

MAIB

MARINE ACCIDENT INVESTIGATION BRANCH

Annual Report 2003

May 2004

Extract from The Merchant Shipping (Accident Reporting and Investigation) Regulations 1999

The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.

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Chief Inspector's Foreword

I get a lot of feedback that the data contained in the MAIB's annual report is eagerly anticipated and pored over by many readers, eager to support theories or spot trends. Within the MAIB, we also look for trends and conduct analyses in order to measure successes within our industry, and to focus our efforts for the future. However, I urge caution with the interpretation of the figures contained within this report, because:

- a. Despite a legal requirement for UK flagged vessels to report accidents to the MAIB, we are aware that some accidents do go unreported.
- b. Many masters of foreign-flagged vessels are unaware of the legal requirement for them to report accidents to us.
- c. There is no legal obligation for accidents to leisure craft (other than those being operated commercially) to be reported to the MAIB.
- d. There is no legal requirement to report "near misses".
- e. One large accident, for example the loss of a vessel with all hands, will skew the statistics.

I therefore tend to look at the figures in absolute terms. The 1522 accidents/incidents reported to the MAIB in 2003 is a disappointing (and depressingly consistent) number. 27 deaths, in a variety of vessels, is 27

tragedies too many: most of them – in hindsight – were avoidable. 27 UK commercial fishing vessels were lost – that is an average of one lost every 13 days. 11 fishermen died.

Nevertheless, I am feeling optimistic that the maritime industry, in the United Kingdom at least, is starting to give safety the priority it deserves. The tanker and ferry sectors recognised the importance of safety some years ago, and have shown some remarkable improvements as a result. Other sectors are starting to follow suit. The much-maligned ISM Code is resulting in companies shouldering their share of the responsibility and, in most companies, the message is getting through to ships that Head Office is serious about safety. However, I remain very concerned that manning levels have been cut to below a safe level in many short sea vessels, single bridge watchkeeping and fatigue are becoming commonplace features in many accidents around our coasts, and are problems that I intend to address in 2004.

The fishing industry continues to struggle to improve safety. Despite the best efforts of many in the industry, marginal financial viability in some sectors lead to skipper/owners having to choose between spending money on their family or on maintenance of their vessels. Too often, crews are cut to save costs; many accidents would be avoided if people were less stretched. However, there are some

simple and cheap remedies that would have avoided many of the accidents we investigated: working and audible bilge alarms and working sea cocks would have prevented nearly all the flooding/founderings.

In the leisure sector there is still a reluctance to report accidents/incidents to the MAIB. Sadly, many associate MAIB with “regulation”, which is an anathema to much of the leisure world. We will continue to work with the RYA, and the yachting press, to assure leisure sailors that reporting accidents and incidents is the best way for them to help improve safety in this growing maritime pursuit.

The MAIB enjoys increasing support from across the maritime spectrum. Although our work inevitably focuses on the tragedies and the mistakes of seafarers, we recognise the professionalism and dedication of the vast majority of those who go to sea either as a career or for fun. We will continue to work with all of them to make the sea a safer place.

A handwritten signature in black ink that reads "Stephen Meyer". The signature is written in a cursive style with a long horizontal stroke at the bottom.

1. A Year of Investigations

This section gives a brief account of seven investigations carried out in 2003. The intention is to provide an idea of the range of activities and experiences encountered by MAIB inspectors in the course of their work.

Grounding of a Passenger Vessel in Fog

A passenger vessel, carrying 200 people, had grounded in thick fog, late at night in the Channel Islands. The vessel was holed, but the passengers and crew were safely evacuated. Two inspectors flew out to the site the next day to carry out lengthy interviews with the skipper, to examine the vessel, and to study the vessel's working patterns and the crew's hours of work.

Adverse comments on the vessel's manoeuvring characteristics led the inspectors to revisit her at low tide, where they took measurements and photographed the unusual configuration of the rudders (they were positioned inboard of the line of the propellers and, thus, out of the propeller stream). The information gathered on the rudder configuration was passed later to a hydrodynamic expert for advice.

The inspectors took a trip on her sister vessel on the same passage, so that they could appreciate the navigational hazards and equipment. They also interviewed the many people who had helped evacuate the passengers and bring the stricken vessel back to port. During the third day, the two other crew members of the vessel and her owner were interviewed. The inspectors sailed with the vessel from the port to the repair yard to see how she handled at sea, and to take further photographs of the extensive damage once she was up the slip.

Keen to gain an insight into the passengers' perception of how the vessel's crew and the emergency services handled the incident, questionnaires were sent out for completion. Their responses provided the inspectors with useful feedback.

The lessons learned from the accident led to a recommendation being made to the owner regarding improving the vessel's manoeuvrability; it was gratifying to see, when some inspectors visited the island on a different case, the proposed modifications being carried out. Recommendations were also made to the local maritime administration regarding implementation of safety management systems (based on UK practice) and to encourage operators to fit the equipment required to stabilise radars and chart plotters.



Fatal Crushing on Aggregate Dredger

The bosun on an aggregate dredger was assisting in preparing the hold to receive cargo when he was fatally crushed between the hold coaming and a rotating tower, which was mistakenly operated by a relatively new member of the crew.

The ship managers notified the MAIB of the accident and two inspectors were immediately deployed to the scene. The lead inspector had personal experience of working on this type of vessel and weaknesses in the onboard operational procedures were quickly identified. Following a briefing at MAIB offices, which was attended by most of the other inspectors, it was decided that the investigation should focus on the effectiveness of the ISM (International Safety Management) Code as it was implemented by this company and on this vessel.

The company's ISM Document of Compliance and the vessel's Safety Management Certificate were both in order. However a small multidisciplinary team of inspectors visited both the company's offices and the vessel to closely inspect the ISM procedures and documentation. The inspection highlighted a number of shortfalls that contributed to the accident, including that there were generic procedures for deck operations across the fleet rather than suitable ship specific ones. Other contributing factors included:

- a failure in the proper induction and training of new employees;
- the lack of a suitable risk assessment after new deck machinery was installed on the vessel.

The inspectors carried out interviews with crew members and former crew members which, among other things, revealed that there had been a hazardous incident a year previously which had been remarkably similar to the one being investigated. The incident had not resulted in injury but the personnel involved had been frightened by its potential. However, despite this, the details of the incident were not reported to the vessel's managers and the chance to learn valuable lessons was thus lost. This highlighted another failure in the safety management system.

This tragic but relatively straightforward case resulted in a number of recommendations, which the company quickly implemented, and which added weight to the international concern regarding inadequate implementation of the ISM Code. Throughout the investigation, the family of the bosun was kept informed of the progress of the report.



Swamping of a motor cruiser on slipway: Public Notices – an effective way of gathering evidence

This incident involved a small pleasure vessel that was swamped, shortly after it was launched from its trailer, by an unexpectedly large wave on Loch Ryan, South West Scotland. The owner was injured and the boat suffered some damage.

Compared to many events that the MAIB investigates, this incident and its consequences were minor. However, it followed other cases investigated by the MAIB in waters around the UK where fast ferry operations were identified as the cause of unexpectedly large waves being generated.

Early in the investigation it became clear that a number of people had evidence and opinions they wished to express to the Inspector on the subject of waves generated on Loch Ryan. To ensure that all who had a contribution to make could do so, Public Notices were published in several local newspapers inviting submissions on the subject. As a result, and following related editorials in the same newspapers, a good number of submissions were received. In general these were sensible, balanced, and clearly the result of long and careful observation of the waters of Loch Ryan from the shore, afloat and, in one case, from the air.

The use of Public Notices to call for submissions from the General Public is not regularly utilised by the MAIB – on this occasion the submissions received far exceeded our expectations both in terms of quantity and quality. The content of the submissions showed that the users of Loch Ryan are very conscious of the importance of safety on the water and the need for commercial ship operations to exist alongside leisure and pleasure users of the Loch and its shoreline.

The MAIB was able to make a number of recommendations to the local council which, if implemented, should result in improved safety in the area.



Hire boat capsizes

A small cabin cruiser that had been hired on the Norfolk Broads, and had ten people on board, capsized. Nine were rescued, but one person was drowned in the upturned hull.

MAIB inspectors were sent to the scene, where they inspected the boat, both in and out of the water. Subsequently, an inclining test was also conducted on a sister vessel to determine stability characteristics. The stability data collected was analysed using computer modelling.

A detailed examination of the regulations applicable to hire craft on UK's inland waters found a mix of European trading and national public health and transport legislation, enforcement of which is the responsibility of a number of government departments and authorities. In many areas of UK's inland waters there was no safety regime applied.

In this case:

The sister boat passed the inclining test required by the European standard, so doubt was cast on the adequacy of the safety margins used. Also, the total weight of the ten people hiring the cabin cruiser exceeded the international standard of 75kg per person required during tests.

There was also concern as the boat's maximum passenger capacity of ten people had been determined by the number of seats alone, rather than by an approved test to ensure that the vessel was stable with ten people on board, or any consideration of where they might be situated.

Among the large number of recommendations resulting from the investigation, was the establishment of a national code of practice for the operation of hire boats on inland waters, to be regulated by appropriate authorities through licensing regimes.

A recommendation was also made to the international standards institute about the validity of using just 75kg to represent a person's weight in such assessments.



General cargo vessel grounds

In the early hours of a Sunday morning, in the summer of 2003, a general cargo vessel carrying 3300 tonnes of zinc concentrate, ran aground on the west coast of Scotland. The chief officer had fallen asleep while alone on the bridge, missing his intended change of course. The vessel subsequently sank, prompting fears of serious environmental damage in an area of outstanding natural beauty.

Two MAIB inspectors were on the scene that evening. They interviewed the crew and took a copy of the chart that had been in use at the time of the grounding.

The inspectors travelled to Germany to interview the director of the management company. They also took copies of pertinent paperwork, the originals of which had been lost with the vessel.

Suspecting fatigue had been a factor in the accident, the inspectors, in conjunction with QinetiQ Centre for Human Sciences, analysed the chief officer's working hours. This work indicated that the chief officer had, indeed, fallen asleep as a result of fatigue - brought about by an irregular work/sleep pattern. Although his hours of rest were generally found to comply with the current regulations, it was considered that these provided insufficient protection from fatigue.

As a result of the investigation, the MAIB made recommendations in support of previous findings regarding fatigue to be taken to the International Maritime Organization, as well as recommending the compulsory fitting of watchkeeper alarms. The MAIB has subsequently undertaken a Safety Study into the whole subject of Bridge Watchkeeping.



Fatal Accident During Ferry Evacuation Drill

The MAIB issued an urgent Safety Bulletin after the initial stages of an investigation revealed serious concerns about the design of evacuation chutes, following the death of a volunteer during an evacuation trial.

In October 2002, over 200 volunteers gathered on board a high-sided ferry to take part in an evacuation drill – a drill that was to go tragically wrong. The drill was being conducted using a marine evacuation system consisting of two vertical chutes leading to two large, fully reversible enclosed liferafts.

A female volunteer became stuck in one of the chutes when her lifejacket rode up over her head. Hearing the lady's cries for help, a member of the ship's crew immediately attempted to rescue her. He found her stuck in a piked position (hands and feet above her head) inside one of the elasticated socks, so quickly cut the socks to allow her to slide down into the liferaft. She was taken to hospital, where she was pronounced dead on arrival.

Two MAIB inspectors were despatched without delay to establish how the tragedy had occurred. They learned more about the type of chute used and, in the company of the police, thoroughly inspected the ship's chute. They descended a chute during another drill, so that they themselves could experience something of what the lady had gone through before she became trapped. In parallel, enquiries were made worldwide about the chute's safety record.

Anxious to inform the maritime industry - by the fastest possible means – of safety issues that had emerged during the initial stages of the investigation, the MAIB published a worldwide Safety Bulletin containing a set of interim recommendations.

From the early stages of the investigation, it became clear that the only way to understand fully how, and why, the volunteer became stuck was to have the chute manufacturers build four chute sections/cells. Tests concluded that if a person became stuck in the piked position, their breathing could be impaired, a condition known as *positional asphyxia*. With this in mind, the MAIB brought in specialist help to investigate the role of positional asphyxia in this death.

The next-of-kin were regularly briefed about the investigation process and conclusions. This proved extremely helpful, and enabled the MAIB to gain more background information about the victim.



After the report was published, an inspector was called to give evidence at a coroner's inquest. The coroner supported the MAIB's findings, and reiterated the safety recommendations.

The wide distribution of the MAIB report and safety recommendations has been well received by the maritime industry worldwide. The chutes had only been used for drills, so there was concern that during a real emergency, further problems could arise.

All the safety recommendations produced from the investigation were accepted by the chute manufactures and ship's operators, and were supported by the lady's family.



Sailing Yacht Sinks After Collision in Fog

A marine accident inspector's work is not always carried out close to home. The following account describes how, sometimes, investigative work involves far afield travel – in this case, to the Far East.

A 14.5m yacht sank, in a busy shipping lane, after being struck by an unknown container vessel. The collision occurred in thick fog, with the ship making good a speed of 25 knots.

The bridge team on board the ship were unaware that they had been involved in a collision and continued on passage. Fortunately, the yacht's crew were able to board a liferaft moments before their vessel sank. All were recovered, uninjured, by a high-speed ferry.

The yacht's crew and the coastguard were unaware of the container vessel's identity, so this was to be the MAIB's first task. With the help of the French authorities, inspectors carried out a detailed analysis of the tracks of all vessels in the area at the time of the accident.

A few days later, they interviewed the skipper and crew of the yacht, who were able to provide a vivid account of their actions prior to the collision, and to recall their subsequent ordeal.

The MAIB inspectors' attention was now focused on a 66,289gt container vessel, now in Hong Kong. Two inspectors flew to Hong Kong to interview the master and crew and to gather further evidence. Confirming evidence, provided by paint marks consistent with the yacht's blue antifouling, was discovered on the ship's bulbous bow.

The accident raised four important safety issues:

- How operators should determine a safe speed and close quarters situation
- The degree of reliance which should be placed on radar
- Low levels of knowledge by some pleasure vessel users in the use of radar
- Lack of knowledge of the collision regulations by some leisure craft users.

Recommendations were made to the operators of each vessel, the Royal Yachting Association, and the Maritime and Coastguard Agency.

The MAIB's investigation received extensive coverage in the yachting press, and has encouraged a healthy debate throughout the leisure sector about the use of radar, the collision regulations and safe navigation in fog.

Demand for the RYA radar courses, promoted in one of the report's recommendations, has noticeably increased.

2. Investigations and Reports

The MAIB received 1,522 accident and incident reports in 2003 (up 2.5% on 2002). Accidents to ships accounted for 689 (up 13.1%), with a further 631 involving accidents to people (down 0.8%). 202 hazardous incidents (near-misses) were reported, a 15.8% decrease on 2002.

Administrative enquiries, where additional information was sought, usually by correspondence, were carried out in 733 cases. The reasons for seeking additional information include:

- To clarify or elaborate on the information initially provided so the accident can be recorded accurately in the database;
- To assist the principal inspector come to a judgment on whether a full investigation is appropriate;
- Where there are grounds for thinking useful lessons may emerge.

Reporting Summary: 2003				
	<u>Accidents</u>	<u>Hazardous Incidents</u>	<u>Accidents to People</u>	<u>Totals</u>
UK Merchant Vessels ①	279	124	512	915
Investigated	8	-	1	9
Prelim. Exam.	6	1	-	7
Fishing Vessels②	370	77	63	510
Investigated	3	-	-	3
Prelim. Exam.	8	-	4	12
Non-UK Vessels	94	121	58	273
Investigated	4	-	-	4
Prelim. Exam.	4	-	2	6
Total Number of Accidents and Incidents ③	689	202	631	1522
Total Number of Investigations	14	-	1	15
Prelim. Exams.④	15	1	6	22

① UK merchant vessels, pleasure craft, and all other vessels except fishing vessels

② Including 28 non-UK registered fishing vessels

③ The number of incidents will be lower than the number of vessels as incidents can involve more than one vessel (e.g.collisions)

④ The number of investigations and preliminary examinations will not equal the total number of vessels - see note ③ above.

At the start of the year, 15 full investigations and preliminary examinations were underway, and a further 37 were started during 2003. This was the first full year of work since the introduction of preliminary examinations whereby initial findings are presented to the Chief Inspector of Marine Accidents and the rest of the Branch for discussion before a decision is taken as to whether a full investigation is to be pursued. Those that are not subjected to the full investigation processes are still likely to be featured in a Safety Digest article, and individuals or companies directly involved will be informed of the MAIB's findings and recommendations.

Investigations started in 2003						
<u>Date of Incident</u>	<u>Name of Vessel</u>	<u>Type of Vessel</u>	<u>Nationality</u>	<u>Size</u>		<u>Nature of Incident</u>
31 Dec 02	Kirsteen Anne	Fishing	UK	6.24	m	Total loss with two fatalities
6 Jan 03	Amber	Fishing	UK	9.03	m	Total loss with one fatality
25 Feb 03	Arco Adur	Aggregate dredger	UK	3498	GT	Fatal accident to person
11 Mar 03	Claymore	Ro-Ro ferry	UK	1631	GT	Contact
18 Apr 03	Pride of Provence	Ro-Ro ferry	UK	28559	GT	Contact
28 May 03	P&O Nedlloyd Vespucci / Wahkuna	Container / sailing yacht	Liberia / UK	66289	GT 14 m	Collision
29 Jun 03	Jambo	General cargo	Cyprus	1990	GT	Grounding
12 Jul 03	-	Open dory	UK	4.6	m	Capsize with the loss of three lives
19 Jul 03	Breakaway V	Cabin cruiser (commercial)	UK	6.77	m	Capsize with the loss of one life
14 Aug 03	Elhanan T	Fishing	UK	21.53	m	Foundering
23 Aug 03	Trident VI	Passenger	Guernsey	22.25	m	Grounding
3 Sep 03	-	Cabin cruiser	UK	6	m	Flooding
1 Oct 03	Chelaris J	Fishing	Guernsey	16.8	m	Total loss with four fatalities
1 Nov 03	Donald Redford	Aggregate dredger	UK	681	GT	Contact with Hythe Pier
3 Dec 03	H C Katia	Passenger	UK	186	GT	Grounding



MAIB Publications

Accident Investigation Reports

MAIB accident investigation reports are available via the MAIB website at www.maib.gov.uk and printed and bound copies are also available free of charge.

Their publication follows the statutory consultation process laid down by the Merchant Shipping (Accident Reporting and Investigation) Regulations 1999, and are accompanied by a DfT press notice.

A list of MAIB accident investigation reports appears in Section 6 and at www.maib.gov.uk/allunpricedreports.htm

Safety Digests

These are produced three times each year and contain a series of 'anonymous' short articles, derived from full MAIB investigations, administrative enquiries and preliminary examinations. They are produced in an easily read format and are distributed free of charge to the marine community. About 9,000 copies are sent to organisations and individuals around the world. Many copies are sent to ships, and feedback indicates they are well received.

Safety Digests are also well received by training establishments, naval architects, equipment manufacturers and academics. Several sailing schools use the contents as source material for RYA shore-based and practical instruction.



The MAIB gives blanket approval for *Safety Digest* articles to be reproduced in other publications, providing the source is acknowledged. During the year, several articles appeared in a variety of house magazines, trade journals and other specialist media.

The MAIB welcomes requests for copies from anyone who might benefit from reading them.

Special editions of the *Safety Digest* were produced for the fishing sector and the leisure sector. The full text of all *Safety Digests* dating back to 1995 is available at www.maib.gov.uk/safetydigests.htm

Other MAIB Publications

Annual Report

The *Annual Report* describes the activities of the MAIB and includes statistics on accidents. The 2002 edition was published in June 2003.

Safety Bulletins and Interim Recommendations

Safety Bulletins ensure that urgent safety recommendations arising from an accident are brought to the attention of those who need to act quickly after the event and before publication of the report. The *Bulletins* are produced for marine safety purposes on the basis of information available at that point in the investigation. Two were issued in 2003:

Title	Issue date
<p>1/2003 <i>P&OSL Aquitaine</i> - A volunteer died when trapped in an emergency vertical evacuation chute during an exercise in Dover Harbour.</p> <p>Shipping companies using these systems were recommended to revalidate their risk assessments and safety cases, and look closely at the design of lifejackets with their regard to their suitability for this means of escape.</p> <p>Manufacturers of these types of evacuation were recommended to take urgent action to remove possible causes of blockages in the chutes' design.</p>	February 2003
<p>2/2003 <i>Breakaway V</i> - A woman died when a hired cabin cruiser capsized on the River Bure in Norfolk.</p> <p>Urgent interim recommendations were made to those responsible for licensing pleasure vessels used on these types of waters regarding stability, the maximum number of passengers that can be safely carried, and handover procedures.</p>	August 2003

Safety Studies

Safety Studies are the product of an analysis of a particular trend or area of concern.

In August 2003 a Timber Deck Cargo Study was published. This provided an analysis of accidents involving timber carriers following a spate of accidents in relatively short succession. It is available in the "Publications" section at www.maib.gov.uk or in hard copy on request to the MAIB.

3. Statistics

Table 1 - Accidents involving loss of life: 2003 (UK registered vessels)

<u>Name of Vessel</u>	<u>Type of Vessel</u>	<u>Location</u>	<u>Accident</u>	<u>Number of Deaths</u>
<u>Merchant Vessels of >= 100 gt</u>				
Arco Adur	Aggregate dredger	River Medway, Kent	Accident to person – Crushing	1
Cumbrae	Tug	Sunderland	Man overboard	1
Hatsu Prima	Container vessel	Nhava Sheva, India	Missing	1
<u>Fishing Vessels</u>				
Amber	Trawler	Firth of Forth	Capsize	1
Boy Richie II	Creeler	NE Scotland	Accident to person – crewman pulled overside by fishing gear	1
Clachan Boy	Creeler	W Scotland	Presumed man overboard - single-handed vessel found empty	1
Kirsteen Anne	Creeler	W Scotland	Capsize	2
Lady Jane	Creeler	W Scotland	Missing vessel	1
Onward Star	Trawler	Bridlington, Yorkshire	Man overboard	1
Patsy B	Trawler	SW Scotland	Accident to person - single handed operator caught in fishing gear and fatally injured	1
Produce	Creeler	NE Scotland	Presumed man overboard - single-handed vessel found empty	1



<u>Name of Vessel</u>	<u>Type of Vessel</u>	<u>Location</u>	<u>Accident</u>	<u>Number of Deaths</u>
Venture II	Trawler	NW Scotland	Accident to person – crewman fatally injured when washed inboard in extreme weather conditions	1
Westella	Trawler	North Sea	Man overboard	1
<u>Other Vessels</u>				
Breakaway V	Cabin cruiser (commercial)	River Bure, Norfolk	Drowned following capsize	1
Dawn Horizon	Cabin cruiser (commercial)	Great Yarmouth	Fell in water while attempting to gain access from the dockside	1
Guildford Duke	Narrow boat (commercial)	River Wey, Guildford	Fatal injury sustained by passenger in contact with low bridge	1
Liberation	Sailing yacht (non-commercial)	W Wales	Man overboard	1
Northern Star	Motor boat (non-commercial)	Hartlepool	Capsize	1
Reliance	Sailing yacht (commercial)	Les Sables d'Olonne, Vendée, France	Capsize	1
Solway Hunter	Angling boat	Irish Sea	Missing	1
Sweetie Pie	Cabin Cruiser (non-commercial)	River Severn, Stourport	Drowned following Capsize	1
Unnamed	Sports boat (non-commercial)	Loch Ryan, SW Scotland	Flooding/foundering	3
Unnamed	Sports boat (non-commercial)	Firth of Forth	Vessel missing - one body recovered	2



Merchant Vessels

***IMPORTANT:** The following tables relate solely to **UK-flagged** vessels of 100gt and over.*

Table 2 - Merchant Vessel Losses: 2003

There were no merchant vessel losses in 2003.

Table 3 – Merchant Vessel Losses: 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number lost	2	-	1	1	1	-	1	1	1	-
Total on Reg	1,103	1,081	1,066	1,055	1,072	1,035	1,050	1,047	1,210	1,343
GT lost	337	-	382	869	3,476	-	12,778	11,217	671	-

Table 4 - Merchant Vessel Accidents: 1994-2003

	<u>Vessels</u>	<u>Population</u>	<u>Accidents/1000 Vessels</u>
1994	249	1,103	225.7
1995	236	1,081	218.3
1996	251	1,066	235.5
1997	237	1,055	224.6
1998	217	1,072	202.4
1999	159	1,035	153.6
2000	141	1,050	134.3
2001	133	1,047	127.0
2002	122	1,210	100.8
2003	137	1,343	102.0



Table 5 - Accidents by Vessel and Accident Type (100gt and over) 2003

	<u>Dry cargo</u>	<u>Passenger</u>	<u>Passenger/ cargo</u>	<u>Tanker/ combination carrier</u>	<u>Other Commercial</u>	<u>Total</u>
Capsize/listing	-	-	-	-	1	1
Cargo handling failure	-	1	-	-	2	3
Collision	4	2	-	2	4	12
Contact	6	13	1	3	9	32
Escape of harmful substance	-	-	-	-	-	-
Fire/explosion	2	13	-	2	5	22
Flooding/ foundering	1	2	-	-	-	3
Grounding	7	3	-	1	3	14
Heavy weather damage	2	1	-	-	-	3
Hull failure	-	-	-	-	-	-
Machinery failure	9	17	2	3	9	40
Person overboard	1	2	-	-	1	4
Pollution	-	1	-	1	1	3
Total	32	55	3	12	35	137

N.B. This table was printed with the column headings in the incorrect order in the 2002 Annual Report. For the corrected version please go to the online version in the "Publications" section at www.maib.gov.uk



Table 6 - Merchant Vessel Accidents by Nature: 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Capsize/Listing	-	-	5	-	-	1	-	1	-	1
Cargo Handling Failure	9	7	2	2	2	1	8	1	1	3
Collision	25	23	26	30	23	10	25	16	16	12
Contact	26	22	31	24	23	18	14	13	24	32
Escape Of Harmful Substance	24	26	20	15	27	15	4	11	-	-
Fire/Explosion	24	25	22	26	24	19	18	21	26	22
Flooding/Foundering	5	3	3	4	3	3	2	3	1	3
Grounding	9	19	18	21	20	16	7	18	13	14
Heavy Weather Damage	4	4	12	2	4	2	5	1	4	3
Machinery Failure	62	37	41	50	55	48	50	39	28	40
Person Overboard	6	6	14	15	7	10	5	9	7	4
Other	55	64	57	48	29	16	3	-	2	3
Total	249	236	251	237	217	159	141	133	122	137



Table 7 - Accidents to Crew by Location on Vessel: 2003

<u>Where</u>	<u>Number of Crew</u>	<u>Of which resulted in death</u>
Accommodation space – crew	28	
Accommodation space – passengers	19	
Cargo or other tank space	2	
Dry cargo space	1	
Engine control room	4	
Engine rooms	22	
External stairway/ladder/gangway	6	
External working deck/shelter	14	2
Galley	38	
Hotel service areas	17	
Internal stairway/ladder	9	
Mooring deck	19	
Navigation/communication control space	1	
Overside/aloft	3	
Ro-ro vehicle deck/ramp	23	
Ship's boat	6	
Store space	10	
Workshop	3	
Other external deck	23	
Other internal deck/space	16	
Other machinery space	3	
Other	19	
Not known	4	1
Total	290	3



Table 8 - Deaths and Injuries of MV Crew Members By Rank: 2003

<u>Rank / Specialism</u>	<u>Number of Crew</u>	<u>Of which Deaths</u>
Master/skipper	1	
Chief engineer	5	1
Officer, Deck	13	
Officer, Electrical	1	
Officer, Engineering	18	
Rating	16	1
Rating, Deck	66	1
Rating, Engineering	23	
Rating, General purpose	33	
Other crew	114	
Total	290	3

Table 9 - Deaths and Injuries of MV Crew Members By Injury 2003

<u>Main Injury</u>	<u>Number of Crew</u>
Death – confirmed	2
Death – presumed	1
Amputation of hand/fingers/toe	2
Bruising	42
Burns/scalds	11
Chemical poisoning/burns from contact or inhalation	4
Concussion/unconsciousness due to head injury	3
Crush injury	11
Cuts/wound/lacerations	35
Dislocations	5
Eye injuries	3
Fracture - of the skull/spine/pelvis/major bone in arm or leg	26
Fracture – other	56
Strains - other strains/sprains/torn muscles/ligaments	37
Strains - strained back	36
Other	5
Unknown	11
Total	290

Table 10 - Accidents to Merchant Vessel Crew: 1994-2003

	<u>Number of crew involved</u>	<u>Resulting in death</u>
1994	436	2
1995	345	4
1996	400	3
1997	326	5
1998	325	2
1999	285	4
2000	300	3
2001	293	3
2002	297	5
2003	290	3

Table 11 - Accidents to Passengers by Injury: 2003

<u>Main Injury</u>	<u>Number of Passengers</u>
Amputation of hand/fingers/toes	1
Bruising	7
Burns/scalds	1
Concussion/unconsciousness due to head injury	4
Cuts/wound/lacerations	3
Dislocations	9
Eye injury	1
Fracture - of the skull/spine/pelvis/major bone in arm or leg	66
Fracture – other	70
Strains/sprains	10
Other	4
Unknown	7
Total	183



Table 12 - Accidents to Passengers: 1994-2003

	<u>No of Passengers Involved</u>	<u>Resulting in Death</u>
1994	79	-
1995	97	-
1996	97	2
1997	94	-
1998	119	2
1999	80	1
2000	136	1
2001	138	1
2002	133	-
2003	183	-



Fishing Vessels

There were 6,731 UK-registered fishing vessels in 2003 (end-December 2003 figure). During the year, 467 accidents and incidents involving these vessels were reported to the MAIB.

27 fishing vessels were reported lost (0.4% of the total fleet) and there were 11 fatalities to crew.

Table 13 - Losses by Registered Length: 2003

Under 12 Metres				
<u>Date</u>	<u>Name of Vessel</u>	<u>Age</u>	<u>GT</u>	<u>Nature of Accident</u>
31/12/02	Kirsteen Anne	36	2.18	Capsize
06/01/03	Amber	14	9.16	Capsize
06/02/03	Boy Jim	30	6.77	Foundering
10/02/03	Cornucopia	22	4.81	Foundering
21/02/03	Ros	-	5.87	Machinery failure
09/04/03	Sea Reaper	6	8.10	Fire
26/06/03	Chernita	7	4.23	Foundering
07/07/03	Briagha Mara	15	11.42	Foundering
29/07/03	Charuny III	3	11.48	Foundering
17/08/03	Francis & William	39	3.02	Grounding
16/09/03	Lady Jane	25	4.38	Missing vessel
24/09/03	Stormy C	13	1.77	Foundering
29/10/03	Phoenix	-	7.69	Capsize
29/11/03	La Belle Trois	20	15.59	Fire
12 - Under 24 Metres				
<u>Date</u>	<u>Name Of Vessel</u>	<u>Age</u>	<u>GT</u>	<u>Nature of Accident</u>
30/01/03	Tonn Vane	35	26.8	Grounding
03/03/03	Melita	24	80.7	Grounding
08/03/03	Onward	13	171.0	Foundering
08/03/03	Arktos II	-	-	Foundering
04/04/03	Reliance	30	44.0	Fire
06/06/03	Diana	32	23.8	Collision
14/08/03	Elhanan T	22	141.0	Foundering
29/10/03	Fairway	8	380.0	Foundering
06/11/03	Hawthorn	30	73.9	Foundering

24 Metres or More				
<u>Date</u>	<u>Name Of Vessel</u>	<u>Age</u>	<u>GT</u>	<u>Nature of Accident</u>
04/04/03	Grampian Duke	43	308.0	Foundering
20/04/03	Lephreeto	42	191.1	Collision
17/05/03	Neptune	12	255.0	Foundering
11/10/03	Itxas	39	336.0	Foundering

Table 14 - Fishing Vessel Losses: 1994-2003

	<u>Under 12 metres</u>	<u>12-24 metres</u>	<u>Over 24 metres</u>	<u>Total Lost</u>	<u>Total on Register</u>	<u>% Lost</u>
1994	21	17	5	43	10,296	0.42
1995	18	13	1	32	9,337	0.34
1996	19	5	1	25	8,064	0.31
1997	11	11	1	23	7,779	0.30
1998	12	5	4	21	7,605	0.28
1999	17	10	6	33	7,460	0.44
2000	15	19	6	40	7,194	0.56
2001	14	18	1	33	7,200	0.46
2002	6	7	5	18	7,046	0.25
2003	14	9	4	27	6,731	0.40



Table 15 - Accidents to Fishing Vessels: 2003

	<u>Number of Vessels</u>	<u>Incident Rate per 1,000</u>
<u>Nature of Accident</u>	<u>Involved</u>	<u>Vessels at Risk</u>
Capsize/Listing	4	0.6
Collision	16	2.4
Contact	8	1.2
Fire/Explosion	13	1.9
Flooding/Foundering	50	7.4
Grounding	38	5.6
Heavy Weather Damage	1	0.1
Machinery Failure	221	32.8
Missing Vessel	1	0.1
Person overboard	1	0.1
Pollution	1	0.1
Total	354	52.59

Table 16 - Fishing Vessel Accidents by Nature: 1994-2003

<u>Nature of accident</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Capsize/Listing	9	7	9	8	11	15	4	3	5	4
Collision	23	29	25	22	20	15	25	17	15	16
Contact	8	9	6	3		7	2	6	1	8
Fire/Explosion	21	17	19	17	11	15	16	10	12	13
Flooding/Foundering	91	74	68	51	62	54	59	46	41	50
Grounding	56	58	64	44	40	31	40	29	26	38
Heavy Weather Damage	4	5	2	1	2	4	4		2	1
Machinery Failure	322	385	327	316	247	232	174	212	181	221
Missing Vessel		1			1		1			1
Person overboard	14	19	8	15	9	8	11	11	2	1
Other				1	1		2			1
Total	548	604	528	478	404	381	338	334	285	354



Table 17 - Accidents to Fishing Vessels by Nature: 2003

<u>Nature of Accident</u>	<u>Number of Vessels Involved</u>	<u>Incident Rate per 1,000 Vessels at Risk</u>
Under 12 Metres - Vessels at Risk = 5,763		
Capsize/Listing	3	
Collision	5	
Contact	3	
Fire/Explosion	7	
Flooding/Foundering	23	
Grounding	25	
Machinery Failure	158	
Missing vessel	1	
Pollution	1	
Total	226	39.2
12 - Under 24 Metres - Vessels at Risk = 722		
Collision	8	
Contact	1	
Fire/Explosion	5	
Flooding/Foundering	24	
Grounding	12	
Machinery Failure	50	
Total	100	138.5
24 Metres or More - Vessels at Risk = 246		
Capsize/Listing	1	
Collision	3	
Contact	4	
Fire/Explosion	1	
Flooding/Foundering	3	
Grounding	1	
Heavy Weather Damage	1	
Machinery Failure	13	
Person overboard	1	
Total	28	113.8

Table 18 - Accidents to Crew by Vessel Length (deaths shown in brackets) 1994-2003

	<u>Under 12 metres</u>		<u>12 - Under 24 metres</u>		<u>24 metres or more</u>		<u>Total</u>	
1994	38	(11)	56	(6)	66	(8)	160	(25)
1995	31	(8)	41	(6)	47	(4)	120	(18)
1996	23	(9)	35	(3)	58	(8)	116	(20)
1997	21	(8)	73	(17)	41	(4)	135	(29)
1998	28	(12)	34	-	51	(14)	113	(26)
1999	15	(4)	29	(2)	37	(3)	81	(9)
2000	18	(4)	44	(9)	43	(19)	105	(32)
2001	12	(2)	41	(3)	34	(5)	87	(10)
2002	10	(3)	24	(4)	19	(1)	53	(8)
2003	26	(8)	26	(2)	17	(1)	69	(11)

Table 19 - Deaths and Injuries to FV Crew by Rank / Specialism: 2003

	<u>Under 12</u>	<u>12-24</u>	<u>Over 24</u>	<u>Total</u>
	<u>Metres</u>	<u>Metres</u>	<u>Metres</u>	
Master/skipper	10	1	1	12
Officer, Deck	2	0	2	4
Officer, Engineering	0	0	2	2
Officer, Fishing Mate	0	0	1	1
Rating, Deck	2	6	1	9
Rating, Engineering	0	1	2	3
Rating, Fisherman	12	12	6	30
Other crew	0	6	2	8
Total	26	26	17	69



Non-UK flag vessels

This is a new table which summarises the reports received by the MAIB of accidents involving non-UK flag vessels in UK territorial waters, i.e. within the 12-mile limit. Under the Merchant Shipping (Accident reporting and Investigation) Regulations 1999, the MAIB is empowered to investigate such accidents.

Table 20 - Accidents to non-UK registered vessels occurring inside UK territorial waters 2003

	<u>Dry cargo</u>	<u>Passenger</u>	<u>Passenger/ cargo</u>	<u>Tanker/ combination carrier</u>	<u>Other commercial</u>	<u>Fishing vessels</u>	<u>Total</u>
Capsize/listing	-	1	-	-	-	-	1
Cargo handling failure	4	-	-	-	-	-	4
Collision	5	-	-	2	1	-	8
Contact	1	3	1	8	1	1	15
Fire/explosion	3	1	-	-	1	-	5
Flooding/foundering	-	-	-	-	-	1	1
Grounding	14	3	-	1	2	6	26
Machinery failure	12	2	-	4	-	2	20
Person overboard	2	-	-	-	-	-	2
Pollution	-	1	-	1	-	1	3
Total	41	10	1	16	5	11	85



4. Other Branch Activities

Key Targets

Reports of investigations to be completed and made publicly available within 9 months of the date of the accident.	Achieved in 25% of cases. The average time taken to complete investigations and publish reports was 10.4 months.
MAIB Safety Digests to be issued at least three times each year.	Exceeded. As well as producing these on time, a special edition was produced for the Fishing 2003 exhibition in April.
MAIB Annual Report to be published within six months of the end of the calendar year.	Achieved.
Written enquiries to be responded to within 15 days (DfT target 75%).	This was achieved in 97% of cases.

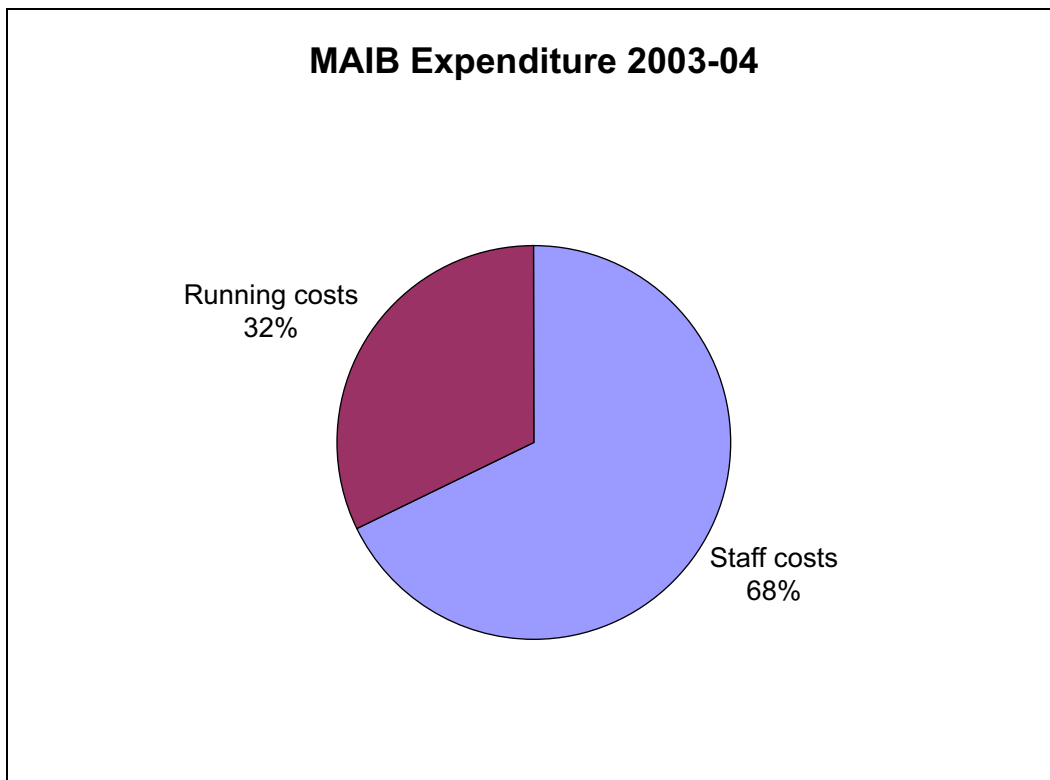
Finance

This Annual Report deals principally with the calendar year of 2003. However, for ease of reference, the financial report refers to the 2003/04 financial year which ended on 31 March 2004. MAIB's funding from the Department for Transport is provided on this basis and is also used for the business planning process.

The total funds allocated by the DfT to the MAIB for 2002/03 were £1.981m. The 2.6% overspend is attributed to some residual costs associated with the Branch's accommodation expansion, and higher than usual IT costs relating to the development of MAIB's voyage data recorder capability.

£ 000s	Budget	Outturn
Staff costs	1,369	1,379
Running costs	612	654
Totals	1,981	2,033





Investors in People

Following MAIB's re-accreditation in 2002 under the Investors in People scheme, first granted in 1996, the year saw further developments in increasing staff inclusiveness and work on the establishment of an accredited training course for MAIB Inspectors.

Fishing 2003 Exhibition

The MAIB repeated the success of its presence the previous year at the annual Fishing Exhibition at the Glasgow SECC in April. Once again, those involved at the 'sharp end' of the industry were able to meet MAIB staff and discuss safety issues. This was the fourth consecutive appearance at the exhibition and there is now tangible evidence that MAIB's profile has been firmly raised among fishing skippers, their crews and families.



International

Marine Accident Investigators' International Forum (MAIIF)

Stephen Meyer attended the most recent meeting of MAIIF, which was held in Chile in November 2003. MAIIF now has representatives from 48 maritime countries around the world, and is an invaluable forum for the exchange of information and best practice in accident investigation. It is also developing as a most useful mechanism for furthering international co-operation in marine accident investigation.

EU

The MAIB was very pleased when David Wheal, a Principal Inspector, was successful in securing a secondment to the newly-formed European Maritime Safety Agency (EMSA), taking up post in January 2004. David has responsibility for the development of policy and guidance on accident investigation across all EU Member States, an area EMSA is very keen to promote.

International Maritime Organization (IMO)

IMO's Flag State Implementation sub-committee continued its work with MAIB's leading involvement. Work was undertaken on the development of a methodology for the analysis of flag states' reports using the principles of formal safety assessment. This work benefited other IMO sub-committees in their work on safety.



Voyage Data Recorders (VDRs)

With the adoption in 2002 of the revised Chapter V of SOLAS by the IMO, Voyage Data Recorders (VDRs) became part of the mandatory equipment on ro-ro passenger vessels and new cargo vessels of over 3000gt. Existing passenger vessels had to be fitted with these instruments by January 2004.

The main purpose of a VDR is to supply good quality factual evidence for use by accident investigators, and 2003 saw the MAIB devoting substantial resources to this area of work.

Work continued, with the help of an expert consultancy, to gain further knowledge of the products being developed worldwide to comply with the IMO specification.

During the year, the increasing number of VDRs at sea became evident when several investigations saw inspectors examining many hours of evidence, including one case where data was forthcoming from five separate vessels.

Human Factors

From May 2003, the provision of human factors expertise was established under a long-term contract with QinetiQ. Representatives of this multi-faceted organisation are invited to attend accident debriefs to provide a human factors perspective, and, on occasions, have accompanied Inspectors when interviewing those involved in accidents. QinetiQ also provide expert input to draft reports to ensure that key human factors elements are properly explained.

Gaul

Following the 2002 underwater survey of the wreck of the UK-registered trawler *Gaul*, which disappeared in the Barents Sea, north of Norway, in February 1974, an MAIB Inspector has continued to provide support to the staff at the Attorney General's Office in preparation for the re-opened Formal Investigation which began in January 2004.



5. Staff

One of the MAIB's longest-serving and respected staff, Audrey Hodges, retired in February 2003. Audrey had provided excellent administrative support to the Branch since 1989 and had seen it grow and change under three different Chief Inspectors.

Three new Inspectors joined the MAIB in 2003. Graham Inseal joined having completed a one-year Law degree at Sussex University following a career at sea as master of deep sea tankers with a major oil company. Wim Hart joined from the Royal Navy where he had served as commander within the marine engineering specialism. Richard Dunham joined from Warsash Maritime College where he had been a senior lecturer; he was previously at sea with the Royal Fleet Auxiliary and then a well-known dredging company.

Three new administrative staff joined in 2003: Mike Dyer came to us from the Maritime and Coastguard Agency, and Helen Gilson and Lucy Munro became our latest recruits in the summer and autumn.

A new post of Project Officer was formed to provide direct support to the Chief Inspector in pursuit of particular initiatives aimed at improving the effectiveness of the Branch. Rod Paterson became the first person to fill this post, coming to the Branch direct from the DfT's Permanent Secretary's private office. An account of his experiences in MAIB appears below.

A Year in the Life of a Project Officer

By Rod Paterson

In May 2003 I joined the Marine Accident Investigation Branch (MAIB) as the Project Officer. This new position was created by the Branch as a secondment opportunity for Department for Transport Fast Stream or Fast Forward staff. The secondment runs for a year, allowing the post holder to lead on a wide range of projects and experience what life is like in a delivery-focussed part of the department.

During my time at the MAIB I have led on four major projects and been involved in many more aspects of the day-to-day running of the Branch. To begin with I was asked to look at the training scheme that the MAIB has in place for its inspectors, looking particularly at developing a system of training for new inspectors about to join the Branch. In the short-term this meant re-arranging the already existing internal training programmes, trying to organise it around the core skills accident investigators required. The long-term aim has been to develop an assessed and accredited training programme. Picking up on the increasing synergies developing from the work of the Board of Transport Accident Investigators we began to explore the possibility of developing a generic accident investigation training programme for marine, air and the newly created rail accident investigators. To deliver the main body of that training we approached Cranfield University. Over the course of the year a working group from the Marine, Air and Rail Accident Investigation Branches has worked, with the excellent support of Cranfield, to develop a generic training course. That first course will be delivered in May 2004 with a second course in September.

As I became more involved and aware about the work of the Branch I took up a project looking at the relationship that inspectors have with their counterparts in the police. On the whole during accident investigations the relationship between the MAIB and the police is positive but the contrast in roles and objectives could sometimes cause difficulties. Over the course of the year I have been developing a Memorandum of Understanding with colleagues in the Association of Chief Police Officers. The purpose of that Memorandum is to identify the areas where the roles and responsibilities of the MAIB and the police overlap, and may cause problems, and to try and identify a way forward. In this way the document tackles everything from how the two organisations should work together on scene, to how evidence is collected and shared. Although the Memorandum is not finalised, the relationship developed with ACPO, particularly the Diving and Marine Working Group, is strong and real progress has been made over the year in agreeing a workable Memorandum.

Over the course of 2003 and 2004 the MAIB is revising and updating its Regulations; the statutory instrument which provides the MAIB with its day-to-day powers. In the latter half of 2003 I was responsible for leading on the internal consultation process that led to providing the Department's lawyers with instructions on how the Regulations should be revised. Since handing over those instructions we have been working with lawyers, and colleagues in the Department's Shipping Policy Unit, to create draft Merchant Shipping (Accident Reporting and Investigation) Regulations. That draft will be circulated widely for full public consultation with the aim that the new Regulations will be laid before Parliament and in place by autumn 2004.

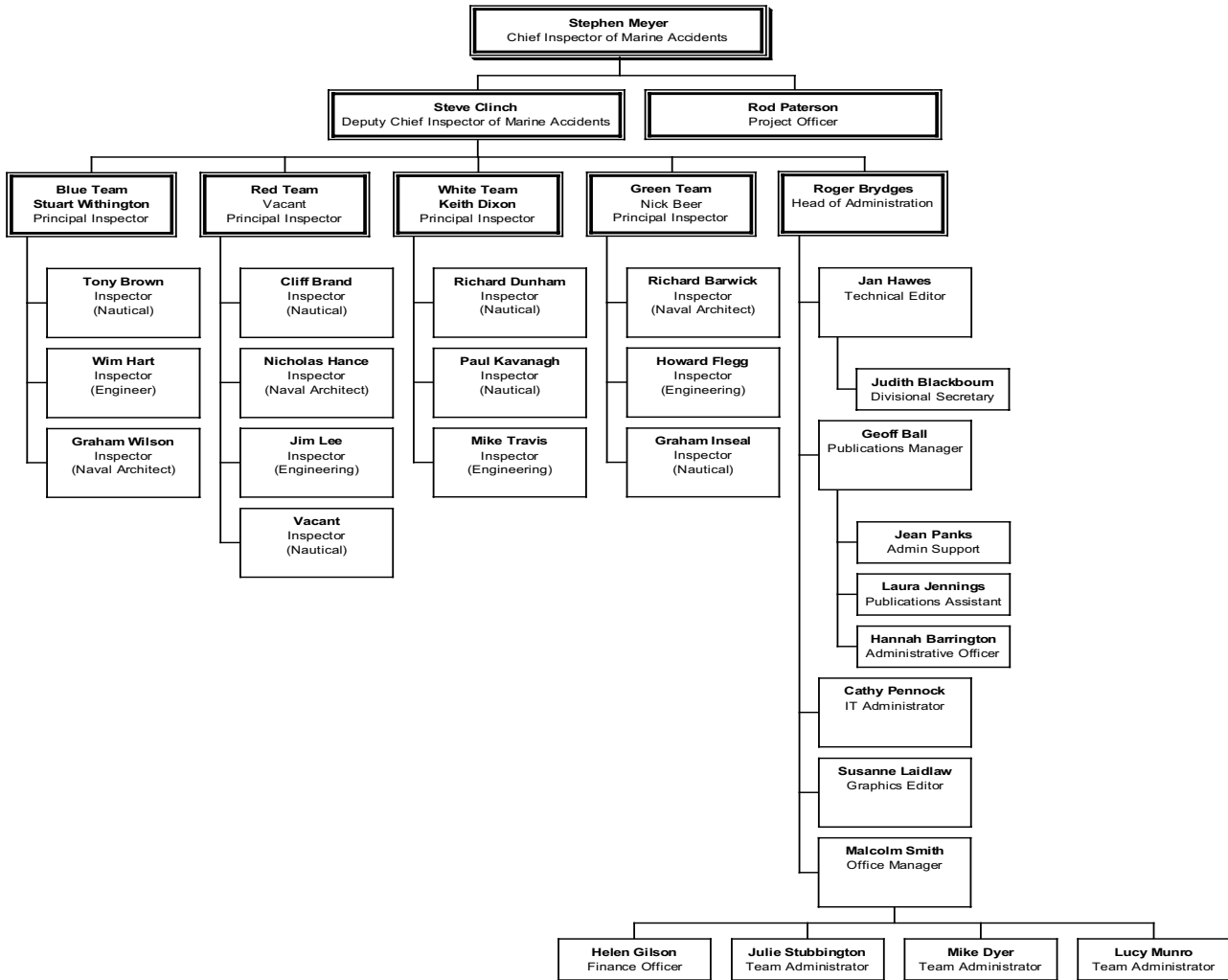
The final major project that I have led on during my time at the MAIB has been the development of a closed loop recommendations system. This system is about ensuring that the Branch is able to track its safety recommendations successfully. The Branch will become more proactive in ensuring that recommendations are being considered. Each year the MAIB will also publish an Annual Progress Report detailing progress with the recommendations made during the course of the year.

As well as these four major projects I have also been involved in an enormous variety of aspects of the Branch's work. I have attended the weekly Management Meetings and Accident Review Meetings, Away Days and Accident Debriefs. I have been involved in the drafting of press notices and correspondence and more recently in the work on the Bridge Watchkeeping Safety Study. I've even been allowed out! Spending time with P&O looking at their operation and even spending a week learning how to sail.

Put simply I have been allowed to get involved in anything that I wanted to be involved in. It has given me a real opportunity to experience working life at the delivery end of the department. It has been a challenging but hugely enjoyable year.



Current Organisation



6. Publications list

Investigation Reports

Merchant Vessels

1/2003 – *Kodima* - report of the cargo shift, abandonment and grounding in the English Channel of this timber carrier on 1 February 2002

5/2003 – *Stena Explorer* - report of the fire on board this high speed ferry when entering Holyhead on 20 September 2001

6/2003 – *Pride of Bath* - report of a barbecue fire in the galley of this passenger vessel when on the River Avon, Bath, on 20 July 2002

7/2003 – *Ash* and *Dutch Aquamarine* collision between these two merchant vessels in the Dover Strait with the loss of one life on 9 October 2001

8/2003 – *Maria H* - report of striking the Keadby Railway Bridge by this cargo vessel on 29 May 2002

9/2003 – *Queen Elizabeth 2* - report into flooding of aft engine room on 21/22 May 2002

10/2003 – *Diamant* and *Northern Merchant* - report of collision SE of Dover between these two ferries on 6 January 2002

12/2003 – *Pride of the Dart* - report of grounding of passenger vessel near the entrance to the River Dart on 28 June 2002

14/2003 - *Portsmouth Express* - report into a wash wave accident involving this high speed ferry off East Cowes on 18 July 2002

16/2003 – *Norsea* - report into a fire in the aft engine room of this ro-ro ferry on 2 September 2002



17/2003 – *Queen Elizabeth 2* - report into the escape of steam and hot water on board resulting in one fatality on 23 June 2002

18/2003 – *P&OSL Aquitaine* report of a fatal accident during a vertical chute evacuation drill on the Ro-Ro ferry in Dover Harbour on 9 October 2002

20/2003 – *Pride of Portsmouth* and *HMS St Albans* - report of the collision in Portsmouth Harbour between this Ro-Ro ferry and Royal Navy vessel on 27 October 2002

21/2003 – *Nottingham Princess* - report on the striking of Trent Bridge Nottingham by this passenger vessel on 15 November 2002

22/2003 – *Bro Axel* and *fv Noordhinder* - report of a near miss and the subsequent grounding of products tanker *Bro Axel* at Milford Haven on 5 December 2002

23/2003 – *Arco Adur* report of a fatal accident that occurred on board this dredger on the River Medway on 25 February 2003

24/2003 – *Claymore* report of the entanglement in moorings by this merchant vessel at St Margaret's Hope on 11 March 2003

26/2003 – *Pride of Provence* - report of the contact by this Ro-Ro ferry with the Southern Breakwater, at Dover Harbour, eastern entrance, on 18 April 2003

27/2003 – *Jambo* - report of the grounding and loss of this cargo vessel off Summer Islands, west coast of Scotland, on 29 June 2003

28/2003 – *P&O Nedlloyd Vespucci* and yacht *Wahkuna* - report on the collision in the English Channel of this container ship and sailing yacht on 28 May 2003



Fishing Vessels

2/2003 – *Radiant* - report of the capsize and foundering with the loss of one life north-west of the Isle of Lewis on 10 April 2002

3/2003 – *Osprey* - report of a fatal man-overboard in Lochinver Harbour on 20 April 2002

4/2003 – *Tullaghmurry Lass* - report into the sinking with the loss of three lives in the Irish Sea on 14 February 2002

11/2003 – *Marbella* - report of the contact with the Bravo Delta Offshore Platform in the Rough Gas Field, south-east of Flamborough Head, on 8 May 2002

13/2003 – *Ocean Star* - report on the failure of a warp block north of the Shetland Islands which resulted in one fatality on 26 November 2001

15/2003 – *Flamingo* - report of the capsize with the loss of four lives, East of Harwich, on 7 July 2002

19/2003 – *Kirsteen Anne* - report on the foundering with the loss of her two crew at the Firth of Lorn on 31 December 2002

25/2003 – *Amber* - report of the foundering of the vessel with the loss of one life in the Firth of Forth on 6 January 2003

Summary Report 1/2003 – *Solway Harvester* - summary report into the capsize and sinking east of the Isle of Man with the loss of seven lives on 11 January 2000



7. Recommendations

During the year, the MAIB made 195 recommendations in its reports of accident investigations. These were directed to the following:

Organisation	Number
Shipping Companies	67
Fishing Vessel Owners/Skippers	34
Maritime and Coastguard Agency	61
Port and Harbour Authorities	8
Classification Society	3
Manufacturers	6
Other Maritime Administration	3
Other Government Departments or Agencies	5
Other	8

135 of these were fully accepted, 10 had qualified acceptance, 5 were rejected and 45 were under consideration at the end of the year.

Of the 45 recommendations made in 2002 which had been awaiting a response at the end of 2002, 15 were accepted, one had been rejected and 29 had produced no response by the end of 2003.

Work began in 2003 on the establishment of a more formalised means of accounting for the effectiveness of MAIB recommendations. From January 2004, those having recommendations directed to them were invited to provide information on the means by which they were to be implemented.

