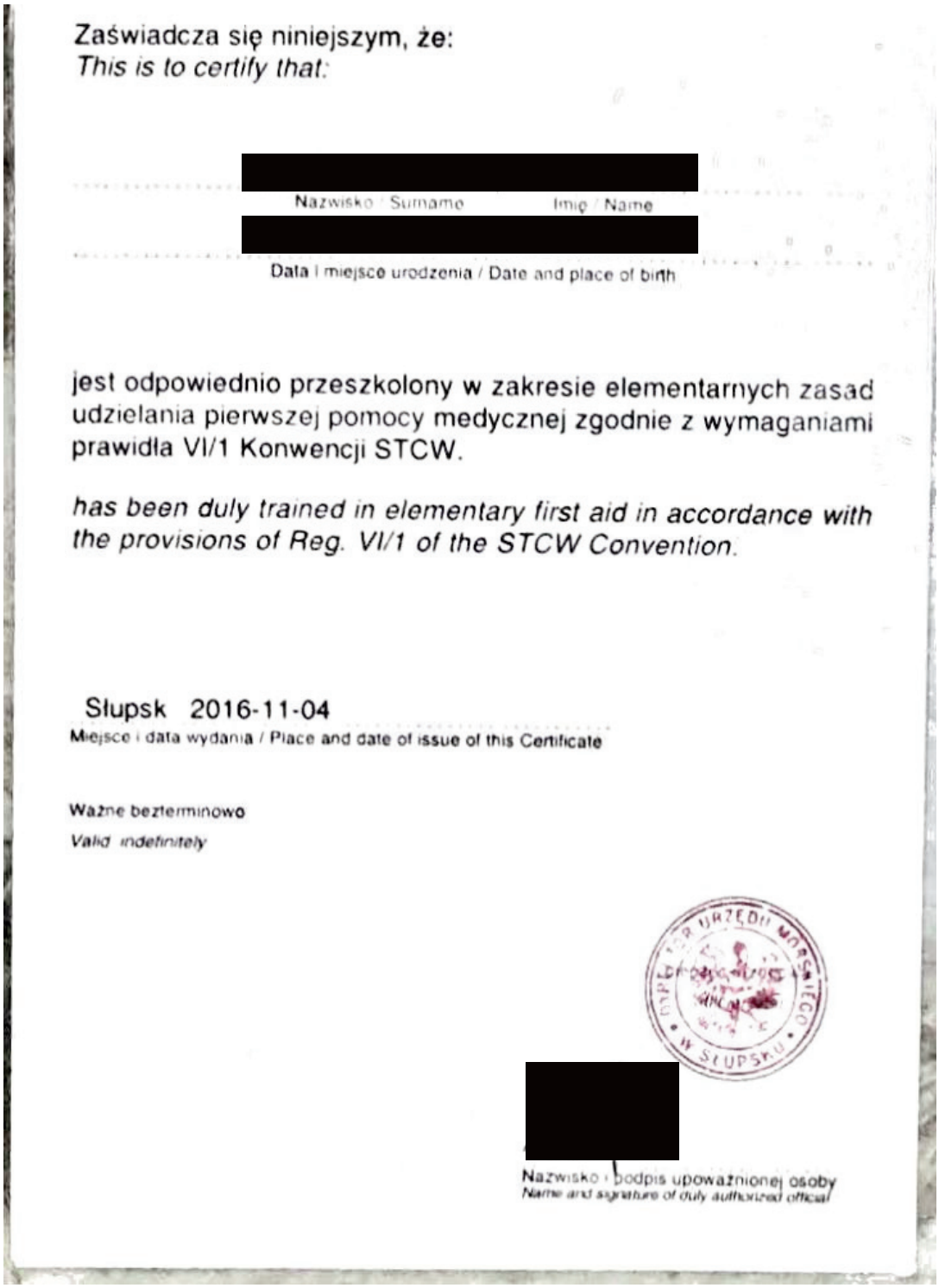
Certificate of Basic Safety Training in Elementary First Aid

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Słupsku

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Słupsk

Nr/*No.* [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish



Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]
Nazwisko / Surname Imię / Name
[redacted]
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie elementarnych zasad udzielania pierwszej pomocy medycznej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

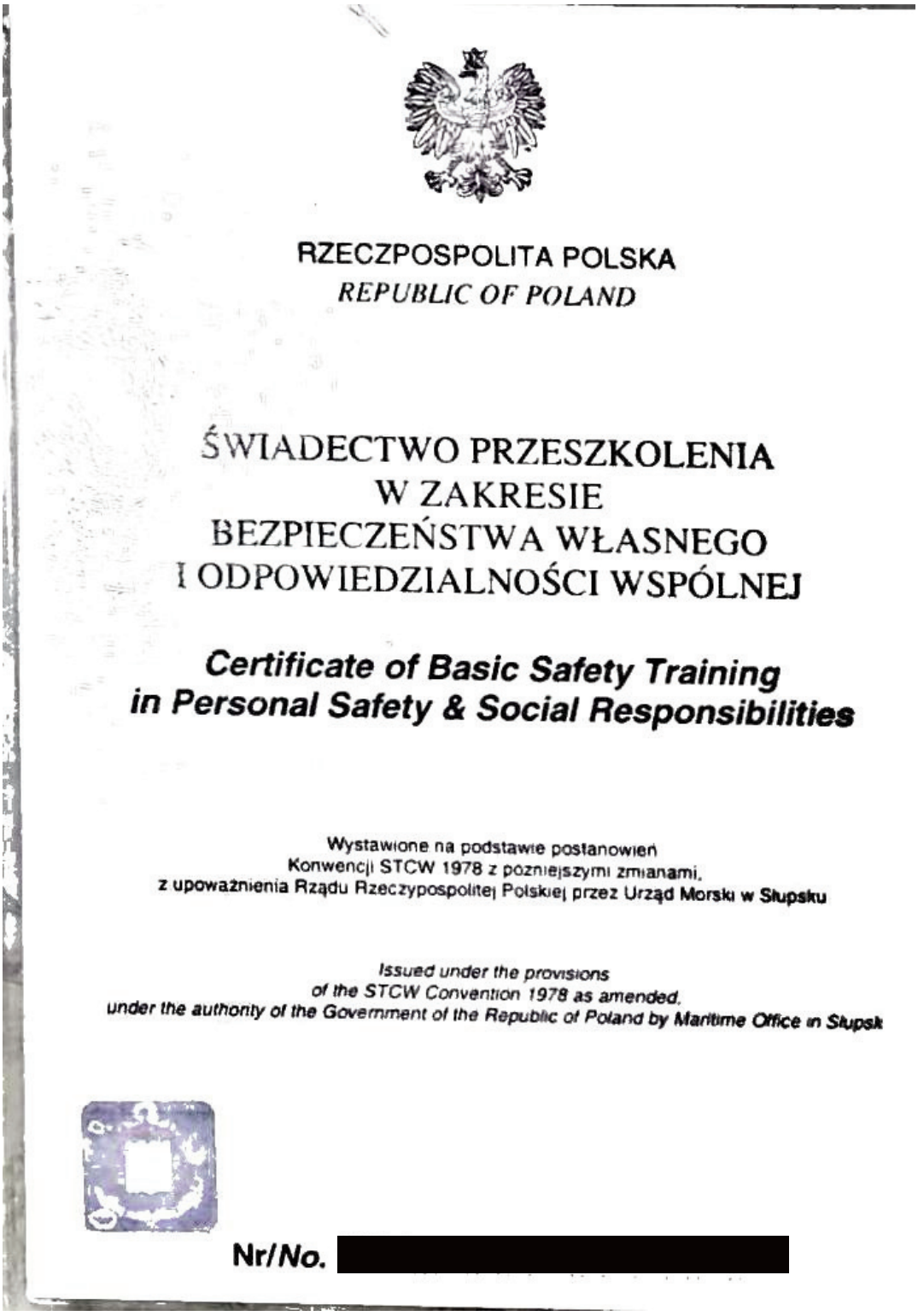
has been duly trained in elementary first aid in accordance with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2016-11-04
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne bezterminowo
Valid indefinitely

[redacted]
Nazwisko i podpis upoważnionej osoby
Name and signature of duly authorized official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish



RZECZPOSPOLITA POLSKA
REPUBLIC OF POLAND

ŚWIADECTWO PRZESZKOLENIA
W ZAKRESIE
BEZPIECZEŃSTWA WŁASNEGO
I ODPOWIEDZIALNOŚCI WSPÓLNEJ

Certificate of Basic Safety Training
in Personal Safety & Social Responsibilities

Wystawione na podstawie postanowień
Konwencji STCW 1978 z późniejszymi zmianami,
z upoważnienia Rządu Rzeczypospolitej Polskiej przez Urząd Morski w Słupsku

Issued under the provisions
of the STCW Convention 1978 as amended,
under the authority of the Government of the Republic of Poland by Maritime Office in Słupsk

Nr/*No.* [redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Crewmember B Polish

Zaświadcza się niniejszym, że:
This is to certify that:

[redacted]
Nazwisko/Surname Imię/Name
[redacted]
Data i miejsce urodzenia / Date and place of birth

jest odpowiednio przeszkolony w zakresie bezpieczenstwa osobistego i odpowiedzialności społecznej zgodnie z wymaganiami prawidła VI/1 Konwencji STCW.

has been duly trained in personal safety and social responsibilities in acc. with the provisions of Reg. VI/1 of the STCW Convention.

Słupsk 2016-11-04
Miejsce i data wydania / Place and date of issue of this Certificate

Ważne bezterminowo
Valid indefinitely

DYREKTOR URZĘDU MORSKIEGO W SŁUPSKU

[redacted]
Nazwisko i podpis upoważnionej osoby
Name and signature of duly authorised official

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas Certificate of Classification 2019

BUREAU VERITAS

INTERNATIONAL CLASSIFICATION SOCIETY

CERTIFICATE OF CLASSIFICATION

Nr LDR0/SMC/20190215105508

ELLIE ADHAMH
Ship's Name

03890F
Register Nr

IRELAND
Flag

WEXFORD
Port of Registry

[redacted]
Owners

This is to certify that the above named ship has been entered in the Bureau Veritas Register Book with the following classification symbols and notations

I ✠ HULL • MACH
Fishing vessel
Unrestricted navigation

This certificate is issued within the scope of Bureau Veritas Marine & Offshore General Conditions.

At CASTLETOWNBERE on 19 February 2019

Limit date of validity **10 October 2023**

[redacted]

By Order of the Secretary

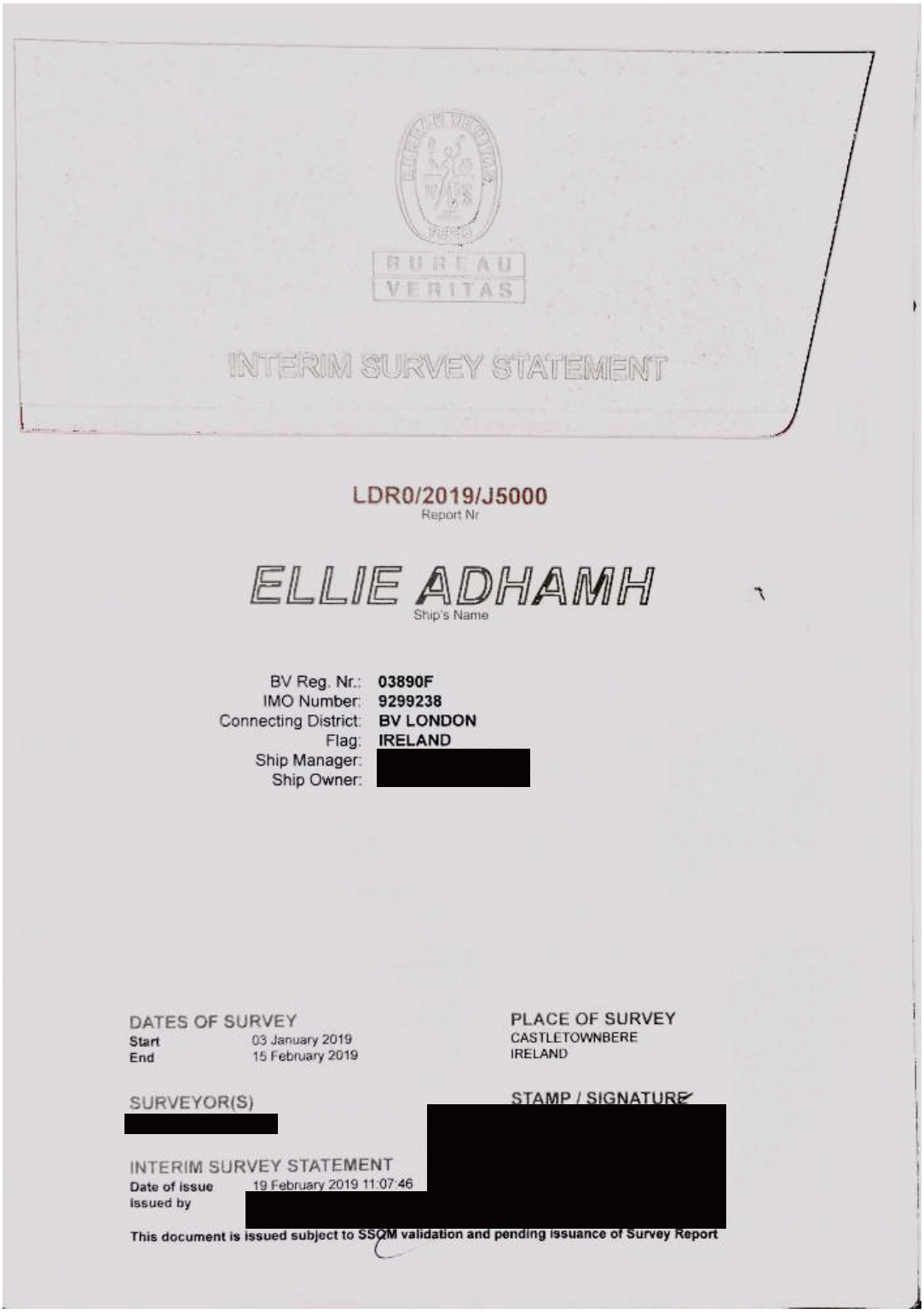
[redacted]

Conditions and endorsements overleaf.

Any person not a party to the contract pursuant to which this certificate is delivered may not assert a claim against Bureau Veritas for any liability arising out of errors or omissions which may be contained in said certificate, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in the establishment or issuance of this certificate, and in connection with any activities which it may provide for.

1/2

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Bureau Veritas Certificate of Classification 2019



BUREAU VERITAS

INTERIM SURVEY STATEMENT

LDR0/2019/J5000
Report Nr

ELLIE ADHAMH
Ship's Name

BV Reg. Nr.: **03890F**
IMO Number: **9299238**
Connecting District: **BV LONDON**
Flag: **IRELAND**
Ship Manager: [redacted]
Ship Owner:

DATES OF SURVEY
Start 03 January 2019
End 15 February 2019

PLACE OF SURVEY
CASTLETOWNBERE
IRELAND

SURVEYOR(S) [redacted]

STAMP / SIGNATURE [redacted]

INTERIM SURVEY STATEMENT
Date of issue 19 February 2019 11:07:46
Issued by [redacted]

This document is issued subject to SSQM validation and pending issuance of Survey Report

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas Invoice and Time Sheet 2019

INTERNATIONAL REGISTER FOR CLASSIFICATION OF SHIPS,
ESTABLISHED 1828.

TIMESHEET

Job Number : LDR0/2019/J5000
BV Number : 03890F **Ship name : ELLIE ADHAMH**

The undersigned [redacted] acting in his capacity as Manager,
confirms the visit and the time spent hereunder :

Surveyor : [redacted]

Date (dd/mm/yyyy)	Survey Time		Of Which*		Travel Time
	Periodical Survey	Occasional Survey	Overtime 50%	Overtime 100%	
03/01/2019	3.0				5.0
04/01/2019					4.5
09/01/2019	1.5				10.0
11/02/2019					4.5
12/02/2019	3.0				4.5
14/02/2019	3.0				5.0
19/02/2019	1.0				5.0

* Non working hours as per local regulation

Attendance :
Number of hours of attendance for thickness measurements :
Number of days of attendance at sea :

At Castletownbere Date/Signature (Client) 19/02/2019

The latest published Bureau Veritas Marine & Offshore General Conditions are applicable
The Bureau Veritas Marine & Offshore General Conditions are available at www.veristar.com

Page 1/1

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Bureau Veritas Invoice and Time Sheet 2019

7 Aug £5,250.00
19 Aug £5,250.00
4563

BUREAU VERITAS

[redacted]

INVOICE ORIGINAL

Bureau Veritas branch UK
2nd Floor Atlantic House
Atlas Business Park
Simonsway
Wythenshawe
MANCHESTER

Issuing Office: London GGH
Tel: 44 (0)207 550 8900
Fax: 44 (0)207 089 7085
Direct contact: [redacted]
Te[redacted]

VAT ID: GB 725 4402 54

Cust No: 836824 Customer VAT ID:

Your Ref: ELLIE ADHAMH

INVOICE No: 19001771
Date: 12/04/19
Reference to be quoted when paying

Contract No: 82455282
Ref BV: LDR0/2019/J5000

Signed on:
Reg no: 03890F

Comments: Owne[redacted]

Service rendered to:

Ship:ELLIE ADHAMH - 03890F - IMO:9299238
Survey carried out at CASTLETOWNBERE, IRELAND
From :03/01/19 to : 15/02/19 by [redacted]
As per job no. LDR0/2019/J5000

Date of completion of services: 15/02/19

Service	VAT %	Net Total
Fees		13,646.40
Expenses		2,063.63

Due Date: 12/05/19
Payment Conditions: 30 days net

Net Amount: 15,710.03
VAT Amount: 0.00

Payment to: Cheque To:
Bureau Veritas
2nd Floor, Atlantic House
Atlas Business Park
Manchester M22 5PR
ACC No : 96774118
Make cheques payable to BV SA

BACS Transfer To:
National Westminster Bank
London , SE1 1TT
Sort Code: 51 50 03
Swift Code = NWBKGB2L
IBAN GB 18NWBK51500396774118
ACC Name : Bureau Veritas SA

TOTAL 15,710.03

Currency GBP

Form: UK04132

BU: 132545 SM: 00014534 PC: N10 Page: 1 of 1

BUREAU VERITAS
SA i.e Société Anonyme
Au Capital de 52 978 224 Euros

Head Office
67/71 boulevard du Château
92200 Neuilly-sur-Seine
France

RCS Nanterre B775690621
SIRET 775 690 621 04320 APE 7120B

Invoice issued in accordance with our general conditions

£5250 paid

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Ellie Adhamh Insurance

Sunderland Marine

Fixed Premium Insurance from North

D&D Insurances Limited
Block A - Unit 3
Nutgrove Office Park
Rathfarnham
Dublin 14
Ireland

OUR REFERENCE :21/32/13.03
POLICY NUMBER :000023/S/002972
DOCUMENT REF :336529/01
DATE :23 March 2021
PAGE NUMBER :1

CERTIFICATE OF INSURANCE

THIS IS TO CERTIFY that in consideration of the payment of premiums (contributions) as agreed and subject to the terms conditions and amounts set out below and the General Conditions of Sunderland Marine, the following insurances have been effected.

Authorised Signatory [redacted]

VESSEL NAME : ELLIE ADHAMH WD206
OWNER : R&E Fish Ltd

PERIOD OF COVER : 00:00 GMT - 13 March 2021 TO 23:59 - 12 March 2022

DETAILS OF COVER	SUM INSURED EUR
Hull & Machinery	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas 2020 Defect List and Emails

BUREAU VERITAS

International Register for Classification of Ships – Established 1828 –
Registre International de Classification de Navires – Fondé en 1828

MARINE & OFFSHORE

Attestation

Vessel: *ELLIE ADHAMH*
Reg. Owner: [redacted]
BV Reg. Nr: 03890F
IMO Number: 9299238
Vessel Type: Trawler
Gross Tonnage: 230
Date of build: 10 MAR 2004

The undersigned, Surveyor to Bureau Veritas, acting within the scope of the General Conditions of the Marine Division attended the vessel at Castletownbere for annual survey, hull and machinery.

The following items are to be completed for annual survey.

- Fish hold Bilge suction to be unblocked, Area to be cleared of debris, old hatch cover to be removed
- Anchor clutch to be repaired (currently not disengaging)
- 4 x tank vent seals to be replaced
- FW filling pipe – threaded end to be repaired & cap to replace
- Emergency Fi-Fi pump start battery to be secured
- Decks to be de-greased in Fish Room
- Unsecured Fuel tank in fish room to be removed
- Telegraph system to be repaired
- Horn to repair
- Emergency light to be repaired in steering gear

This list is not exhaustive and may be added to at any during next attendance

Issued at: CASTLETOWNBERE on the 20th January 2020

Skipper: [redacted]

[redacted]

The latest published Rules of the Bureau Veritas Marine & Offshore Division and the General Conditions therein are applicable.
La dernière edition des Reglements de la Direction Marine du Bureau Veritas ainsi que les Conditions generales qui y figurent sont applicables

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Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas 2020 Defect List and Emails

 # Ref : CLO/2020/001086/DH – Re: FW: Ellie Adhamh annual survey
1 message

<gbr_clo@uk.bureauveritas.com> Mon 3 Feb 2020 at 11:19
Reply to: [redacted]
To: [redacted]
Cc: [redacted]

Good morning,

I draw your attention to the following extract of our Part A Rules (Pt A, Ch 3, Sec 1):-

- confirmation that the engine-room telegraph, the second means of communication between the navigation bridge and the machinery, and the means of communication with any other position, from where the engines can be controlled, operates satisfactorily

Therefore based on the above, this is a requirement.

Trusting this assists.

Regards,

[redacted]
Marine Customer Centre
Bureau Veritas - Marine Division
Suite 1, Keel House, Tyne Dock, South Shields, Tyne and Wear, NE34 9PY
[redacted]
www.bureauveritas.co.uk
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---------- Original Message by [redacted] GBR/VERITAS-------

Memo Received No : NCT/2020/002906

Created by : [redacted]

Send To : [redacted]

Copy To :

Subject : FW: Ellie Adhamh annual survey

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas 2020 Defect List and Emails

Can you please check with flag and advise the client

[redacted]

From: [redacted]
Sent: 02 February 2020 18:41
To: [redacted]
Subject: Ellie Adhamh annual survey

[redacted]

Please see list of completed works from 20/01/2020 annual survey.
There is one item not resolved yet. The electrician was unable to repair the engine order telegraph for the wheelhouse. I am trying to purchase one but no company will sell me the screen seperatly.
Could you double check if the telegraph is a requirement for our vessel? [redacted] was saying that it mightnt be, but the fact that the unit is there it should be working to pass the survey.
So if it is not a requirement perhaps I could remove it in order to pass?

- Fish hold bilge suction is unblocked, and the debris removed, and floors degreased
Old hatch cover removed
-Anchor has been repaired (wheel reconnected to disengage)
-Tank vent seals replaced
-FW water filling pipe fitted
-Emer fuel pump Batt secured
-Temporary fuel cube on factory floor removed
-Horn repaired
-Emergency light replaced in wheel house

Kind-Regards,
[redacted]
R&E FISH LTD

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Bureau Veritas 2020 Defect List and Emails

ELLIE ADHAMH telegraph
1 message

[redacted] Wed 4 Mar 2020 at 11:12

Dear [redacted]

Regarding classification for your vessel *ELLIE ADHAMH*.

[redacted] says you had trouble getting the telegraph repaired.

I can ask for an exemption to be made for the telegraph.

For this to be considered the attached list will need to be completed and in place of the telegraph there will need to be an alternative way to communicate between the engine room and wheelhouse.

A working talk-back system, made for machinery spaces would do the job.

If you would like to discuss the matter further, please give a call.

With best regards,

[redacted]
w: www.bureauveritas.co.uk
Bureau Veritas UK | Suites 1 & 2, Keel House, Tyne Dock,
South Shields, Newcastle Upon Tyne NE34 9PY

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Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Marine Survey Office Initial Survey

SUR 2200 Rev 1.01 (11/09

DECLARATION OF SURVEY

FISHING VESSEL SAFETY CERTIFICATE (15m – 24m)

GENERAL PARTICULARS

Name of Ship	Fishing Letters & Numbers	Distinctive Letters	Port of Registry	Length (L)	Length Overall (Loa)	Sea areas in which ship is certified to operate
Ellie Adhamh	WD206	EI7536	Wexford	23.47	25.00	A1, A2

Name of Owner	[redacted]	Date on which the keel was laid or ship was at a similar stage of construction	01 January 2003
Address of Owner	[redacted]	Is vessel in Class	Yes
Medical Equipment	B	Expiry Date of Class	

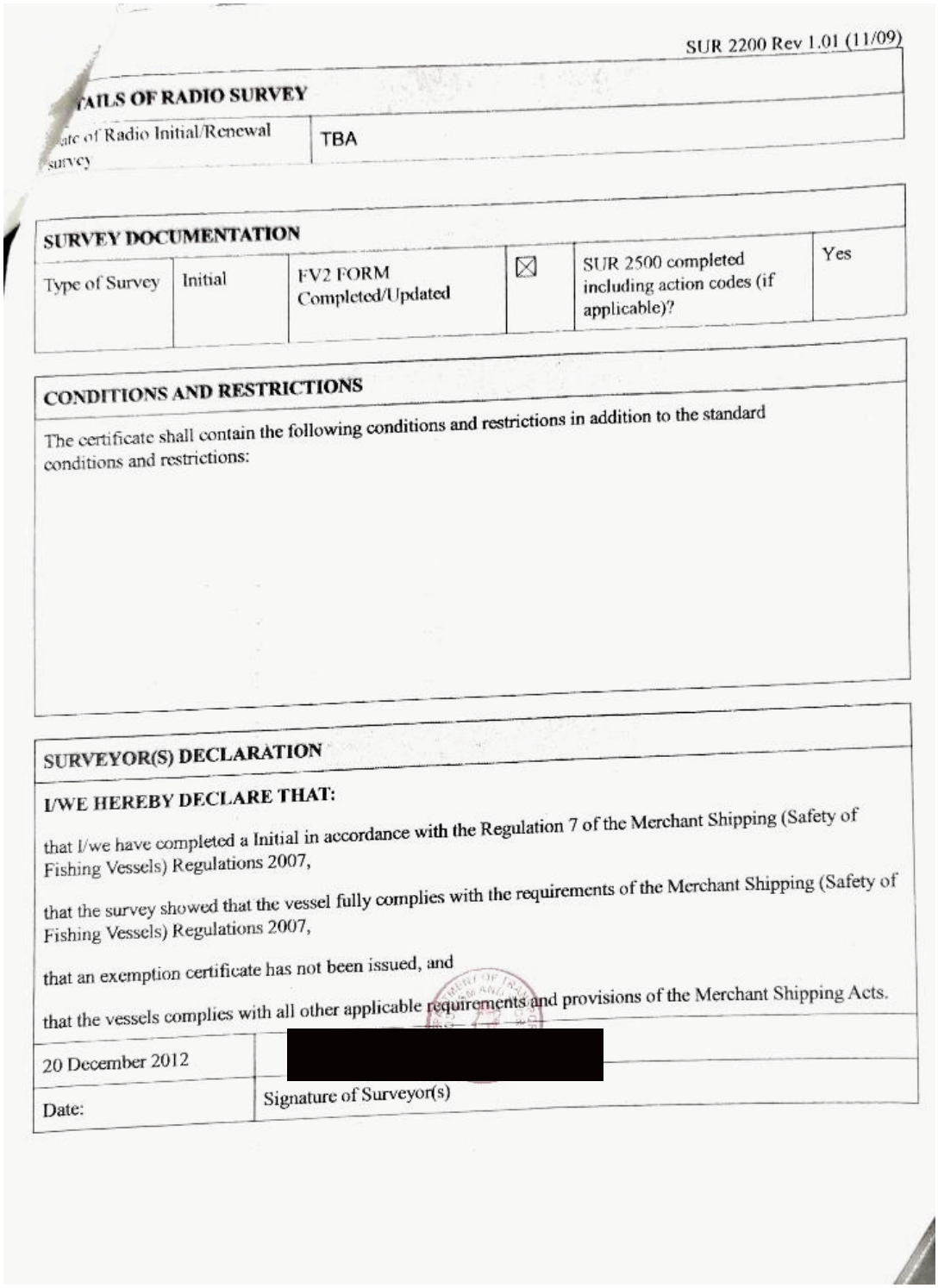
STABILITY

Type of Approval	Final	Date of Approval	15 June 2009
Operation in Icing Regions (Regulation 37)	not permitted	Is Bulk Loading of the catch permitted	permitted
Maximum permitted draught	4.70 metres	Is the catch allowed to be stowed on deck	not permitted

CERTIFICATION

Type of certificate	Full Term	Exemption Certificate	has not been issued
Issued at	Cork	Date of Expiry of Full Term	18 December 2016
Hull Bottom Date	19 December 2012	Date of Expiry of Interim	19 March 2013
Date of Issue	20 December 2012	Type of Survey	an Initial

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Marine Survey Office Initial Survey



SUR 2200 Rev 1.01 (11/09)

TAILS OF RADIO SURVEY

ate of Radio Initial/Renewal survey	TBA

SURVEY DOCUMENTATION

Type of Survey	Initial	FV2 FORM Completed/Updated	☒	SUR 2500 completed including action codes (if applicable)?	Yes

CONDITIONS AND RESTRICTIONS

The certificate shall contain the following conditions and restrictions in addition to the standard conditions and restrictions:

SURVEYOR(S) DECLARATION

I/WE HEREBY DECLARE THAT:

that I/we have completed a Initial in accordance with the Regulation 7 of the Merchant Shipping (Safety of Fishing Vessels) Regulations 2007,

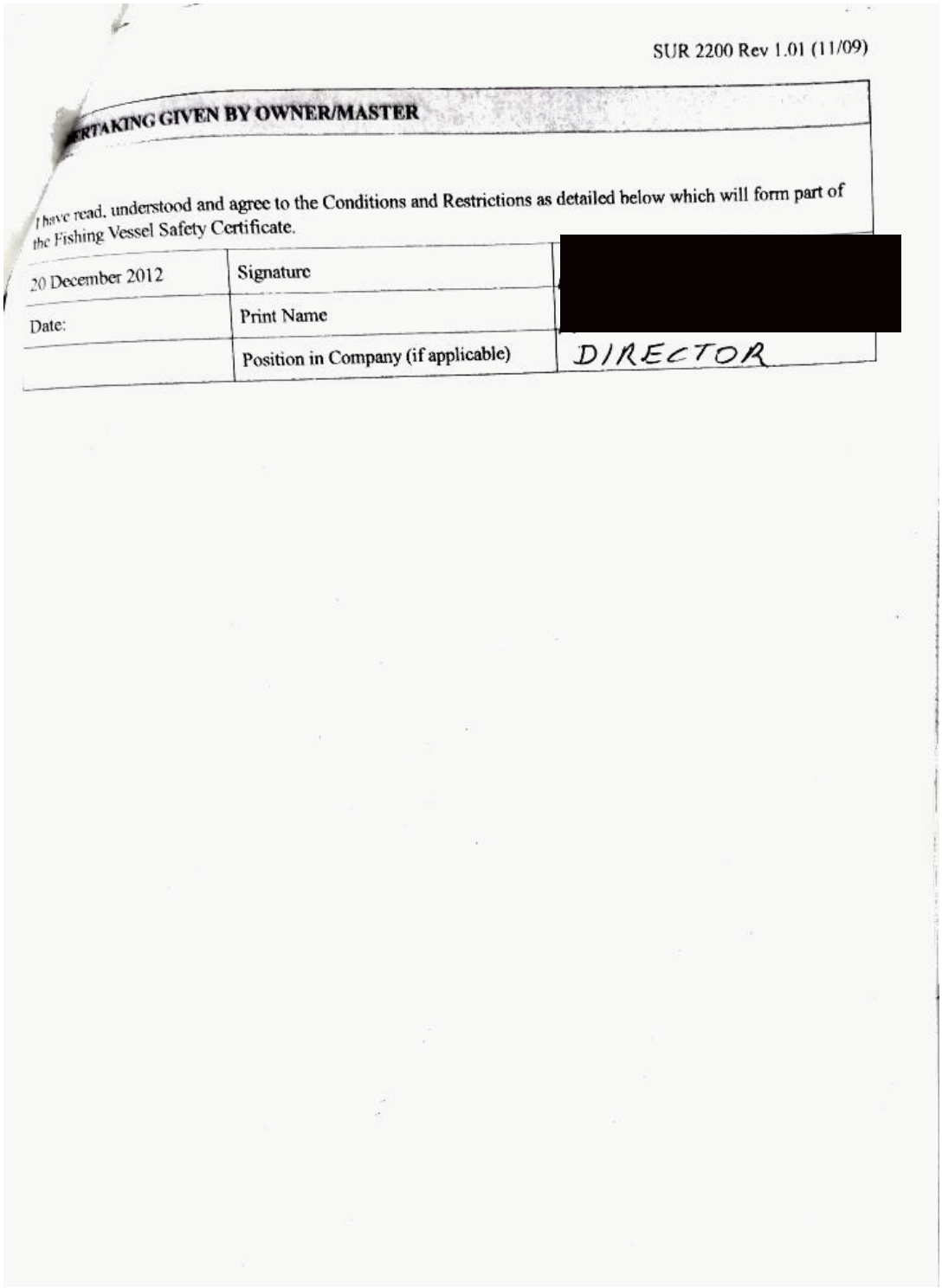
that the survey showed that the vessel fully complies with the requirements of the Merchant Shipping (Safety of Fishing Vessels) Regulations 2007,

that an exemption certificate has not been issued, and

that the vessels complies with all other applicable requirements and provisions of the Merchant Shipping Acts.

20 December 2012	[redacted]
Date:	Signature of Surveyor(s)

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Marine Survey Office Initial Survey



SUR 2200 Rev 1.01 (11/09)

ERTAKING GIVEN BY OWNER/MASTER

I have read, understood and agree to the Conditions and Restrictions as detailed below which will form part of the Fishing Vessel Safety Certificate.

20 December 2012	Signature	[redacted]
Date:	Print Name	
	Position in Company (if applicable)	DIRECTOR

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response Marine Survey Office Initial Survey

Certified Copy page 1 of 3

CERT 2200 Rev 1.00 (11/09)

FISHING VESSEL

SAFETY CERTIFICATE

This certificate of compliance shall be supplemented by a record of equipment

Issued under the Merchant Shipping (Safety of Fishing Vessels) (15-24 Metres) Regulations 2007 (S.I. No. 640 of 2007)

under the authority of the Government of Ireland

by The Department of Transport.

Name of Ship	Fishing Letters & Numbers	Official & IMO Numbers	Port of Registry	Length (L)	Length Overall (Loa)	Sea areas in which ship is certified to operate
Ellie Adhamh	WD206	EI7536	Wexford	23.47	25.00	A1, A2

Date on which the keel was laid or ship was at a similar stage of construction (3) 01 January 2003

THIS IS TO CERTIFY:

1. that the ship has been surveyed in accordance with Regulation 7 of the Merchant Shipping (Safety of Fishing Vessels) Regulations 2007

2. that the survey showed that:
   1. the conditions of the hull, machinery and equipment, as defined in the above Regulations was in all respects satisfactory and that the vessel complied with the applicable requirements;
   2. the maximum permissible operating draught associated with each operating condition for the vessel is contained in the stability booklet dated 15 June 2009;
3. that an Exemption Certificate has not been issued.

This Certificate is valid until 18 December 2016subject to surveys in accordance with Regulation 7(1)(b)(ii), (b)(iii) and (c).

Issued at Cork (place of issue of Certificate) 20 December 2012 (date of issue)

(signed) [redacted]

An authorised officer of the Department of Transport.

(seal or stamp of issuing authority)

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response
Marine Survey Office Initial Survey

Certified Copy page 3 of 3.

CERT 2200 Rev 1.00 (11/09)

Radio surveys

THIS IS TO CERTIFY that, at a survey as required by Regulation 7(1)(b)(iii), the vessel was found to comply with the relevant requirements.

First periodical radio survey:

Signed:
(An authorised officer of the Department of Transport.)

Place: _____

Date: _____

(seal or stamp of issuing authority)

Endorsement for intermediate survey

THIS IS TO CERTIFY that, at a survey as required by Regulation I/6(1)(c), the vessel was found to comply with the relevant requirements.

Signed: [redacted]
(An authorised officer of the Department of Transport.)

Place: Rosslare Harbour.

Date: 10th November 2015.

(seal or stamp of issuing authority)

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Correspondence 8.1 Correspondence from Owner (1st Draft Report) and MCIB response

Video footage received. CLICK HERE to view

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.2 Correspondence from Macduff Ship Design Ltd and MCIB response

From: [redacted]
Subject: RE: Investigation into a marine casualty involving the fishing vessel Ellie Adhamh
Date: 27 July 2023 at 11:00
To:
Cc: [redacted]

IE

Dear [redacted]

Thank you for the provision of the draft report into the sinking of the fishing vessel Ellie Adhamh, and the oportunity to respond.

We would make a couple of notes and requests.

We would ask that it is made clear that as designers of the vessel we were not consulted on the movement or design of the revised waste discharge chute or the removal of the deck sumps and pumps.

On p38 section 3.18 refers to *'Freeing ports are the normal means for clearing entrapped water off a deck located above the vessels load line.'* We would note that this is only true for a non-watertight deck or deck above the freeboard deck. Vessels such as the Ellie Adhamh which have fully enclosed watertight structures cannot have freeing ports in these areas as this renders the area non watertight. In these cases, the vessel has pumped bilge systems fitted to discharge any water that may be introduced into the area by the processing equipment. These areas are watertight and are arranged with closures to prevent water ingress. The paragraph in question would seem to imply that freeing ports would normally have been fitted in this area which is not the case and would not comply with MSO regulation.

Best Regards
For Macduff Ship Design Ltd

[redacted]
Managing Director

[redacted]
Web Site:- www.macduffshipdesign.com

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UNITED KINGDOM

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.3 Correspondence from Crewmember and MCIB response

From: [redacted]
Subject: Re: Draft Report of an Investigation into a marine casualty involving the fishing vessel Ellie Adhamh, off the coast of Co Cork on 28 March 2021
Date: 1 August 2023 at 12:30
To: Marine Casualty Investigation Board MarineCasualtyInvestigationBoard@mcib.ie

AS

Thank You for the answer, i agree with the documents.

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.4 Correspondence from Skipper and MCIB response

13/09/2023

To The MCIB,

There was a lot written in the draft report that I found to be untrue and statements made that I never recall saying to the investigator. I knew that the owners were going to be writing a reply to clear things up but have now learned that you consider this to be hearsay. I can confirm what the owners said to be true below-

Once the MFV Monica headed for port on the 26/03/2021 I had no way of contacting or relaying messages to the owners. I did request a call be relayed to the owners through the navy but they denied that request. I also requested a spare breaker from the coastguard and Navy.

On the 26/03/2021 the coastguard advised me to activate the EPIRB so that our position was known, it was not because we were in danger at this time.

I confirm that the Ellie Adhamh had little to no water aboard for 33hrs after the power was lost. We had travelled over 110nm towards the coast from the time of the power failure to the time that the Navy took us under tow.

At 05:00 on the 27/03/2021 I asked the Captain of the George Bernard Shaw was it possible if he could launch his rib and get the tow connected as the wind had died down but was forecast to deteriorate later. He told me negative as it was too dangerous. Afterwards the Navy ship made manoeuvres in various directions to check the vicinity for traffic. At approximately 0700 to 0730 on the 27th of March 2021 the George Bernard Shaw made and attempt to approach the Ellie Adhamh proceeding downwind. The seas were about 25ft to 30ft and wind at this time was gusting 40kts to 45 kts. The George Bernard Shaw came downwind which I though was crazy to be honest. Having experience as a fisherman and pair trawling I know that you would not go downwind on top of another vessel. The George Bernard Shaw approached the Ellie Adhamh, went up on a swell and struck the Ellie Adhamh on the starboard side. The George Bernard Shaw went full ahead to get away from us. The George Bernard Shaw then contacted me on the VHF channel 67 and told me that he was going to try again. I advised that he should approach upwind and attach the tow from that direction. The George Bernard Shaw didn't come close and shot a rocket line which completely missed.

At this time one of my deckhands came up with an idea to throw a lifebuoy and allow it to drift away from the Ellie Adhamh so that he could pick up the tow line. The lifebuoy was thrown upwind and allowed the vessel to drift away approximately 100m. A line was secured.

It was once towing commenced and after the collision that I noticed more water on deck.

On the 27/03/2021 when we were under tow by the Navy and about 10nm from the Bullrock I asked the Captain of the Navy to slow the tow so the water could settle and I could pump water from the deck. The Captain ordered me to launch a life raft. The Captain replied negative and he would turn head to wind to allow the pumping of the water. I went down to the main deck and pumped out the water to a low level to about 1 to 2 foot of water on deck. I returned to the wheelhouse and confirmed to the George Bernard Shaw that I had the water

Correspondence 8.4 Correspondence from Skipper and MCIB response

pumped out and that we could resume the tow towards Castletownbere in an Easterly direction. He overruled my decision and ordered us to abandon ship. This was approximately 1600 on the 27th of March 2021. I requested to the Captain of the George Bernard Shaw that I did not see fit to abandon ship as the water condition onboard the Ellie Adhamh was under control. As master of the vessel, I did not want to abandon ship and strongly recommended that we make haste for Castletownbere. The Captain of the George Bernard Shaw replied that he did not want to turn as if he did he was concerned that he might break the tow which would make it difficult to get the crew off. I found this ironic as we had been towing across the weather all day and turning away from the weather should have been an easier turn. I was overruled at this stage.

The Captain of the George Bernard Shaw requested me to launch a liferaft. It was lost and I was ordered to launch the second one, which was also swept away as we were still making headway being towed by the George Bernard Shaw.

I received a phone call from the Captain of the Naval Vessel after the boat sank. He said he was sorry and that he had to think of his crew and get them to safety because they were taking on water in their fore locker.

I don't recall telling the investigator that a spindle of the waste chute was missing or that the lid was leaking. I told the investigator that the water was entering through the rubber bushing of the lever of the chute and it was a gap no bigger than a garden hose.

From my time on the Ellie Adhamh I never recall water entering the waste chute while it was closed.

I confirm that the chute was inspected by myself and the owner in January 2021. There were no issues with it at this time.

I confirm that the fish room hatch door was secured closed from the 27/03/2021 and was closed when I left the trawler. Myself and the owner tested the hatch for watertightness in January 2021 and there were no issues with it.

I can confirm that the starboard aft deck pump was operating during the final trip. It was not welded blocked.

I don't recall saying to the investigator '*that three deck pumps on the starboard side had been considered redundant*'. I confirm that this was not the case.

No crew members were responsible for the operation of the ship and fishing operations. That is the job of the skipper.

I do not recall saying to the investigator that I asked the owner to procure a spare breaker switch. I confirm that I did not make this request.

Regards,

[redacted]

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

From: (null)
Subject: FW: Ellie Adhamh Section 36 response
Date: 30 October 2024 at 09:43
To:

From: [redacted]
Sent: Thursday, August 31, 2023 5:30 PM
To: Marine Casualty Investigation Board <MarineCasualtyInvestigationBoard@mcib.ie>
Subject: Ellie Adhamh Section 36 response

#Ref: CDR/2023/000174/ELB

Dear sirs,

Further to the below emails from MCIB, please find our following comments :

- On page 2, "Kilovot" should read "Kilovolt"
- on paragraph 1.8 of page 4, "Discard" should read "Discharge"
- on paragraph 2.4.2 of page 8, "twelve" should read "eleven"
- on paragraph 2.4.7 of page 9, "referenced" should read "by reference"' and "conduct of the surveys" should read "conducted surveys"
- Concerning paragraph 2.4.8 of page 10, please be informed that the class of Ellie Adhamh was suspended in 2005 and withdrawn by BV between 2006 and 2008. Moreover, "12 July" should read "11 January".
- on paragraph 2.4.10 of page 10, "September 2017" should read "October 2016"
- on paragraph 2.4.19 of page 12, "Elli" should read "Ellie"
- on paragraph 3.7 of page 36, the sentence "Both vessels were approximately 55 NM from the homeport of Castletownbere; the weather was worsening and the and sea swell was forecast to increase to heavy swells that evening" should read "Both vessels were approximately 55 NM from the homeport of Castletownbere; the weather was worsening and the sea swell was forecast to increase to heavy swells that evening."
- 3.18 page 38
- The first sentence of paragraph 4.1.7 in page 44 should read "FV Ellie Adhamh was constructed in accordance with Bureau Veritas rules and MSO approval".
- The first sentence of paragraph 4.6.5 in page 48 should read "The Waste Overboard Discharge Chute modification, the removed bilges pumps, and the electrical alterations (if, as is likely, they occurred after manufacture) were not reviewed by Bureau Veritas and their compliance with the Societies Rules was therefore not checked".
- Concerning paragraph 6.2.5 of page 58, we confirm that we act as classification society when a ship is classed by BV. We act as recognised organisation when we issue statutory certificates on behalf of the ship's Flag.

As member of the International Association of Classification Societies, we are compliant with IACS requirements. Paragraph B.1.1.1 of PR1D confirms that the submission of plans may be specially considered subject to confirmation of no alteration/modification to the vessel in cases where the vessel has been previously classed by the Society.

Our internal procedure is compliant with PR1D. Refer to table 2 of the attached file (PNS 032).

According to table 1, Class Re-assignment of a ship which is not classed is CR case C. Confirmation that no modification was carried out from the original reviewed drawings or that the drawings of any modifications is to be available for CR case C.

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

Moreover, the attending surveyor has confirmed that the Master has been asked if he had anything to declare or put to his attention and that no additional points have been raised by the Master with respect to the ship's classification and statutory certification. Refer to the item DCC005D in BV report of the first survey carried out after the class was withdrawn in 2016.

Reg: 03890F **ELLIE ADHAMH** **Ref: LDR0/2016/J5**

1. Surveyor's statement

DCC001B ASM-ASHS-ASH-INT-DOK Coef : 0.0

Confirmation that applicable items of Rules and Regulations and International Conventions relevant to the present sun scope have been surveyed to the surveyor's satisfaction without remark, except when indicated otherwise hereunder

DCC005D ASM-ASHS-ASH-INT-DOK Coef : 0.0

Confirmation that the Master has been asked if he had anything to declare or put to his attention and that no additional points have been raised by the Master with respect to the ship's classification and statutory certification.

Finally, we confirm that our general conditions are part of our contractual documents with our clients. They have nothing to do with our procedures.

Thanks and best regards,

[redacted]

Head of FM_CDR & TPP
Casualty, Damages & Repair and Technical Performance & Port State Control
Fleet Management (FM)

[redacted]

BUREAU VERITAS Marine & Offshore

Tour ALTO

1 Place Zaha Hadid - CS 40381

92062 PARIS LA DEFENSE CEDEX - FRANCE

Report1.pdf

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

BUREAU VERITAS

SHIPS IN SERVICE SURVEY REPORT

LDR0/2016/J5195

03890F	ELLIE ADHAMH	9299238
Register Number	Ship Name	IMO Number

Connecting District Marine Center	Bureau Veritas UK Ltd (LDR0)	
Flag Ship Manager Ship Owner	IRELAND [redacted]	
DATES OF SURVEY Start End	03/10/2016 05/10/2016	**PLACE OF SURVEY** DUBLIN : Wexford IRELAND
SURVEYOR [redacted]		**SSOM** [redacted]
Report validated on by	21-10-2016 Thu TA	**Stamp**

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

Reg: 03890F ELLIE ADHAMH Ref: LDR0/2016/J5195

SURVEY STATEMENT

CERTIFICATES / DOCUMENTS OF COMPLIANCE ISSUED OR EXTENDED		
Certificates / Documents of Compliance	Status	Expiry Date
Classification Certificate	New provisional certificate issued	04/04/2017

SURVEY(S) CARRIED OUT	
Code	Survey Name
ASH	Hull Annual Survey
ASHS	Annual survey of structure (Complete)
ASM	Machinery Annual Survey
DOK	Periodical Bottom Survey in Dry Dock
INT	Hull Intermediate Survey (Complete)

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

SURVEY REPORT

Table of contents

Page

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

1. Surveyor's statement

DCC001B ASM-ASHS-ASH-INT-DOK Coef : 0.0

Confirmation that applicable items of Rules and Regulations and International Conventions relevant to the present survey scope have been surveyed to the surveyor's satisfaction without remark, except when indicated otherwise hereunder

DCC005D ASM-ASHS-ASH-INT-DOK Coef : 0.0

Confirmation that the Master has been asked if he had anything to declare or put to his attention and that no additional points have been raised by the Master with respect to the ship's classification and statutory certification.

2. Documentation

Certificates

DCS040B ASM-ASH-INT-DOK Coef : 0.0 Done in current job **See Remark**

CLASSIFICATION : Confirmation that the Classification Certificate and relevant Annexes are available on board and due surveys are up to date (before starting of survey)

Remark

Vessels class withdrawn due to overdue surveys. Class certificate validity 10/10/2018.

3. Bottom survey

Bottom (periodical survey)

DOK010A DOK Coef : 0.0 **See Remark**

Examination of bow, keel, bottom, turn of bilge, bilge-keel attachments, sides and stern.

Remark

No damage affecting class noted.

DOK040 DOK Coef : 0.0 **See Remark**

Propeller-shaft clearances :

Clearance positions:	mm
Outer Top	**65.10**
Out5er BtmM	**64.40**

Remark

Readings are poker gauge readings.

DOK060 DOK Coef : 0.0 **See Remark**

Examination of rudder; clearances measured :

Clearance position:	mm
Top Bearing	**0.9**
Btm Pintle	**0.5**

Remark

Bottom pintle bush renewed.

Bottom (others)

OTH050A DOK Coef : 0.0 **See Remark**

Thickness measurements of plating below the waterline.
Ref. to TM report (Page Nbr)

Remark

Thickness readings were not required by surveyor for this survey.

OTH080A DOK Coef : 0.0 **See Remark**

Maintenance and repair works.

Description and remark

Rudder bottom pintle renewed hull cleaned and recoated.

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

4. Structure

CAX020B INT Coef : 0.0 **See Remark**

Date and place of survey planning meeting, name of the master of the ship in attendance or an appropriately qualified representative appointed by the master or Company, name of the owner's representative(s) and name(s) of the thickness measurement firm's representative(s) so as to ensure the safe and efficient execution of the surveys and thickness measurements to be carried out onboard.

	Survey planning meeting N°1	Survey planning meeting N°2 (if any)
Date of survey planning meeting	**03/10/2016**	
Place of survey planning meeting	**Rosslare Dockyard**	
Master of the ship or appropriatly qualified representative	[redacted]	
Owner's representative(s)	[redacted]	
Thickness measurements firm representative(s)	**N/A**	

Remark
The full scope of all surveys to bring vessel back into class was agreed with owner and yard. Vessel has no ballast tanks.

VIOF001 ASHS-INT Coef : 0.0

Additional comment related to mergeable surveys carried out previously.

Systematic and other thickness measurements

CAX010B ASH-INT Coef : 0.0 Done in current job **See Remark**

Confirmation that thickness measurements required in the context of hull structural classification surveys are witnessed by a Surveyor.
This requires the Surveyor to be on board while gaugings are taken to the extent necessary to control the process.
This includes a survey meeting to be held prior to commencement of the survey, the monitoring of the thickness measurement process on-board and the review and verification of preliminary and final reports.
Concurrent crediting to both Intermediate Survey and Class Renewal Survey for surveys and thickness measurements of spaces are not acceptable.
Remark
Thickness readings were not required by surveyor for this survey.

MEX030B ASH-INT-DOK Coef : 0.0 Done in current job

Additional thickness measurements as deemed necessary.
❍ **Yes** ● **No**

5. Fire protection and fire fighting

Basic fire fighting equipment

FFE012 ASM Coef : 0.0 **See Remark**

Examination of the emergency fire pump and verification it can be operated separately so as to simultaneously produce two (2) jets of water from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main.
Remark
Emergency fire pump tested satisfactory.

FFE165 ASM Coef : 0.0 **See Remark**

Type of gas used in the fixed fire-fighting appliance in other spaces (like paint lockers, galleys, etc.) ?
❍ **Halon**
❍ **CO2**
● **Other**
Remark
Portable extinguisher in galley.

Special arrangements in machinery spaces

FFE090 ASM Coef : 0.0

Type of gas used in the fixed fire-fighting system for the machinery spaces ?

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

○ **Halon**
● **CO2**
○ **Other**

6. Annex for Safety and Fire Fighting Equipment

Fire protection and fire fighting

Fire extinguishers

FFE022A ASM Coef : 0.0

Date of recharge or date of inspection of the portable fire extinguishers :
Date : **29/10/2015**

Special arrangements in machinery spaces

FFE073A ASM Coef : 0.0

Date when the CO2 cylinders were weighed or date when their level was checked :
○ **Weighed** ● **Checked**
Date : **29/10/2015**

Correspondence 8.5 Correspondence from Bureau Veritas and MCIB response

Reg: 03890F ELLIE ADHAMH Ref: LDR0/2016/J5195

LIST OF DOCUMENTS ATTACHED TO JOB NUMBER LDR0/2016/J5195

RFS

End of List

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.6 Correspondence from Naval Service and MCIB response

Óglaigh na hÉireann
IRISH DEFENCE FORCES

STRENGTHEN THE NATION

Ceannasóir i gCeannas na Seirbhíse Cabhlaigh
Flag Officer Commanding Naval Service
Commodore Michael Malone

NHQ/

06 NOV 2023

MCIB CHAIR
[redacted]

REPLY TO MARINE CASUALTY INVESTIGATION BOARD LETTER DATED 20OCT23

References
A. MCIB Letter to FOCNS 'Investigation into an incident involving the FV Ellie Adhamh, off the coast of Co. Cork, 26-28th March 2021', Dated 20OCT23.
B. Letter from [redacted] MCIB. Dated 13SEPT23.
C. Letter from [redacted]ated 29AUG23.
E. MCIB DRAFT Report into the Sinking of the Irish Fishing Vessel ELLIE ADHAMH.

[redacted]

1. The Naval Service acknowledges the content and findings of the MCIB Draft Report of an Investigation into the sinking of the FV ELLIE ADHAMH and welcomes the opportunity to make brief comment on the Report.

2. As the State's principal sea-going agency, the Naval Service engages in search and rescue operations in furtherance of the protection of life at sea. While engaging in SAR operations, it is inevitable that some operations such as attempting to tow a vessel to safety may be considered to overlap with actions engaged in during salvage operations. Naval Service policy is unambiguous in that its vessels do not engage in salvage operations and such actions are only taken as part of a wider SAR operation and are conducted from a safety of life at sea perspective. If towing operations are conducted as part of a SAR operation, Naval Service policy is to handover any salvage-type evolutions to the salvor who has been contracted by the vessel owners, once lifesaving operations are completed.

3. In the case of the FV ELLIE ADHAMH, The Naval Service wishes to commend the Captain and crew of LE GEORGE BERNARD SHAW in their actions which contributed to the rescue of seven personnel under difficult circumstances and very challenging weather conditions. OC LE GEORGE BERNARD SHAW exercised diligent, experienced seamanship and prudence while engaged in rescue attempts with the FV ELLIE ADHAMH. The particular challenge posed by prevailing weather and sea conditions significantly hampered the conduct of close manoeuvres and unfortunately led to unavoidable contact between the two vessels while attempting to pass a tow line.

4. The extent of the challenge posed by the weather conditions on scene is well evidenced by the details recorded in the ship's logbook during the tow evolution, a tabulated copy of which is attached at ANNEX A. Also attached (ANNEX B) is a copy of the ship-specific standard operating procedure for towing evolutions in force on board LE GEORGE BERNARD SHAW at the time of the SAR operation.

www.military.ie

Correspondence 8.6 Correspondence from Naval Service and MCIB response

5. As the Board is aware and has stated in its findings, this type of contact is not uncommon in salvage and rescue operations in very bad weather. The NS acknowledges and concurs with the Board's finding that this contact is not considered a causative factor in the sinking of the FV ELLIE ADHAMH.

6. The Naval Service notes the submissions made by the skipper and representative of the owner of FV ELLIE ADAMH in response to the MCIB Draft report and does not agree with the sequence of events as described therein.

[redacted]

FLAG OFFICER COMMANDING NAVAL SERVICE

MCIB RESPONSE: The MCIB notes the contents of this observation.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

Marine Casualty Investigation Board Leeson Lane,

Dublin 2, Ireland

Email: info@mcib.ie

11 August 2024

Re: Sinking of the Fishing Vessel Ellie Ádhamh

Comments to be included in the Report

At the beginning of this investigation, the owners of the vessel objected to the appointment of the investigator by the MCIB . The investigator is a former member of the Irish Naval Service, and the owners believed that his appointment would be a conflict of interest, particularly when it came to investigating the collision between the Ellie Ádhamh and the LE George Bernard Shaw. The owners request was denied.

1.6- it is stated further in this report that there was little water entering the vessel through the waste chute at this time. To say 'the crew encountered difficulties in pumping overboard the shipped seawater' at this stage is misleading. Further verified by the fact it was reported that 'they were happy to stay onboard' that night.

1.7- there is no mention that there was a collision between the LE George Bernard Shaw and the Ellie Ádhamh, a significant detail that has been omitted from the 'summary'.

1.8- the summary fails to include the position of the vessel on the Saturday. The coastguard and VMS show that the vessel was only 10nm from the Bullrock around 15:23 on the 27th March.

1.9- the summary fails to mention that when the Navy Commander ordered the crew to abandon ship the water had been pumped from the deck to a low level of about 1 to 2 feet.

The report claims that the towline broke around 20:00hrs. VMS records from the Ellie Ádhamh show that she was moving at 4knts at approx. 20:00 at position 51 28.59N 010 38W.

2.2.1- the electrical system onboard the Ellie Ádhamh was not changed from the time she was built. It is not clear why the MSO has a different designer documented.

2.4.1- the original chute on the starboard side was not 'left in place', it was completely blocked off and welded shut.

2.4.5- using the phrase 'fitted back to front' is misleading. The waste chute was fitted correctly and as requested.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

It can only be the MCIB's opinion that the waste chute on the Ellie Ádhamh was not a weathertight design. The waste chute on the port side was the same as the approved and surveyed waste chute on the starboard side. No issues or concerns were raised by the MSO or Bureau Veritas with the design of the waste chute.

2.4.6- the 'new' waste chute was the same as the old waste chute. It had the same design and mechanisms as that that was fitted when the trawler was first built. The chute had two separate closings. The owner, who built and skippered the trawler for 6 years after the chute had been relocated, insists that there was never any water ingress through the waste chute. The vessel was towed in similar weather conditions, with the port side chute often being submerged and no water entering the deck from the discharge waste chute.

Also, the chute was surveyed by both the MSO and BV in many surveys throughout the years. It is incredulous to suggest that a surveyor would walk by a waste chute without inspecting its weather and water tightness.

2.4.7- it is not accepted by the owners or skipper that they knew of a defect with the waste discharge chute on commencing or during the voyage. It was only discovered by the Skipper on the 27th March 2021 when he saw water entering via the lever of the chute.

2.5.11- it was not merely an intermediate survey that was carried out by BV in 2019. We have provided evidence to the MCIB that the surveyor requested our trawler to undergo 'a special survey' which entailed much more than that of an intermediate survey.

The surveys included;

Hull Annual Survey, Machinery Annual Survey, Periodical Bottom Survey in Dry Dock, Hull special Survey, Machinery Special Survey, Centre Tail shaft Complete Survey.

Below are some of the items the surveyor advised would be and were inspected;

- "Megger" (electrical resistance) test results for all electrical alternators, motors switch board and sub systems

- Confirmation Battery starting arrangements & back-up battery for emergency supply is OK.

- Confirmation electrical system is in working order / as built. (e.g. Navigation lights)

- Confirmation engine (main & generator) control and safety systems are functional

- Bilge pumping

- Check of seals and condition of watertight hatches, doors & ventilation dampers.

- Satisfactory Thickness test results

- Engine and gearbox maintenance report

- Generator maintenance logs

- Outer shell plating above the waterline, relevant shell doors and accessible parts of the rudder(s).

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

- Sidescuttles and deadlights, chutes and other openings with their means of closure.

- Inlets, scuppers, and sanitary discharges, valves on discharge lines and their controls.

- Verification that no alterations have been made to the hull or superstructures that would affect the position of the load lines.

- Watertight integrity of the closures to any openings in the ship's side shell below the freeboard deck

A sea trial was also completed as part of the survey.

The Ellie Ádhamh was granted a Certificate Of Classification from Bureau Veritas on the 19/02/2019 with an expiry of 10/10/2023.

2.5.12- an annual survey was conducted on the 20/01/2020 with a list of items to be dealt with. All items were corrected by 25th March 2020. Unfortunately, due to precautionary measures being taken by the vessel during the Covid 19 pandemic, the owners were prevented from arranging a survey to check 1 of the items on the list and issue the certificate.

2.5.14- the waste chute was examined by inspectors in BV surveys.

2.6.14- the owners and skipper were unaware of missing bushing when the trawler left the harbour. The owner and skipper examined and tested the waste discharge chute in preparation for the MSO survey in January 2021 and detected no issues.

2.8.4- crewmember C had a good command of English

2.8.5- crewmember D had a good command of English

2.8.8- the crew member who worked under contract was no longer working on the vessel at the time of its loss.

2.10.8- it is disagreed that flooding was unmanageable as the skipper had cleared the water when he was ordered to abandon ship. This fact has been stated to the investigator.

3.5- the skipper assisted the engineers in installing and commissioning the new gearbox in 2019. He had an extensive amount of knowledge of the gearbox and main engine. It is unfounded to suggest that he did not know how to engage the clutch manually.

3.35- the report fails to mention how the towline was established. This should be highlighted in order to assist future rescue operations.

It was a crew member on the Ellie Ádhamh that came up with the idea of how to establish the towline. A rope, connected to the bridle from the Ellie Ádhamh was attached to a float and thrown into the water. When the Ellie Ádhamh drifted from the float it was safe for the crew of the navy vessel to approach the float and pick up the bridle and attach it to their towline.

3.38- the fish hold hatch was not located at the port aft side of the working deck, but port fore of the working deck.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

3.46- the skipper was ordered by the navy commander to launch the life rafts, it was not their decision to do so.

4.1.1- 'the securing toggles for the inboard cover were then subject to fatigue failure' this statement is a presumption and not factual.

The statement 'the lack of emergency preparedness before the vessel set sail' is not accepted by the owners.

4.1.3-

a) the owners do not accept that there was a lack of emergency planning in place onboard the Ellie Ádhamh.

b) the owners do not accept that equipment failings were not followed up.

c) the owners insist that the skipper was a competent and experienced skipper, with proven management experience.

4.4.1- any electrical failures that occurred in the past were investigated thoroughly and resolved effectively by qualified electricians.

4.4.2- the owners disagree that the failure of the circuit breaker component was predictable.

4.4.3- any electrical failures that occurred in the past were investigated thoroughly and resolved effectively by qualified electricians.

4.5.5- the owners were informed that the skipper exhausted all possibilities in restoring power to the vessel, this included the attempt to start the No.2 generator.

4.5.6- as stated previously, the skipper had experience and training in the manual operation of the main propulsion systems. This fact can be attested to by qualified personnel and the owners of the vessel. He also had experience and training in the starting of all generators on board the vessel- it is absurd to suggest otherwise.

4.6.3- the skipper was unable to alert the owners directly, but it has been previously established that the owners and the skipper of the Monica 2 were in contact on the Thursday night.

Alternative towing arrangements were in place with larger fishing vessels that were still in the fishing grounds that the Ellie Ádhamh had departed from. They offered to tow the vessel on their return to port. By the time they were passing the Ellie Ádhamh (some on the Friday night, others on the Saturday morning), the Navy was on site and would not allow them to assist the Ellie Ádhamh.

Advice on how to reinstate power on the vessel was relayed to the skipper by the owners via the skipper of the Monica 2. It was relayed to the owners that all the options given were tried but the skipper was still unable to restore the power.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

4.6.6- there was not 'increasing water ingress during Friday', any water onboard at this stage was from the previous night's fishing operations. Pumps were requested by the skipper from the rescue services as a precautionary measure.

4.7.5- the crew did not encounter difficulties to control an ingress of water on the Thursday or the Friday. As stated, any water on deck at this time was from the previous nights fishing operations. It has been established that the crew were happy to stay aboard the Friday night. Furthermore, the skipper has stated that he was not concerned by the small amount of water on deck during Thursday and Friday.

4.7.6- there was no water ingress through the chute at the time of the initial electrical failure. Later, the water leaking via the chute lever was not of concern to the Skipper as it was an insufficient amount.

4.7.7- the owners disagree that there was a failure to take practical steps in the main deck or a failure to plan for the consequences of total electrical failure.

4.8.3- it is not obvious that there was an unresolved issue. It is not known when the rubber from the bushing went missing. As no water was seen entering through the waste chute by the skipper until the Saturday, it is not warranted to refer to it as 'an unresolved issue'

4.8.7- there were no reports of water entering via the open shooting hatches while the crew were onboard. The skipper confirms that all doors were closed on the factory deck before leaving the vessel. Therefore, to suggest that water entered the accommodation via the open shooting hatches is a presumption and unfounded.

4.8.8- the report fails to mention the non-return flap fitted in the waste chute. The owners disagree that 'the new chute was not design approved or surveyed'. The owners have already stated that it was the same chute and design as was on the starboard side. The owners have confirmed that the chute was inspected during surveys.

4.8.11- the reports reference to a sudden increase in the inflow of water could also be attributed to another source of water entering the vessel from an unknown location.

4.8.12- the owners find the timings and flow rates in this section to be incorrect as it was stated by the skipper that the chute hatch cover was not leaking. It was also stated by the skipper that the doors on the working deck were closed when the skipper left the trawler. Furthermore, the calculations do not consider that the water had been cleared from the deck by the salvage pumps during the 27th. This would lead one to believe that there was another source from which water was entering the vessel.

4.8.16- the report states that 'it seems possible that when the vessel was abandoned one internal watertight door was open'. The skipper has stated that all watertight doors within the vessel were closed when he was forced to abandon ship. As the skipper was the last crewmember to leave the vessel the reports statement is not warranted.

4.8.17- the owners refute that the waste chute was of an incorrect design.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

4.9.2- the skipper had demonstrated his experience to the owners in electrical fault finding and repair during his time as the vessels engineer.

4.9.3- it has already been established that the skipper requested a breaker from the rescue services.

There were crew onboard, other than the skipper, who were trained in basic medical first aid.

4.9.4- the crew onboard were trained in emergency procedures and were subject to emergency drills as per the safety requirements.

4.9.6- the owners maintain that the skipper was a competent skipper, and that the crew received training in emergency procedures.

4.10.4- the design of the port waste chute was the same as that of the original starboard waste chute. There was an ultrasonic inspection carried out on the trawler in 2019, the results of this thickness report were found to be satisfactory. No issues were raised over the thickness of the waste discharge chute section.

4.10.9- It is strongly opposed that the owner had 'a serious lack of understanding of the stability characteristics of the vessel'. The owner was present during the design process and construction of the vessel, he was present for all major surveys and works, and fished the vessel up until 2018. No one knew the capabilities and limits of the vessel better than he did. The owner was well versed in stability by means of experience and training. The owner maintains that there were no issues pertaining to the relocation of the waste discharge chute on the port side, even when being towed in similar weather conditions with the outside of the chute being submerged under water. The owner does not believe that the relocation of waste discharge chute was a factor in the sinking of the Ellie Ádhamh. He believes there was another source of water ingress that has not been investigated.

4.12.3- the bulbous bow on the Ellie Ádhamh was designed to survive the impact of waves but was not designed to withstand a collision with a vessel that is more than 3 times its length, with a displacement of 2,256 tonnes.

4.12.6- the owners have not criticized any involvement from IRCG rescue helicopters R115 or R117 and thank them for their valiant attempts in this operation.

5.1-

b) it is refuted that the owners did not investigate electrical failures.

c) it is refuted by the owners that the skipper was not properly trained.

d) it is refuted by the owners that the crew were not trained in emergency procedures.

e) it is not true that the skipper lacked knowledge and was not trained in the operation of the propulsion and CPP control systems without a power supply.

g) it has been confirmed by the skipper that all watertight openings within the vessel were closed.

Correspondence 8.7 Correspondence from Owner (Revised Draft) and MCIB response

i) it is not true that the owners had a lack of appreciation of the stability characteristics of the vessel. The owners conformed with the regulations to maintain the vessel and its equipment, ensuring that the vessel was fit to proceed to sea.

j) the waste chute was examined in MSO and BV surveys.

To conclude-

The vessel had little to no water aboard for 33hrs after the power was lost. From the time of the power failure to the time that the Navy took the vessel under tow, the Ellie Ádhamh had travelled over 110nm towards the coast. The situation only began to deteriorate after the Navy collided with the Ellie Ádhamh. The persons who reviewed the footage of the collision and decided that it could not be a causative factor in the sinking of the Ellie Ádhamh, should not be investigating marine casualties.

The determination of the Skipper of the Ellie Ádhamh and efforts of the crew were commendable, the skill from the skipper of the Monica 2 in quickly attaching a tow line was valiant, the efforts from Castletownbere RNLI, rescue 115 and rescue 117 were greatly appreciated. The offers from the Irish trawlers to take over the tow will never be forgotten, and the owners regret that they were stood down by the Navy.

Signed: [redacted]

For and on behalf of the owners of the MFV Ellie Ádhamh

MCIB RESPONSE: The MCIB notes the contents of this observation.

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