



New Zealand Naval Architect

The New Zealand Division of the Royal Institution of Naval Architects

Issue 40 May 2013

Trevor Blakeley, CEO of RINA paid a visit to Queenstown on 3rd March

In addition to the usual magnificent weather that Queenstown offers, a display by the Red Chequers added to the pleasures of a trip across the lake to Walter Peak and a generous dinner hosted by Real Journeys Ltd.



Above: Trevor Blakeley with the centenary commemorative plaque presented to TSS EARNSLAW by the NZ Branch of RINA, October 2012.

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President's Message



Ian MacLeod

Those of you that managed to attend the recent RINA AGM will be aware that a number of our long serving council members are stepping down and we have some new faces on the team.

Our thanks to departing council members Roger Hill, Jarrod Hall and Cristiana Chiappini for their contributions during their time on council. Other movements within the team include the end of my term as division president (in line with our constitution a new division president will be elected from the council at the next council meeting), Professor Richard Flay will be on a research sabbatical this year but will remain on council and Brendan Fagan will remain on council from his new location in Wellington.

We are acutely aware that the vast majority of our events and activity is centred very closely around Auckland and equally aware that our members span the entire country. I have noted a recent influx of Naval Architects in to Wellington and we are keen to bring members in this area together to share ideas and technical discussions, Brendan is happy to coordinate some informal meetings to kick things off, we will review our contacts lists for local members however if you are in the area

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President's Message *continued*

and keen to participate please send us a message with your contact details. If you are interested in getting in contact with members in your area please let us know.

Recently we were visited by RINA Chief Executive Trevor Blakeley who had a busy schedule of meetings with member companies and educational institutions during his brief visit. High on Trevor's agenda this year was the promotion of professionalism within the marine industry and the recognition of the professional experience of members. During a well-attended workshop here in Auckland Trevor highlighted the routes to Professional MRINA status and how this status can be achieved through a number of routes depending on educational qualification and experience. If you are currently either a student or associate member and would like further information on how to progress to full professional member there are a number of useful guides available from the membership department in RINA UK (membership@rina.org.uk) and you can discuss with local members and council for any further guidance required.

Finally, if you have an interesting project underway or development that you would like to share with other

members through a site visit or presentation then the council would welcome your offer and will make all necessary arrangements to put together a members evening, please get in touch.

I look forward to handing over the role to the next local divisional president and will remain on the council to support them, many of you may also see my name coming through from NZ Marine as I take up the role of President of the Marine Industry Association where I will continue to champion the role of the professional Naval Architect.

All the best,

Ian

Editor's Note

Please Remember

All contributions are always appreciated!
Send your info/article before 30th June to Mike.

mikekay@michaelkay.co.nz

Royal Institution of Naval Architects The Route to Chartered Membership



The RINA was Founded in 1860 “...to promote the art and science of naval architecture and maritime technology” In 2013 the Institution is “...an international professional institution, whose members involved at all levels in the design, construction, repair and management of marine vessels and structures in over 90 countries”. Membership demonstrates the achievement of the highest standards of professional competence and integrity, or the commitment to achieving those standards.

Introduction

Achieving an academic qualification and becoming an Associate Member of the Royal Institution of Naval Architects is only the beginning of your professional career. Professional competence cannot be achieved solely by formal study. Nor cannot it be maintained simply through employment. The achievement and maintenance of professional competence necessitates life long professional development.

Professional development may be defined as the acquisition, maintenance, improvement and broadening of knowledge, understanding and skills, and the development of personal qualities necessary to carry out your professional duties throughout your career. As your career develops so will your professional competence, both generally and to meet the specific requirements of your job. However, there is a minimum level of competence and experience which all practising engineers involved in the design, construction and maintenance of marine vessels and structures must achieve, and that level is defined by the requirements for Corporate membership of the

Institution.

Corporate Membership

Corporate membership of the Institution is a milestone in your professional development that is reached by meeting the Institution's requirements for professional competence in the appropriate class of membership. The Institution considers that only Corporate Members may properly describe themselves as professionally qualified naval architects.

In becoming a Corporate member of the Institution, you implicitly accept the commitment to maintain that competence through continuing professional development. You also accept the requirement to act at all times with professional integrity, as defined in the Institution's Code of Professional Conduct.

The Institution's requirements for Corporate membership are intended to ensure that as an Associate Member, you have developed the professional knowledge, understanding and skills needed to provide a sound foundation for your future

The Route to Chartered Membership . . . continued

career as an engineer in the maritime industry, as well as the specific competencies relevant to your current employment.

Corporate Membership is therefore dependent upon your achieving the required levels of competence across a range of activities relevant to the design, construction and maintenance of marine vessels and structures and to your own employment.

Classes of Corporate membership

The Corporate classes of membership are Fellow and Member. Members who have a minimum of five years' superior experience may be elected to the highest class of membership as Fellows of the Institution.

Registration

Registration with the UK Engineering Council (EC) provides a generic professional qualification which is applicable to all engineering disciplines. Engineering professional institutions such as the Royal Institution of Naval Architects, whose requirements for Corporate membership also meet the requirements of the EC may apply to become a Licensed and Nominated body, able to enter Corporate members on to the CEng Register. It is not possible to be registered with the EC without having first become a Corporate member of a Licensed and Nominated body. Registration is optional for Corporate members. Registration as CEng with the Engineering Council is recognised by employers in New Zealand as being equivalent to registration as CPEng with IPENZ.

Chartered Membership

Corporate members who are registered as Chartered Engineers, or its recognised equivalent, are referred to as Chartered members of the Institution. You can apply to transfer to Corporate or Chartered member from Associate Member or be elected directly as a Corporate or Chartered member. This presentation describes the routes to becoming a Chartered member of the Institution.

Milestones on The Route to Chartered Membership

There are four major milestones to becoming a Chartered member. These are achieving the required educational base, developing professional competence through training and experience, the application process and the Professional Review which consists of a Report and an Interview.

1. Education

The exemplifying academic standard for both Corporate and Chartered member is a four-year course of academic study at BEng or higher level. If your academic achievement meets this requirement you may take the standard route to Chartered membership. Where your course has been accredited or approved by the Institution,

no further proof is required, other than you do have this qualification. Where your course is not accredited or approved, you will be required to provide evidence that the content of your course is equivalent to that of the exemplifying academic qualification. The exemplifying academic requirements can also be achieved by a combination of academic qualifications, such as an accredited 3-year degree and an appropriate Masters degree, or by other approved examinations such as the EC's own examinations.

If you do not have the exemplifying academic qualification or qualifications, in full or in part, but can demonstrate that you have achieved the required knowledge and understanding through learning and experience in the workplace, you may apply for Chartered membership through either the Extended Professional Review Route or the Technical Report Route.

Extended Professional Review Report Route

If you are applying through the Extended Professional Review Report Route, you must submit an extended Professional Review Report which provides examples of your professional activities which required you to apply knowledge and understanding at the required level. You must separately demonstrate in the Report that you have achieved the required professional competencies.

Technical Report Route

If you are applying through the Technical Report Route you must submit a report which demonstrates that you have achieved the same level of knowledge and understanding as an applicant with the exemplifying academic qualification.

The requirement may be met by a paper on a subject proposed by you and approved by the Institution, or by previously published technical papers. You will then require to undertake an interview, based on the report. If this is satisfactory, you will then follow the same route as applicants with the exemplifying academic qualification, i.e. Professional Review.



RINA Conferences

The Route to Chartered Membership . . . continued

2. Professional Competence

Chartered membership is dependent upon your achieving the required levels of competence across a range of activities relevant to the naval architecture profession. Whilst not being time based, experience shows that it is extremely unlikely an Associate Member would have gained the required level of professional competence and responsible experience in less than two years, and depending on the opportunity to achieve this level of professional competence, it may take longer. Four years from graduation is probably the norm. An approved Graduate Training Programme should provide you with the necessary opportunity to develop the professional competence required for Chartered membership.

The Institution is flexible about how you achieve the required professional competence, which can be by experience, on-the-job training, or off-the-job courses. Any relevant previous engineering experience, not necessarily in the marine field, and work experience at an appropriate level gained prior to graduation may also help you in part to meet the requirements. You should continually assess your current levels of knowledge, understanding and skills, and how these match what the Institution is looking for – this will enable you to identify and plan what additional professional development is needed.

Chartered members are competent by virtue of their education, training and experience to use a combination of general and specialist engineering knowledge and understanding to optimise the application of existing and emerging technology. They are able to apply appropriate theoretical and practical methods to the analysis of engineering problems. They can provide technical and commercial leadership, and demonstrate effective interpersonal skills. They can also demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.

These are generic competences, applicable to all engineers of equivalent status, and are the EC's requirement for all Licensed and Nominated professional institutions.

Professional Development Objectives

The Institution requires that these generic competences be achieved across a range of activities relevant to the design, construction and maintenance of marine vessels and structures and also to your employment. This requirement is defined by a number of Professional Development Objectives which you are expected to achieve before applying for Chartered membership. These Professional Development Objectives consist of a number of activities and the minimum levels of ability expected for each of the activities.

•Activities

The activities are grouped under the broad headings of Design, Engineering Practice and Management Services. However, these titles should not be taken too literally. For

example, it may well be possible to achieve management skills whilst working in a design environment, or gain the required design skills whilst doing plan approval work. Also, many of the skills can be achieved working outside the maritime environment. The Institution does not prescribe how or where you should obtain these skills.

•Ability

The minimum levels of ability required in each objective are broadly defined as:

- Having knowledge or being aware of an activity's existence and the reason for it.
- Having an understanding of the reason for an activity and being familiar with how it should be carried out.
- Having the skill to be able to carry out carry out an activity competently and without further guidance.

However, irrespective of the minimum standards implied in the Professional Development Objectives, you will be expected to be competent to carry out all activities required by your position of responsibility. This may require a higher level of competence in some areas specific to your job.

Logbook

The Professional Development Objectives are listed in the IPD Logbook, which you should maintain as a record of the activities which contribute to your professional development since completion of your education, showing the nature of the activity, its duration and the Professional Development Objective(s) which the activity has helped you to achieve. This Logbook should be complementary to any training record which your employer might require you to keep. It will serve as the basis of your Professional Review Report when you come to apply for Chartered membership.

The Logbook lists all the Professional Development Objectives which you are required to achieve, and other non-work-related activities which also contribute to your professional development. It is available online, and it is strongly recommended that you start recording from the time started work. Even if you have not used the IPD Logbook, it is recommended that you complete it retrospectively, as a check that you have achieved all the required professional competencies.

3. Application

Having achieved the required levels of competence, you may then apply for transfer or direct election to Chartered member. All applications for Chartered membership are considered by the Institution's Membership Committee which meets five times per year. Applications should normally be received at least three weeks before the meeting at which they are considered. The first step is the completion of the application form, providing personal

The Route to Chartered Membership . . . continued

information, details of academic and professional qualifications and a brief record of employment from graduation, giving company, job title and brief description of job.

Your application should normally be proposed by two members who should verify that to their best of their knowledge the information contained in the application is correct. However, if this cannot reasonably be achieved, it is acceptable for the application to be verified by two persons in positions of responsibility. Details of the positions held by such non-member proposers should be supplied with the application.

Unless your academic course has been accredited or approved by the Institution, you may be required to provide documentary evidence of the content of the course to show that it is equivalent to the exemplifying academic standard required for the class of membership. The Institution's Professional Affairs Department can advise on this requirement.

If you are not sure whether you have achieved the level of professional competence and responsible experience required for Chartered membership, the Professional Affairs Department of the Institution will be very happy to discuss and advise, even to the extent of looking at a draft application before it is submitted.

4. Professional Review

Professional Review Report

Your application should also include your Professional Review Report in which you demonstrate that you have achieved the level and breadth of professional development required for Chartered membership.

Although the route to Chartered membership may be

different for every applicant, each is required to achieve the standards of professional competence defined by the Professional Development Objectives. Your Report should therefore be written such as to demonstrate how your training and experience has enabled you to achieve these Objectives.

Your Report may also include activities carried out before graduating which have contributed to your initial professional development, and relevant activities outside your Company IPD Scheme.

The Report should be written in chronological order, ending with your current employment. It should be typed on A4, single side, or may be submitted electronically in MSWord format.

Your Report should be written in three parts.

• Part 1

Part 1 of the Report should give a summary of your career to date, eg dates, company/organisation, position and nature of nature of employment.

• Part 2

The main body of the Report in Part 2 should describe in detail the activities which have contributed to your professional development, including where applicable:

- Nature of the activity, eg purpose, technical content, etc. Duration of the activity, eg start/completion, accumulated time.
- Resources involved, eg manpower, financial, etc.
- Personal involvement and level of responsibility, eg who you were accountable to, number of staff responsible to you.
- How the activity contributed to achieving your Professional Development Objectives.

• Part 2A (Extended professional Review Report)

If you are applying for Chartered membership through the Extended Professional Review Report route, Part 2 of the Extended Professional Review Report is in two parts. Part 2A should give specific examples of your professional activities which could not have been carried out without the required knowledge and understanding. The required knowledge and understanding is listed in the Part 2A Report form.



RINA Publications

The Route to Chartered Membership . . . continued

• Part 2B (Extended Professional Review Report)

Part 2B of the Extended Professional Review Report should describe in detail the activities which have contributed to your professional development.

• Part 3

Part 3 of the Professional Review Report should record those activities which have contributed indirectly to your professional development, such as attendance at training courses and conferences; preparation and presentation of engineering papers or articles; participation in Institution activities, e.g. Branch technical meetings; etc.

You will also be expected to be able to demonstrate a commitment to continuing your professional development in the future, and should therefore include a brief plan of your intended Continuing Professional Development.

Professional Review Interview

If the Membership Committee is satisfied that your Professional Review Report has demonstrated that you have achieved the required professional competence and responsible experience, you will then be required to undertake a Professional Review Interview. The Interview will normally last about one hour, and will be conducted by two experienced and suitably qualified members of the Institution. Wherever possible, the Interview will be held close to your place of work, but this is dependent upon the availability of members of the interview panel.

The Interview will not be conducted just as a formal appraisal of your technical abilities, but will also seek to confirm and expand upon the information given in the written Report. The Membership Committee may have recommended that the interviewers examine specific areas of the Report.

The interviewers will also seek to confirm that you have an awareness and understanding of the wider aspects of engineering outside the naval architecture and maritime technology fields. You will need to demonstrate that you are aware of the need for Continuing Professional Development, and have an appreciation of the Institution's Code of Professional Conduct.

If you do not wish to be registered with the EC, the Membership Committee will normally waive the requirement for a Professional Review Interview, and you will be informed of your election as a Corporate member, normally within one week of the Membership Committee meeting.

Election and Registration

After the interview, the comments from the Interview Panel will be reported to the Membership Committee for a final decision on your application. You will then be formally informed of the outcome as soon as possible after the Interview, depending upon the timing of the next

Membership Committee meeting.

If the Membership Committee is satisfied that you have met the requirements you will be elected as a Corporate Member, and application made to the EC for you to be placed on the CEng Register. The EC Entrance and Annual Registration fees are collected by the Institution with your Membership Entrance Fee (if applicable) and Annual Membership Fee.

If the Membership Committee does not consider that you have met the requirements, they will normally recommend which areas they consider you require further experience in, and when you should apply again. You have a right to appeal against the decision of the Membership Committee.

Advice And Further Information

If you require any further advice or assistance in applying for Chartered or Corporate membership of the Institution, you should not hesitate to contact the Professional Affairs Department. Guidance Notes on the Routes to Chartered membership, Professional Review Report and Professional Review Interview are available in the Careers section of the Institution's website.

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Editor's Note

Professional Review Interview

There are 3 approved interviewers in New Zealand. Consideration will be given to conducting interviews by Skype video link should this be appropriate.

Industry News

Landmark Auckland shipyard McMullen and Wing has been awarded the contract to design and build a brand new oil recovery vessel for Auckland.

The vessel, to be operated by the Auckland Council Harbour Master, will be a cornerstone in protecting Auckland's harbour and coastline from oil spills.

Although Auckland has not suffered a spill on the scale of that resulting from the sinking of the Rena off Tauranga last year, that event showed that maritime environmental disasters can happen without warning and with potentially devastating consequences. This new vessel will enable Auckland Council Harbour Master to respond quickly to any such incident.

Oil spills are rare events, but the new vessel will not lie idle awaiting a crisis. Designed as a true multi-purpose asset, the new vessel will be a busy workhorse in the day-to-day running of the harbour. With the ability to carry on-road and off-road vehicles to Hauraki Gulf islands, service buoys and markers, support dive teams and countless other tasks involved in the operation of a busy harbour.

The new vessel will be capable of being transported by road, ensuring its value to operations on both Waitemata and Manukau harbours, as well as potentially offering support to neighbouring regions in times of need.

McMullen & Wing Managing Director David Porter says, "McMullen & Wing is an Auckland company. Our staff are Aucklanders and we enjoy Auckland's clean waters and beautiful coastline in

our personal lives. We understand the importance of this project to all who live and work in the Auckland region and are proud to be able to continue to apply our skills and experience to serve our community in this way."



McMullen & Wing Managing Director David Porter

McMullen & Wing is one of New Zealand's longest standing and most renowned shipyards. Although best known as one of the world's leading builders of custom luxury superyachts up to 50m in length, they have also built a wide range of vessels, from ferries, police, fishing and workboats to America's Cup and round the world racing yachts.

McMullen & Wing Commercial Manager Michael Eaglen says, "Although McMullen & Wing is most publically known internationally for our luxury yachts, our on-going involvement in commercial vessels is very important to our business. Maintaining our long held links with the local maritime industry keeps us grounded in the solid reliable engineering on which our reputation is based. Our ability to build practical cost-effective vessels for the workboat market keeps us fitter and leaner in our execution of our larger multi-million dollar luxury export vessels. Equally our exposure to the demands of a highly discerning international market sharpens our focus on strong customer relations and contractual performance which improves our service of our workboat customers."



McMULLEN & WING
YACHT BUILDERS

RINA Update ... continued

Right: Trevor Blakeley, CEO RINA and Drew Bryant, Member RINA, Real Journeys Ltd. disembarking from EARNSLAW at Walter Peak, Lake Wakatipu.



Above: Left to right, Trevor Blakeley, Aidan Bird, Spiire NZ Ltd., Maurice Davis, Member, RINA, Spiire NZ Ltd. & Drew Bryant.

Biographies

Jolan Trecherel

In the last edition we included a resumé of Jolan Trecherel, the young French naval architect who wants to work in New Zealand. He has now sent us more information and we have included it in this edition to demonstrate how entrepreneurial some young people in the industry are. Perhaps his persistence and proactive approach will bear fruit.

For many years, in fact since I became interested in the America's Cup and the victories of Sir Peter Blake, I wanted to travel to New Zealand. I developed the idea of leaving France after my studies and took advice from a member of the PRB Team and other passionate sailors.

I am a young naval architect with a passion for the sea, that has made me who I am today.

During my studies, it was very important for me to do something else outside school time and the best solution for me was to participate in a sport. I lived near the sea which meant that sailing was a logical choice. I started sailing socially but soon took the sport seriously and my week-ends on the sea became the most important thing after school activity.

Over time, competition became my goal. Competing against sailors coming from all over the world was extremely exciting and I really enjoyed the reaching for the goal of being faster through analyzing the sea and making use of the wind, waves or current. Sometimes, risky or not my decisions would prove fruitful but there were also times when I found myself in a bad situation finishing in 30th place. These were times when I had to exercise self control and trust my instincts to improve (or keep) my ranking place higher.

The last regattas I participated in were the Laser Worlds in 2011 at La Rochelle where I was 5th of silver fleet and the Europa Cup in Martigues in gold fleet.

The key to doing well in those competitions was to enjoy them. Now it is my sincere wish to sail in the South Pacific Ocean with NZers sailors to compare with the way of sailing and the North Atlantic Ocean, in Laser or in other typical NZ boat. In fact, sailing was the base of my choice of career.

I love sailing, but I also really enjoy designing and building boats. My experience in boat-building has afforded me the skills to work well with my hands. I made carbon pieces for IMOCA 60', I worked on the assembly of MULTI 50' trimaran and the carbon prototype catamaran. I enjoy manipulating composite fibers and decided to see if I could test the effect of fibers on small objects and determine the limit to which I could handle this material. I realised that I could use the material to create jewelry and I spent a year designing and producing 100% carbon pendants, bracelets and rings. It is my hope that New Zealand will inspire me to make other models.



My passion for the sea gave me respect for nature and the diversity of landscape in New Zealand between the North and South Islands offers a multitude of possibilities for discovery and I am keen to explore the flora and the fauna of this beautiful country.

I am now in New Zealand and hope to have an opportunity to share my passions with New Zealanders and to learn more about the country.

If you would like to contact Jolan he can be reached on 021 028 34509 or email jolan.trecherel@gmail.com



Committee Update

Council standing down:

Roger Hill
Christiana Chiappini
Jarrod Hall

President Position:

Ian Macleod – President - *about to stand down as president but staying on as council member* – ian@marinedesign.co.nz

New Council Members elected/confirmed at 2013 AGM:

Anderson Chaplow - anderson.chaplow@lr.org
Brendan Fagan - brendan.fgn@gmail.com
Nina Heatley - nina@cleverfoxprojects.com
Jason Smith - jason@marinedesign.co.nz
Richard Flay - *On Sabbatical* – r.flay@auckland.ac.nz
Graeme Finch - g.finch@xtra.co.nz
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Susan Lake - susanelake@gmail.com
Ted Ewbank - ewbank@xtra.co.nz
Tony Stanton - tony.stanton@gurit.com

Meet the Council Members



Anderson Chaplow

Originally from Thames, Anderson studied Naval Architecture at The University of New South Wales in Sydney, graduating in 2005.

Upon completion of his degree he joined Lloyd's Register as a Trainee Surveyor, working variously in Sydney, London and South Korea, before arriving in New Zealand in 2008 where he completed his training.

Anderson is now principally involved in yacht construction, equipment and components and naval ships. He is married to Sarah and has two young children, Chloe (3) and Elliott (1) who occupy most of his free time.

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Opinions expressed in this newsletter are not necessarily those of the Institution.

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