The Royal Institution of Naval Architects



2023 Annual Report

and

Financial Statements

for the year ending 30 September 2023

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Royal Institution of Naval Architects

2023 ANNUAL REPORT

OBJECTIVES OF THE INSTITUTION

The Objectives of The Royal Institution of Naval Architects are as set out in the Charter of Incorporation 1910 - 'the improvement of ships and all that specially appertains to them, and the arrangement of periodic meetings for the purpose of discussing practical and scientific subjects bearing upon the design and construction of ships and their means of propulsion, and all that relates thereto'.

Today, reflecting the wider range of activities of the Institution as both a professional institution and learned society, the Objectives of the Institution are more aptly described as "to encourage and assist in the achievement of the safe and efficient design, construction, maintenance and operation of marine vessels and structures."

These Objectives are primarily achieved by:

- Setting of internationally recognised and accepted standards of professional competence and integrity required for membership.
- Encouraging membership of the Institution at all levels
- Enabling of the exchange of technical information through the Institution's publications, conferences, and local meetings, which are open to all those involved in the design, construction, maintenance and operation of marine vessels and structures.
- Contributing its collective expertise to national and international maritime organisations for the benefit of the profession and society.

In 2023 the Institution's specific objectives have been set to become an International Centre of Knowledge and Excellence for the Naval Architecture and Maritime Engineering Community and to identify and develop the skills needed for the 21st Century Naval Architect and Maritime Engineer. To inspire the next generation and to increase membership globally and focus on its activities to encourage the younger members of the profession to get involved in the activities of the Institution, furthermore, to continue with strengthening its links with academia and industry. These remain the Institution's specific Objectives for the forthcoming year.

ACTIVITIES, ACHIEVEMENTS AND PERFORMANCE

The Institution organised/co-organised 7 courses and conferences, covering the full spectrum of maritime technology, consisting of 1–2-day events. Throughout the year, the Institution published 8 journal titles (6 Magazines, 1 supplement and 1 Journal), reporting on developments in the maritime industry and the results of research and development. Conferences and publications have also contributed to the Institution's income.

Publications: TNA (10), SBI (6), WT (5), SRM (4), Jetro-sponsored supplement 2023, Significant Ships, Significant Small Ships and IJME (3 issues). Also, 5 RINA Conference Proceedings.

The Institution's local Branches and Sections have held regular meetings to present and discuss matters of professional interest. The Institution's conferences, publications and local meetings are available to both members and non-members.

The Institution also contributed its collective expertise to national and international organisations, particularly concerned with maritime safety and the protection of the maritime environment. The Institution recognised and encouraged the achievement of individuals at all stages of professional development through its prizes and awards.

During the year, the Institution achieved its programme of planned activities in full and continued providing hybrid events and activities providing online and in person options to increase their availability to both members and non-members. Feedback on its activities confirmed that the Institution was maintaining the high standard and value of its conferences, publications etc., and meeting its Objects.

Future Plans

In the forthcoming year, the Institution intends to bolster its programme of courses, conferences, and local meetings, reflecting developments in the design, construction and maintenance of marine vessels and structures, and to continue contributing its collective expertise to appropriate national and international organisations for the public benefit. All activities have returned to a hybrid model with the option for live attendance or online participation. The digital programme has provided better communication and membership support, via the new membership CRM, website, and digital media. The strong focus on ongoing digital development will enhance accessibility and engagement for members to foster greater collaboration and knowledge-sharing within the global maritime community.

The strategic objective in becoming an International Centre of Excellence for Naval Architecture and Maritime Engineering brings numerous benefits to bolster our community of experts and thought leaders who drive innovation and advancements, moreover, enhancing the Institution credibility and reputation as a trusted source of knowledge and expertise for industry stakeholders, policy makers and academia. Supporting the professional development of naval architects and maritime engineers, ultimately contributing to the growth and sustainability of the maritime sector.

BOARD OF TRUSTEES

The Royal Institution of Naval Architects, also known as "RINA", is a registered charity (number 211161) incorporated under Royal Charter. The Board of Trustees is the governing body of the Institution.

The Board of Trustees is responsible for the governance and management of the Institution. Responsibility for the day-to-day management of the Institution's affairs is delegated to the Chief Executive, accountable through the Chairman to the Board of Trustees. All Trustees are provided with guidance documentation issued by the Charity Commission concerning their responsibilities.

Board of Trustees

(at 31 December 2023)

Chairperson

C Savage

Vice Chair R Cripps

Treasurer D Monioudis

Trustees

T Strang	M d'Amico	R Gehling
E Pang	T Allan	J Paik
K Hutchinson	B Rosenblatt	N Chrissos

The Board of Trustees met four times in the year, during which its principal considerations were the policy, management and review of the Institution's investments, the management and review of the Risk Register, and review of the Institution's financial and administrative procedures.

The implementation of the strategic direction is ongoing. The Institution continues improving its profile within the maritime community, whilst addressing future challenges and maintaining the Institution's standing as a leading maritime organisation.

Management of Risk

The Risk Register is reviewed and updated at every meeting of the Board of Trustees.

COUNCIL

The Council is elected by the members. It is responsible for communicating the views of the Institution's membership to the Board and providing guidance and advice to the Board of Trustees on all matters related to the governance of the Institution.

The Council holds delegated authority from the Board of Trustees for the management of the professional, technical, and learned society affairs of the Institution. Such delegated authority is

principally exercised through the Institution's standing committees and the Chief Executive.

Council and Officers of the Institution

(at 31 December 2023)

President

2022 - Hon Professor C Savage FRINA

Past Presidents

1984-1987 Professor J B Caldwell OBE PhD MSc FREng

1996-1999 Sir John Parker FREng

2002-2004 Professor W G Price FREng FRS

2004-2007 Dr N Gee DEng FREng

2007-2010 Dr S Payne OBE HonPhD (Sc) FREng

2010-2014 P French FREng FRSA 2014-2016 B S. Rosenblatt FRINA

2016-2018 T Boardley FRINA

2018-2020 Professor R Birmingham FRINA

2020-2022 M d'Amico FRINA

Honorary Vice Presidents

2004 - E C Tupper RCNC FRINA

2022 - J Frier FRINA 2022 - P Wrobel FRINA

Date Elected/Appointed Date Elected/Appointed

Vice Presidents

2019 R Gehling +	2019 D Molyneux*
2019 Dr D Aldwinckle	2020 C De Marco*
2019 P Krishnankutty*	2021 IKAP Utama*
2019 J K Paik*	2021 T Allan
2019 A Subahani *	2021 A K Dev*

* Regional Vice Presidents

Fellows

2020 R Downs	2020 S Inayatullah
2020 P A Wilson	2021 D Monioudis
2020 K W Hutchinson	2021 P Kujala
2020 R P Fernandez	2022 M Renilson
2020 G S Chopra	2022 N Ratukalou

2020 D Konovessis

Members

2020 H Theunissen
2020 A J Aitken

Associate-Members

2021 M H Ghaemi	2022 H Dixon
2021 R Miller	2022 C Baxter
2021 Y R Kamath	2022 C McNair
2021 S De Villiers	2022 C Baker
2021 A Kumar	

President of the Australian Division

2022 Jim Black +

President of the New Zealand Division

2023 G Schweikart +

Chairperson of Standing Committees

R Cripps Maritime Innovation Committee
S Watts + Maritime Safety Committee
T Strang + Maritime Environment Committee

E Pang + IMO Committee
P Wilson Publications Committee
J Kernaghan + Membership Committee
M Barton + Professional Affairs Committee
F Spencer + Disciplinary Committee

+ Ex officio members

Chief Executive

C Boyd

Auditors

haysmacintyre

Bankers

The Royal Bank of Scotland

Investment Advisors

CCLA Investment Management Ltd

Staff

The Board and Council record their grateful thanks to the Chief Executive and the Secretariat staff for their dedication to the work of the Institution during the year.

STANDING COMMITTEES

The Council thanks the Chairs and members of the Institution's standing committees for the time and effort which they devote to the work of the Institution.

Membership Committee

The Committee met five times during the year to consider applications for membership and registration with the Engineering Council.

A total of 47 Fellows were elected, with 31 being forwarded for registration with the Engineering Council. A total of 97 were elected as Members, with 71 being forwarded for registration with the Engineering Council.

The Committee acknowledged their appreciation for the sterling service of Martyn Hart, who stood down during the year, having served as Chair and a committee member since 2008.

Disciplinary Committee

No allegations of improper professional conduct by members were received during the year.

IMO Committee

In 2023 the IMO Committee met three times (21/02, 09/05, 23/10). All meetings were hybrid meetings.

The Committee organised RINA delegations to participate in the following IMO Committees, Sub-Committees, and inter-sessional working groups:

- Sub-Committee on Ship Design and Construction (SDC)
- Sub-Committee on Ship Systems and Equipment (SSE) 9
- Intersessional Working Group on Greenhouse Gas (ISWG-GHG) 14
- Sub-Committee on Pollution Prevention and Response (PPR) 10
- Maritime Safety Committee (MSC) 107
- Intersessional Working Group on Greenhouse Gas (ISWG-GHG) 15
- Marine Environmental Protection Committee (MEPC) 80
- Underwater Radiated Noise workshop
- Intersessional Working Group on the revision of SOLAS Chapter III and the LSA Code (ISWG-SOLAS III-LSA 2)

The committee is 33-strong and in 2023 contributed around 170 days to IMO meetings, industry meetings, correspondence groups and preparing submissions.

Committee members continued to participate in a number of correspondence groups, being particularly active in life-saving appliances, bio-fouling, GHG, carbon intensity reduction matters and submitted or co-sponsored 5 papers.

The Committee continued to engage widely with flag states and NGOs at the IMO.

Two Members of the Committee are members of the UK's Clean Maritime Council and the Committee has a liaison with ISO through the Vice-chair of the Committee.

Some topics are addressed jointly with the Safety Committee, including safety of container ships and an industry-wide investigation into North Atlantic wave data.

Publications Committee

The Committee met three times during the year and the new Chair, Professor Philip Wilson, emphasised that the business of the Committee remains unchanged.

A new IJME Editor, Prof Alan Murphy, is now in place, together with a number of Associate Editors. The distribution of papers means that there is a search for an additional Associate Editor to balance the workload. The Committee aim to have a quicker turn around on acceptance rates, a vital factor in the publication game.

The Institution's publisher's, University Buckingham Press, have met with the new Operations Director, and improvements in the processing of papers has been implemented.

The Committee determined which papers published in the Transaction, are worthy of Medals and Prizes.

The editors of all the Institution's publications will henceforth join the Committee to allow an overview of high standards and the improved flow of relevant information between all publications.

Professional Affairs Committee

The Professional Affairs Committee (PAC) met on three occasions during 2023 (22/02, 21/06, 1/11).

All three meetings were held in hybrid format enabling international members of the committee to attend. The committee remains strong in numbers with several new members prepared to help support the work of the committee and undertake training in the various areas of accreditation.

The main activities of the PAC during the year were:

- Accreditation of Higher Education Institutions with reaccreditations of Singapore Institute of Technology, UCL and a new accreditation of Belgrade University. Grant of a one-year extension of accreditation was given to Plymouth.
- Accreditation of Initial Professional Development/Graduate Training Schemes for the following companies: Global Maritime, Shell, and BAE Systems.
- Accreditation of 6 Continuous Professional Development courses for NavyApp and a Dry Dock Course for DM Consulting.
- Continuing development and implementation of RINA's policy for Equality, Diversity, and Inclusivity (ED&I) via a working group which reports to the PAC and providing the panel for the Eily Keary award.
- Increasing the number of trained assessors in each area of accreditation in line with the training plan.
- Conducting the 2023 professional audit of RINA (delayed until January 2024) but with no significant issues being identified although the changes in the Membership Team had led to items being missed.
- The work around improving individual CPD was largely on hold during 2023 while the launch of MyCareer was awaited (occurred early 2024).

In the forthcoming year, the following will provide the major focus of PAC activity:

- Ensuring that all accreditation requests continue to be responded to in a timely and thorough manner.
- Continuing action to ensure that the PAC has the suitable qualified and experienced members to

- successfully undertake its activities, through the training plan.
- With the launch of MyCareer the renewing and adapting of the processes for reviewing CPD records and increasing the effectiveness pf CPD activities of members. including working with and contributing to the Developing Careers Committee's working group to improve the experience for RINA members.
- Monitor RINA's implementation of IT tools for improved record keeping and document control.
- Continuing the implementation of the ED&I policy.
- Provide panel members for the Eily Keary award and internal audit.

Maritime Safety Committee

The Maritime Safety Committee met four times during 2023, (14/03, 20/06, 26/09, 5/12), to discuss and review issues of maritime safety and continued to develop its remit and scope.

The ongoing work on the Safety of Container Ships was discussed and it was stated that changing the responsibility for stowage from the master to the load port was key, and whilst that was recognised within Top-Tier JIP, the mechanism to effect that change wasn't discussed, i.e. updating the Hamburg Rules. Following an invitation from MARIN, who are running the Top-Tier JIP, a workshop was attended in Rotterdam to discuss the "ship to shore" interface and included an update on the Top-Tier project. Attendees were across the stakeholder spectrum and included central planners, vessel planners, ship operators, lashing and stowage experts, insurers and terminal operators and the World Shipping Council. The discussions covered the stowage process e.g. weights; positioning; contents and the lashing gear e.g. condition; inspection; reporting.

The Chair met members of the Seafarers Charity and their work was outlined, alongside the current projects on Fishing Vessel Safety. A specific area of common interest was the research undertaken by the Wolfson Unit in exploring the possibility of using a sea state allowance (as defined by the Wolfson Stability Method) to establish safe operational practices for fishing vessels under 15m. It was proposed that suitable experts within the Safety Committee would review the work and provide feedback.

The issue of enclosed space safety continued to make the headlines with more fatalities and the Committee continues to raise the awareness of the complex issues surrounding confined spaces and the dangers thereof. In September 2023 the following article "Enclosed Space Engineering Solutions" in the Maritime Reporter and Engineering News, was published. The Committee also has a representative on the Human Element Industry Group, led by IMarEST and this subject continues to be on the Committee agenda.

Discussions were held on the limitations of the wave data and associated methodology for the update to IACS Rec 34 and the Committee worked with the IMO Committee to support a paper submitted to IMO by ICS for MSC108. Additionally, the Committee approached the UK National Oceanographic Centre (NOC), to establish whether there was any further support they could provide in this subject area and were informed that there would be a requirement to fund any further work.

The Accident Analysis Working Group continued to meet to develop the analysis and add further accident data. The data is currently in the form of a spreadsheet however the Secretariat stated that the requirements for the data would be included within Phase 2 of the technical specification of the digital transformation. A major purpose of the spreadsheet is to provide innovative thinking around the big issues that the spreadsheet highlight, for example Fires at Sea. Currently Lithium-ion batteries in cars etc can be identified, alongside other fuel types other than HFO, for ease of establishing trends. Another area of concern was the number of domestic ferry accidents in certain parts of the world, such as Far East and Africa and it was suggested that RINA branches across the world could take an active role in promoting safety of these vessels.

It was recognised that there are many accident spreadsheets in various parts of the maritime industry, however, the specific purpose of developing the analysis spreadsheet is to understand where there are naval architecture improvements which can be made that are perhaps not so visible when looking at the overall accident reports. This work is ongoing and will be used to focus effort within both the Safety Committee and wider parts of RINA, to promote safety. RINA is in a unique position to be able to raise issues due to its status as a professional body rather than being tied by regulations or political considerations.

RINA continued to attend the SNAME Marine Forensic Committee meetings and furthermore two members of that committee are now members of the RINA Safety Committee. This has provided a useful channel for exchange of information and views specifically with respect to containership issues and ship accidents.

In November 2023 RINA was invited to submit comments on the Australian Naval Nuclear Power Safety Bills 2023, which is a "framework to promote and regulate the nuclear safety aspects of Australia's nuclear-powered submarine enterprise." This covered aspects such as independence of regulators, maintaining quality assurance through the procurement process and whether existing regulations adopted by other countries could be adopted directly. A small group of suitably qualified and experienced individuals, from the Safety Committee put together a concise but comprehensive response which was submitted in January 2024.

Maritime Innovation Committee

The Committee has met twice during the year together with a combined meeting with the RINA Maritime Environment Committee. The purpose of this meeting was to discuss topics of common interest particularly related to decarbonisation impacts, future fuel considerations, and design for the future.

The Committee has continued to discuss and review the innovative and emerging technologies that will have an impact on the industry, the profession, and the Institution across all sectors in the immediate future and long term during the year.

There have been wide-ranging discussions on some of the technological developments and the following topics were raised as areas of particular interest:

- Alternative Fuels and the supporting regulatory framework
- Floating Offshore Wind Technology
- Reduction in underwater noise

- Use of nuclear power
- Manufacture of composite boats using natural fibres and resins
- Digitalisation and Sustainability
- Education/training/skills

One area that has also been discussed in depth has been Cyber Security in the Maritime Sector.

Several current Committee members have decided to step down from their roles and it is pleasing to welcome a number of new members to the Committee from all sectors of the industry.

Maritime Environment Committee

During 2023, the Maritime Environmental Committee met 3 times (20/02, 19/06, 24/10) to review issues related to the maritime environment.

The Marine Environmental Committee continued to work on matters related to the environment and supporting the IMO Committee as needed. While many issues continue to be discussed (underwater noise, hull coatings, training of Naval Architects etc.) the focus remains on decarbonisation and how the alternative fuels and technologies that the next generation of vessels will use impacts the work and study of naval architecture.

The priority list of topics to discuss was updated and included:

- Nuclear power propulsion
- The UK Government's Clean Maritime Demonstration Competition (CMDC) for innovative clean maritime technologies
- Al from an environmental assessment perspective
- Future alternative fuels

A presentation was carried out by representatives from Bureau Veritas and University College Cork about the EU SATURN H2020 project on underwater radiated noise.

The second meeting was a joint meeting of the Maritime Innovation Committee and of the Maritime Environment Committee to consider topics of interest to both committees.

Some of the topics amongst others discussed were:

- Future fuel considerations
- Decarbonisation impact
- Alternative fuels such as ammonia, hydrogen, and methanol
- Use of nuclear power
- Rapid recharging facilities for electric maritime vessels
- What is the opportunity for wind propulsion?
- Reduction in underwater noise
- Ship/boat designs for the future
- Manufacture of composite boats using natural fibres and resins
- Education and future skills

It was agreed to conduct a survey of the RINA membership asking what topics they felt the Committees should be considering. Once the results of the survey were received, the Technical Committee Steering Group (TSCG) would review these to decide which topics to concentrate on.

The Committee noted that the membership had been falling off in recent meetings and therefore will continue to look for members who are passionate about the environment and will carry out a review of the Terms of Reference. Future plans include a greater involvement of the technical committees in the work of the Institution.

Developing Careers Committee

During 2023, the Council approved establishing a new Developing Careers Committee (DCC). The Chair and committee members have been active in setting the objectives and defining the direction for 2024.

The group, with inclusion of the secretariat membership team, discussed the need to develop common and modern career pathways for routes into the industry, and not just from conventional routes; improving resources and support for developing engineers; and changing our thoughts on university and school engagement through several working groups like:

STEM working group.

The STEM working group is a diverse group of individuals who are redeveloping how the institution looks at how we can support Naval Architects in how they engage with School and High School age kids to consider a career in the Maritime industry and even become a Naval Architect. Currently the Team has been looking at developing a suite of information resources that all RINA members can use when visiting schools suitable for up to 18 years of age, as well as engaging with Parents. The next phase will focus not only on information resources but also tasks, exercises, and games.

Universities Working Group

The University working group has been developed to focus on how the institution engages with the student body and the universities through Student Ambassador programme. In addition to highlighting the support we can give to students and student societies; the aim is to attract students to join and get involved with the Institution; and ultimately join the industry.

AMRINA members forum

The AMRINA members forum will focus on the matters relating to the development of Naval Architects and other engineers, and other AMRINA members. From providing an End-User perspective on the onboarding process through to hand-in of the Professional Registration report and resources for the engineer to help develop their Naval Architecture journey. This endeavour will help not just the Associate-Member, but also Members and Fellows.

This group is also involved in the expansion of core training towards new types of routes into the profession. Many companies have understood that several factors have led to a downturn in available naval architecture graduates. The DCC are aiming to better understand the legislation related to Apprenticeship programmes, so that we can help the industry develop suitable programmes UK-wide for additional Naval Architecture apprenticeships, whilst also supporting existing Draughtsmanship and Shipwright apprentices develop into naval architects. This is achieved through supporting several initiatives

to develop new training programmes to create routes into the profession. The DCC aims to understand these areas and help industry to develop fit-for-purpose, and suitable programme.

Benevolent Fund Committee

Limited financial assistance was given to members who found themselves in necessitous circumstances. The Council records its grateful thanks for the donations to the Benevolent Fund received during the year.

MEMBERSHIP

Members on the Roll at 31 December 2023 are shown below:

Hon Fellows	7
Fellows	1049
Members	3037
Associate Members	2430
Associate	263
Student Members	1391
Junior Members	0
Corporate Partners	82
Total	8177

Corporate Partners

The following companies were elected Corporate Partners in 2023, having demonstrated their commitment to achieving and maintaining high standards of professional competence amongst their engineers:

Voe Marine
Burner Fire Control
Sea Delta
Consult Maritime LLC
Synoptix
Cyprus Marine and Maritime Institute
ZAZA Inc
Shipglide
Larsen & Toubro
Resimac
Navantia
DNV UK

COOPERATION WITH OTHER ORGANISATIONS

The Engineering Council

The Institution continued to carry out its responsibilities as a Licensed and Nominated Body of the Engineering Council of the United Kingdom. A total of 2337 members were registered with the Engineering Council through the Institution, with 61 members being registered during the year.

RINA and IMarEST

The Institution continued to work closely with the IMarEST through joint branch and accreditation activities.

RINA and SNAME

The Institution continued to work closely with SNAME through the SNAME Marine Forensics Committee.

Agreements of Co-operation

The Institution continued to work with national professional institutions with common aims and objectives through its Agreements of Co-operation.

The Council considers that these Agreements also serve to demonstrate the Institution's commitment to maintaining the professional standing and influence it derives from its international membership and activities.

International Maritime Organization

The Institution has continued to make a significant contribution to improving safety at sea and the protection of the maritime environment through its work as an NGO at the International Maritime Organization. The significance of this contribution is recognised by staff and members of the IMO and is an important element of the public benefit which the Institution provides.

Confederation of European Maritime Technology Societies (CEMT)

The Council of CEMT met twice during the year, in Rotterdam and Naples. The Institution was represented by Trevor Blakeley FRINA, who is also the Chairman of the CEMT Council. Matters discussed included the routes to achieving professional recognition and working as maritime professionals in the countries of Europe.

The principal activity of CEMT during the year was the organisation of the fourth online international Conference on Post Graduate Research in the Field of Maritime Technology (PostGradMarTec 2023) organised on behalf of CEMT by the Hellenic Institute of Marine Technology. This annual conference again provided a unique opportunity for younger postgraduates to present their current or recently completed work, and to meet with other postgraduates from universities and industry in a conference environment. PostGradMarTec is free to post and undergraduates. Papers presented at the Conference were again made available online with free copyright.

The 2023 Annual CEMT Award for Significant Contribution to the European Maritime Industry was presented to KNVTS in recognition of the significant contribution it has made to the success of the Dutch and European and international maritime industry over the past 125 years through its work in encouraging and assisting its members to achieve the highest standards of professional competence and integrity.

CEMT continued its role of updating maritime professionals in Europe on developments in the maritime industry though its NGO status with the UN and EU. It again published Papers of Significance published by its member Societies during the year.

PUBLICATIONS

Magazines

The Naval Architect, Ship & Boat International, Shiprepair & Maintenance and Warship Technology, were published during the year, providing reports on technological development in all sectors of the maritime industry.

All magazines published during the year were also published online.

eNewsletters

The eNewsletters *The Naval Architect eNews, Shiprepair & Maintenance eNews_and Warship Technology eNews* were published during the year.

Significant Ships and Significant Small Ships

The series were continued with the publication of *Significant Ships 2023* and *Significant Small Ships 2023*.

Transactions

Transactions Part A – International Journal of Maritime Engineering (IJME) was published three times during the year.

The IJME was published in printed format, and online by The University of Buckingham Press.

Digital Media

Extensive use was made of the Institution's social media groups on LinkedIn, Facebook, Instagram, and Twitter, as well as the Institution's YouTube channel to communicate with the members of the Institution and global maritime community.

CONFERENCES, COURSES AND EVENTS

Conferences and Courses

The following conferences and courses were organised or coorganised during 2023:

Wind Propulsion 2023 16-17 February 2023, London, United Kingdom

RINA Annual Dinner 2023 27 April 2023, London, United Kingdom

Warship 2023 31 May – 1 June 2023, Bath, United Kingdom

Dry Dock Training 2023 6-9 June 2023, London, United Kingdom

Dry Dock Training 2023

13-16 June 2023, London, United Kingdom

SURV 11 21-22 June 2023, Rotterdam, Netherlands

Offshore Wind Summit 2023
3 October 2023, Aberdeen, United Kingdom 2023 President's Invitation Lecture
1 November 2023, London, United Kingdom

Historic Ships 2023 28-30 November 2023, London, United Kingdom

Sponsored Student Places

The Council record their grateful thanks to the following companies who generously sponsored places for students at Institution conferences during the year.

BAE Systems Lloyd's Register ABS

Annual General Meeting

The Annual General Meeting was held online on 27th April 2023 at which the following Resolution was passed:

Resolution 1

To reappoint haysmacintyre as the Institution's auditors.

Catherine Ingram, MRINA, Chair Equality, Diversity, and Inclusion Group presented:

Me, Engineering and Us.

Annual Dinner

The Annual Dinner was held at the De Vere Grand Connaught rooms, London in April 2023. The guest speaker was Dr Bas Buchner, President of Marin who presented:

"Better Ships, Blue Oceans: The Role of Research in Safer, Cleaner and Smarter Shipping and sustainable Use of the Seas".

President's Invitation Lecture

The President, Hon. Professor C Savage, welcomed guests and members to the 2023 President's Invitation Lecture on the 1st November 2023, when Dr Rodrigo Perez Fernandez, PhD, MSc, MBA, CEng, CmarEng, FRINA, FSNAME, FIMarEST presented:

"Artificial Intelligence VS Engineering Intelligence".

The President's Invitation Lecture was again sponsored by ABS, to whom the Institution is indebted for their support of this and other Institution activities.

Divisions, Sections and Branches

The Divisions, Branches and Sections provided a comprehensive programme of online technical events during the year.

The Board of Trustees and the Council recognise the value which the membership places upon the activities of the Divisions, Sections and Branches, and record they're thanks to those members who spend much time and effort in organising these activities.

INSTITUTION AWARDS

Medal Of Distinction

The Institution's Medal of Distinction for papers published in the 2023 Transactions is awarded to Hyeong Jin Kim, Sang Min Park, Giles Thomas, and Jeom K Paik for their paper Solid Rubber Fenders to Prevent Structural Damage in a Low-speed Collision Between a Ship-Shaped Offshore Installation and a Shuttle Tanker Working Side-By-Side in Offloading Operation.

Jeom Paik Prize

The Jeom Kee Paik Prize for the best paper on the subject of structures, published by an author under the age of 35 in the 2023 Transactions is awarded to Hyeong Jin Kim and Sang Min Park for their paper Solid Rubber Fenders to Prevent Structural Damage in a Low-speed Collision Between a Ship-Shaped Offshore Installation and a Shuttle Tanker Working Side-by-Side in Offloading Operation.

W H C Nicholas Prize

The W H C Nicholas Prize for the best paper on a design-related topic published by an author under the age of 35 in the 2023 Transactions is awarded to Astrid Solheim, Sigurd S. Pettersen and Jose J G Agis for their paper *Early-Stage Decisions in Marine Systems Design for Deep-Sea Mining*.

Ian Telfer Prize

The Ian Telfer Prize for the best paper published in the 2023 Transactions on energy or the environment-related issues, by an author under the age of 35, is awarded to Daehee Seong for their paper Fracture Safety of Liquefied Natural Gas Tank in Cryogenic Conditions.

Wakeham Prize

The Wakeham Prize for the best general paper published in the 2023 Transactions by an author under the age of 35 is awarded to Ícaro Aragão Fonseca and Felipe Ferrari de Oliveira for their paper *Open Framework for Digital Twin Ship Data: Case Studies on Handling of Multiple Taxonomies and Navigation Simulation.*

Calder Prize

The Calder Prize for the best paper published in the 2023 Transactions by an author(s) under the age of 35 on the subject of small or high-speed craft is awarded to Tarik Taspinar for his paper Optimisation of Voyage Speed using Genetic Algorithm Approach.

David Goodrich Award

The David Goodrich Prize for the best paper presented at the 2023 Warships Conference is awarded to Anthony Burnett and Charles MacLeod for their presentation of the paper *In-Process Ultrasonic Inspection During Fusion Welding of Large-Scale Fabrications*.

Pyrgotelis Zoitos Award

The Pyrgotelis Zoitos Award, sponsored by Cyprus Marine and Maritime Institute, for the best general paper published in the 2023 Transactions by an author under the age of 35, is awarded to Jean-Baptiste Souppez and Tabbi W. Awotwe for their paper The Conceive Design Implement Operate (CDIO) Initiative — An Engineering Pedagogy Applied to The Education of Maritime Engineers.

Peter Contraros Award

The Peter Contraros award for the best paper on Strength, Safety or Reliability of Marine Structures by an undergraduate or postgraduate student is awarded to Dimitris G. Georgiadis for his paper Stochastic geometric imperfections of plate elements and their impact on the probabilistic ultimate strength assessment of plates and hull-girders.

The judging panel considered that "the study presents a novel approach for modelling the inherent uncertainties of initial geometric imperfections found at the plates of ships. It assesses their impact on the ultimate strength from a probabilistic point of view. The approach is examined in a case study of a VLCC tanker midship section in extreme sagging condition. The findings are validated against previous studies and showcase tangible improvements against the conventional "hungry-horse" and the theoretical "buckling-mode" imperfection models."

Student Awards

Student Awards in recognition of their achievement were presented to students at 24 universities.

The Institution is grateful to the following organisations and companies for their support of the Awards:

BAE Systems Bureau Veritas d'Amico Società di Navigazione Greek Shipping Cooperative Committee Keppel Shipyard Lloyd's Register

RINA - LR Maritime Safety Award

The Maritime Safety Award, sponsored by the Institution and Lloyd's Register, is presented to an individual, company or organisation which has made a significant technological contribution to improving maritime safety or the protection of the maritime environment.

This year the Maritime Safety Award is presented to Orca AI for their SeaPod lookout unit. The ORCA SeaPod demonstrates a step change in technology which can improve safety across a wide range of maritime vessels by its integrated machine vision and Al system. Additionally, it can benefit the environment by reducing collisions with sea mammals which can be identified by its powerful cameras.

The judges took into consideration the fact that the attributes of the technology, such as reducing crew workload by helping object identification, particularly in congested waters and bad visibility, smart alarms for collision avoidance, offer safety benefits across a wide spectrum of scenarios. Also, the use of AI in the system will allow the technology to evolve in the future. The winner will be announced at the 2024 Annual Dinner.

RINA - BP Eily Keary Award

The Royal Institution of Naval Architects is committed to ensuring that all individuals, regardless of gender, faith, or ethnicity, have equal opportunity to participate fully in all the Institution's activities. The Institution also seeks to encourage such equality of opportunity and involvement throughout the global maritime industry.

The annual Eily Keary Award is sponsored by BP and recognises the contribution by an individual, organisation, or part of an organisation to increasing equality, diversity, and inclusion in their sector of the maritime industry.

This year the Eily Keary Award is presented to David Foote (Babcock) for his dedication in advocating for Neurodiversity in the Maritime Defence and Shipbuilding Sector.

The judging panel recognises that David is to be applauded for going above and beyond the responsibilities of his day job to make a positive difference in our industry. Neurodiversity is not a topic that is well-understood, but it impacts a lot of people (estimated 15-20% of the population): Raising awareness and taking action in this area is a significant achievement and gives considerable benefit both to individuals, organisations, and our industry. David Foote's efforts in championing neurodiversity both at local and national levels enables individuals to fulfil their potential and allows the industry to make the most of the available resources and understand the value that neurodiverse individuals bring. The winner will be announced at the 2024 Annual Dinner.

MEMBERS DECEASED DURING THE YEAR

Honorary Fellow (HFRINA)

	FRINA	
A M Stephen	A H Taylor	D L Blount
H E Penny	J K Develin	M M Thomson
P J Dowling		
	MRINA	
A S Walley	A G Parkinson	A J Wright
B Postlethwaite	B S L Smith	C T D Collins
D R Patterson	D J Brown	G Breekveldt
J S Lingwood	L J Wilson	P B Watson
P Atkison	R N Caby	R F Burnett
R A Given		

The Royal Institution of Naval Architects

FINANCIAL STATEMENTS FOR THE PERIOD ENDING 30 SEPTEMBER 2023

FINANCIAL REVIEW

Total income (Restricted and Unrestricted) in 2022/23 was £1.95m (2021/22: £1.95m) and total expenditure (Restricted and Unrestricted) in 2022/23 was £2.65m (2021/22: £2.12m). Income remained relatively stable; income from institution membership fees tracked inflation and increased to £846k (2022: £810k).

After the short-term disruption of Covid, income from events gradually increased to £335k (2022: £240k). The income from publications and advertising sales shrunk to £454k, (2022: £569k) which reflects changing market conditions. The total expenditure increased due to ongoing investment into human capital, upskilling the secretariat and increased IT support costs with investment into an updated systems architecture.

The value of the fixed assets increased to £5,49m (2022: £5,46m) as a result of the ongoing digital upgrade; the Institution invested into a bespoke Customer Relationship Management system and a new website. Net deficit before investment losses in 2022/23 was £700k (2021/22: £181k). The operating deficit in the Unrestricted Fund in 2022/23 was £749k (2021/22: £245k), and the operating surplus in the Restricted Fund in 2022/23 was £49k (2021/22: £65k).

Investment policy and performance

In accordance with authority enabled by the Order of the Charity Commissioners for England and Wales, dated 1 Nov 2002 and issued under Section 26 of the Charities Act 1993, the Trustees have sought and gained approval to use a 'Total Return' policy with regard to the Endowment Funds.

The investment powers of the Board of Trustees are set out in the Royal Charter and By-Laws, copies of which are available from the Chief Executive at RINA Headquarters. Under the terms of those powers, management of the investment portfolio has been delegated to two investment management companies: CCLA Investment Management Ltd and M&G Investment Management Ltd. The Board of Trustees reviewed its investment policy and confirmed that it remains the purpose of the Investment Portfolio to provide the Institution with income whilst maintaining the value of capital in real terms. As such the investment aim is to generate a minimum total return in excess of inflation (UK RPI) over a 5-year period.

The value of the investments at end September 2023 (£3.15m) has decreased by 10% from the previous financial year, despite a combined £50k gain on the M&G and CCLA investments, as a result of the sale of £400k M&G Charifund investment to finance the operational deficit and digital upgrade project. Throughout the year, the M&G dividend yield (Sept 2023: 5.88%) was significantly ahead of the average yield of the FTSE

All Share Index (Sept 2023: 3.81%) and the M&G total return over 12 months stood at 10.54% versus the Index at 13.84%. The CCLA fund total return performance over the past twelve months was 4.48%.

Reserves Policy

The total value of the Institution's funds (Unrestricted, Restricted and Endowment) on 30 September 2023 was £8.52m (2022: £9.17m).

The value of the Unrestricted Fund on 30 September 2023 was £6.58m (2022: £7.27m).

The value of Restricted Funds on 30 September 2023 was £349k (2022: £334k).

The value of Endowment Funds on 30 September 2023 was £1.60m (2022: £1.6m).

The total value of the Institution's investments on 30 September 2023 was £3.15m (2022: £3.5m).

The Institution's free reserves (unrestricted funds less designated funds and tangible fixed assets) stood at 30 September 2023 at £1.09m (2022: £1.80m). The cash holdings stood at £181k on 30 September 2023 (2022: £487k).

The Board of Trustees' policy is to maintain minimum cash reserves at the level of 3 months forward cash outflow from HQ operating costs net of rental and investment income, namely circa £250k, and to consider reserves in excess of this level for investment. To finance the operating deficit the Trustees released £400k of investment to cash during the year.

Restricted Funds

The Board of Trustees' policy is to use all dividend income from Restricted Funds to assist and enable the continuing academic and professional development of members.

- Prize funds are awarded for outstanding articles published in the Institution's journals.
- Scholarship funds support student attendance at conferences and other events and provide for online learning.
- Benevolent funds provide membership funding to members in full-time education and assistance to other members requiring financial support.

Risk Management and Principal Risks

Operational and financial risks facing the Institution are listed in the Risk Register which is routinely reviewed and revised by the Trustees. Policies and procedures have been established to mitigate any risks identified during these reviews. Compliance with these policies and procedures is monitored by routine Internal Audit and Self-Assessment.

Covid-19 has presented a significant risk to both the operation and finances of the Institution., Members have shown an appetite to attend the Institution conferences and receive publications, but the uptake has not been enough to make a positive impact to Institutions income for this year. The combination of these principal risks has the potential to undermine the Institution's ability to maintain the current level of its activities and services to members. A Publications and Events audit is scheduled to measure and benchmark against current best practice and what members want to receive. The Board routinely reviews cashflow, income and expenditure in both short and long term to manage financial risk.

Remuneration of key personnel

The remuneration of senior members of the Secretariat is reviewed and changes approved annually by the Trustees.

Fundraising

The Institution does not carry out any active fundraising, nor does it engage with any third party or professional fundraisers, and therefore has not signed up to any fundraising standards. There have been no fundraising complaints received during the year (2023: none). Complaints are considered by the Board or by independent non-Board members as appropriate.

STATEMENT OF THE BOARD OF TRUSTEES' RESPONSIBILITIES

Law applicable to charities in England and Wales requires the Trustees to prepare financial statements for each financial year which give a true and fair view of the Institution's financial activities during the year and of its financial position at the end of the year. In preparing financial statements giving a true and fair view, the Board of Trustees should follow best practice and:

- select suitable accounting policies and apply them consistently.
- make judgements and estimates that are reasonable and prudent.
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements.
- prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Institution will continue in operation.

The Board of Trustees is responsible for keeping accounting records which disclose with reasonable accuracy the financial position of the Institution, and which enable them to ascertain the financial position of the Institution, and which enable them to ensure that the financial statements comply with applicable law. They are also responsible for safeguarding the assets of the Institution and hence for taking reasonable steps

for the detection and prevention of fraud and other irregularities.

Disclosure of information to auditor

The Trustees who held office at the date of approval of this Board of Trustees' Report confirm that, so far as they are each aware.

- there is no relevant audit information of which the auditor is unaware; and
- each Trustee has taken all steps that they ought to have taken as a Trustee to make themselves aware of any relevant audit information and to establish that the auditor is aware of this information.

Annual Accounts

The accounts which follow are the full statutory accounts of the Institution and should be read in conjunction with the Annual Report of the Board of Trustees.

Auditors

Haysmacintyre LLP have expressed their willingness to continue in office as auditors and a resolution proposing their re-appointment will be submitted at the Annual General Meeting.

INDEPENDENT AUDITORS' REPORT TO THE BOARD OF THE ROYAL INSTITUTION OF NAVAL ARCHITECTS

Opinion

We have audited the financial statements of the Royal Institution of Naval Architects for the year ended 30 September 2023 which comprise the Statement of Financial Activities, the Balance Sheet, the Statement of Cash Flows, and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice). In our opinion, the financial statements:

- give a true and fair view of the state of the charity's affairs as at 30 September 2023 and of the charity's net movement in funds for the year then ended.
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

Basis for opinion

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder. We conducted our audit in accordance with International

Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern.

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other information

The trustees are responsible for the other information. The other information comprises the information included in the Trustees' Report.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this

Matters on which we are required to report by exception.

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- adequate accounting records have not been kept by the charity; or
- sufficient accounting records have not been kept;
 or
- the charity financial statements are not in agreement with the accounting records and returns;
- we have not received all the information and explanations we require for our audit.

Responsibilities of trustees for the financial statements

As explained more fully in the trustees' responsibilities statement set out on page 9, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the charity or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below:

Based on our understanding of the charity and the environment in which it operates, we identified that the principal risks of non-compliance with laws and regulations related to the Charities Act 2011 and GDPR, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the preparation of the financial statements such as Charity SORP, and considered other factors such as payroll tax and VAT.

We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls) and determined that the principal risks were related to posting inappropriate journal entries to income and management bias in accounting estimates.

Audit procedures performed by the engagement team included:

- Inspecting correspondence with regulators and tax authorities.
- Discussions with management including consideration of known or suspected instances of non-compliance with laws and regulation and fraud.

- Evaluating management's controls designed to prevent and detect irregularities.
- Identifying and testing journals, in particular journal entries posted with unusual account combinations, postings by unusual users or with unusual descriptions; and
- Challenging assumptions and judgements made by management in their critical accounting estimates.

Because of the inherent limitations of an audit, there is a risk that we will not detect all irregularities, including those leading to a material misstatement in the financial statements or noncompliance with regulation. This risk increases the more that compliance with a law or regulation is removed from the events and transactions reflected in the financial statements, as we will be less likely to become aware of instances of noncompliance. The risk is also greater regarding irregularities occurring due to fraud rather than error, as fraud involves intentional concealment, forgery, collusion, omission, or misrepresentation. A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities

This description forms part of our auditor's report.

Use of our report

This report is made solely to the charity's trustees, as a body, in accordance with section 144 of the Charities Act 2011 and regulations made under section 154 of that Act. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an Auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity's trustees as a body for our audit work, for this report, or for the opinions we have formed.

Haysmacintyre LLP

Statutory Auditors

SUMMARY STATEMENT OF FINANCIAL ACTIVITIES FOR THE YEAR ENDED 30 SEPTEMBER 2023

	Unrestricted	Restricted	Endowment	Total	Total
	Funds	Funds	Funds	2023	2022
	£	£	£	£	£
Income and expenditure					
Income and endowments	s				
from: Charitable Activities					
Membership	986,736			986,736	924,025
Events	335,657			335,657	239,559
Publications	453,693			453,693	569,451
Grants, Donations, and	d	8,342		8,342	32
legacies Investment income	110,055	58,385		168,440	213,163
Total income and endowments	1,886,141	66,727		1,952,868	1,946,230
Expenditure on:					
Charitable Activities					
Membership	1,007,685	16,934		1,024,619	718,142
Events	448,778	326		449,104	464,352
Publications	1,178,450	523		1,178,973	944,292
Total expenditure	2,634,913	17,783		2,652,696	2,126,786
Net income before investment gains/losses	(748,772)	48,944		(699,828)	(180,556)
=	25,322	3,922	21,236	50,480	(174,884)
Net income before	(723,450)	52,866	21,236	(649,348)	(355,440)
transfers Transfers between funds	38,000	(38,000)	-	-	-
Net movement in funds	(685,450)	14,866	21,236	(649,348)	(355,440)
Reconciliation of funds Total funds brought forward	7,265,195	333,712	1,575,290	9,174,197	9,529,636

All amounts relate to continuing activities.

BALANCE SHEET AS AT 30 SEPTEMBER 2023

		2023		2022
	£	£	£	£
FIXED ASSETS				
Tangible assets		5,489,598		5,461,254
Investments		3,150,351		3,499,872
		8,639,949		8,961,126
CURRENT ASSETS				
Debtors	130,034		152,499	
Cash at bank and in hand	181,926		487,266	
	311,960		639,765	
CREDITORS: amounts falling due				
within one year	(427,060)		(426,694)	
NET CURRENT ASSETS		(115,100)		213,071
NET ASSETS		8,524,849		9,174,197
		=======		=======
CHARITY FUNDS				
Unrestricted funds				
General funds		6,579,745		7,265,195
Restricted		348,578		333,712
Endowment		1,596,526		1,575,290
		8,524,849		9,174,197
		=======		=======

The financial statements were approved and authorised for issue by the Board of Trustees on 30th January 2024 and signed on their behalf by:

D N Monioudis Treasurer

STATEMENT OF CASHFLOWS FOR THE YEAR ENDING 30 SEPTEMBER 2023

	2023	2023	2022	2022
	£	£	£	£
Operating activities				
Net income before investment gains	(699,828)		(180,556)	
Depreciation	109,142		75,967	
Investment income	(168,440)		(213,163)	
(Increase)/decrease in debtors	22,465		(30,059)	
Increase in creditors	364		7,678	
Net cash from operating activities		(736,297)		(340,129)
Investing activities				
Purchase of tangible fixed assets	(137,486)		(241,963)	
Purchase of investments			(3,000,000)	
Investment income	168,440		213,163	
Proceeds from Sale of tangible fixed assets			1,033	
Proceeds from sale of investment	400,000		3,400,000	
Net cash from investing activities		430,954		372,233
Movement in cash and cash equivalents		(305,340)	32,102
Cash and cash equivalents at 1 October 2022		487,266		455,164
Cash and cash equivalents at 30 September 202	23	181,926 ======		487,266 ======
Cash and cash equivalents comprise				
Cash at bank		181,926		487,266
		======		======
Analysis of changes in net debt	Balance at 1 Oct 2022	Cash flow	Other movements	Balance at 30 Sep 2023