THE ROYAL INSTITUTION OF NAVAL ARCHITECTS

Guidance On The Extended Professional Review Report (IEng)

INTRODUCTION

All candidates for election or transfer to Corporate member (FRINA and MRINA) and registration with the Engineering Council as IEng are required to undertake a **Professional Review** to demonstrate that they have achieved the required standard of professional competence and commitment. The Professional Review consists of a **Report,** followed by an **Interview**.

Candidates who do not have the exemplifying academic qualification for IEng, but who are offering experience in lieu of formal academic qualification may submit an **Extended Professional Review Report**, demonstrating that the have achieved the same level of underpinning knowledge and understanding as a candidate with the exemplifying academic qualification.

EXTENDED PROFESSIONAL REVIEW REPORT

Candidates for registration as IEng who are applying through the Extended Professional Review Report route are required to submit a Professional Review Report in three parts.

CAREER SUMMARY - PART 1

Part 1 of the Extended Professional Review Report should provide a career summary to date, eg dates, company/organisation, position and nature of nature of employment.

KNOWLEDGE AND UNDERSTANDING - PART 2A

The outcomes of an academic course are the knowledge and understanding which underpin professional competence. The required outcomes of an accredited course which meets the academic requirement for IEng are defined in terms of underpinning science & mathematics; engineering analysis; design; economic, social and environmental context; engineering practice; management & leadership.

Underpinning science and mathematics

- Apply knowledge and understanding of the scientific principles underpinning relevant
- current technologies, and their evolution;
- Apply knowledge and understanding of mathematics necessary to support application of key engineering principles.

Engineering Analysis

- Monitor, interpret and apply the results of analysis and modeling in order to bring about continuous improvement;
- Apply quantitative methods and computer software, frequently within a multidisciplinary context;
- Use the results of analysis to solve engineering problems, apply technology and implement engineering processes;
- Apply a systems approach to engineering problems through know-how of the application of the relevant technologies.

Design

- Define a problem and identify constraints;
- Design solutions according to customer and user needs;
- Use creativity and innovation in a practical context;
- Ensure fitness for purpose (including operation, maintenance, reliability etc);
- Adapt designs to meet their new purposes or applications.

Economic, social and environmental context

- Apply knowledge and understanding of commercial and economic context of engineering processes;
- Apply knowledge of management techniques which may be used to achieve engineering objectives within that context;
- Understand the requirement for engineering activities to promote sustainable development;
- Be aware of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues;
- Understand the need for a high level of professional and ethical conduct in engineering.

Engineering Practice

- Understand and be able to use relevant materials, equipment, tools,
- processes, or products;
- Apply knowledge and understanding of workshop and laboratory practice;
- Apply knowledge of the contexts in which engineering knowledge can be applied (eg operations and management, application and development of technology etc);

Part 2A of the Extended Professional Review Report should give examples of professional activities which required the candidate to apply the level of knowledge and understanding implicit in the outcomes of an accredited academic course. Such activities may have required knowledge and understanding covered by more than one of the outcomes.

Specific examples of activities should be provided for each outcome, in sufficient detail to enable the Membership Committee to assess whether the required knowledge and understanding has been achieved. Inability to provide an example for every outcome will not necessarily preclude a successful application, but the advice of the Institution should be sought as to whether sufficient information has been provided to enable the Membership Committee to assess whether the required level of knowledge and understanding has been achieved.

Part 2A of the Extended Professional Review Report should be submitted on the Part 2A Form at Annex A.

PROFESSIONAL COMPETENCE - PART 2B

Part 2B of the Extended Professional Review Report should describe in detail the activities which have contributed directly to achieving the required standards of professional competence, as defined in the Professional Development Objectives, 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 the candidate was accountable to, number of staff responsible to the candidate.
- How the activity contributed to achieving the candidates's Professional Development Objectives.

Candidates for registration who have already submitted a Professional Review Report with their application for Corporate membership are only required to submit Part 2A of the Extended Professional Review Report.

PROFESSIONAL COMPETENCE – PART 3

Part 3 of the Extended Professional Review Report should record those activities which have contributed indirectly to the candidate's 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.

Oct 2015

ANNEX A - EXTENDED PROFESSIONAL REVIEW REPORT - PART 2A FORM

ROYAL INSTITUTION OF NAVAL ARCHITECTS

Extended Professional Review Report (IEng) - Part 2A

Name: **Date**:

Part 2A of the Extended Professional Review Report should be completed by applicants for registration as IEng who do not have the exemplifying academic qualification in full or in part, but who wish to demonstrate that they have achieved the required knowledge and understanding through. (See *Guidance on the Extended Professional Review Report*)

Applicants should give specific and detailed examples of their work or other professional activities where they were required to carry out the following:

Underpinning science and mathematics	**Activities**
Apply knowledge and understanding of the scientific principles underpinning relevant current technologies, and their evolution;	
Apply knowledge and understanding of mathematics necessary to support application of key engineering principles.	
Engineering Analysis	**Activities**
Monitor, interpret and apply the results of analysis and modeling in order to bring about continuous improvement;	
Apply quantitative methods and computer software, frequently within a multidisciplinary context;	
Use the results of analysis to solve engineering problems, apply technology and implement engineering processes;	
Apply a systems approach to engineering problems through know-how of the application of the relevant technologies.	

Design	**Activities**
Define a problem and identify constraints;	
Design solutions according to customer and user needs;	
Use creativity and innovation in a practical context;	
Ensure fitness for purpose (including operation, maintenance, reliability etc);	
Adapt designs to meet their new purposes or applications.	
Economic, social and environmental context	**Activities**
Apply knowledge and understanding of commercial and economic context of engineering processes;	
Apply knowledge of management techniques which may be used to achieve engineering objectives within that context;	
Understand the requirement for engineering activities to promote sustainable development;	
Be aware of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety, and risk (including environmental risk) issues;	
Understand the need for a high level of professional and ethical conduct in engineering.	
Engineering Practice	**Activities**
Understand and be able to use relevant materials, equipment, tools, processes, or products;	

Apply knowledge and understanding of workshop and laboratory practice;	
Apply knowledge of the contexts in which engineering knowledge can be applied (eg operations and management, application and development of technology etc);	