



# THE ROYAL INSTITUTION OF NAVAL ARCHITECTS

## Guidance on the Extended Professional Review Report (CEng)

### INTRODUCTION

All candidates for election or transfer to Corporate member (FRINA and MRINA) and registration with the Engineering Council as CEng 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 CEng, but who are offering experience in lieu of formal academic qualification may submit an **Extended Professional Review Report**, demonstrating that they 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 CEng 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 CEng 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 a comprehensive understanding of scientific principles;
- Be aware of developing technologies;
- Apply a comprehensive knowledge and understanding of mathematical and computer models, and appreciate their limitations;
- Apply an understanding of concepts from a range of areas, including some outside engineering, and apply them effectively;

##### Engineering Analysis

- Apply fundamental knowledge to investigate new and emerging technologies;
- Apply mathematical and computer-based models to solve problems, and assess their limitations;
- Extract data pertinent to a problem, and apply it to solving the problem, using computer based engineering tools when appropriate.

##### Design

- Apply a wide knowledge and comprehensive understanding of design processes and methodologies, and adapt them in unfamiliar situations;
- Generate an innovative design for products, systems, components or processes;

## **Economic, social and environmental context**

- Apply an extensive knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately;
- Make general evaluations of commercial risks through an understanding of the basis of such risks.

## **Engineering Practice**

- Apply a thorough understanding of current engineering practice and its limitations, and appreciate likely new developments;
- Apply an extensive knowledge and understanding engineering materials and components;
- Apply engineering techniques, taking account of a range of commercial and industrial constraints

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 candidate'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.

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



## ROYAL INSTITUTION OF NAVAL ARCHITECTS

### Extended Professional Review Report (CEng) - Part 2A

Name:

Date:

Part 2A of the Extended Professional Review Report should be completed by applicants for registration as CEng 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:

<b>Underpinning science and mathematics</b>	<b>Activities</b>
Apply a comprehensive understanding of scientific principles;	
Be aware of developing technologies;	
Apply a comprehensive knowledge and understanding of mathematical and computer models, and appreciate their limitations;	
Apply an understanding of concepts from a range of areas, including some outside engineering, and apply them effectively;	
<b>Engineering Analysis</b>	<b>Activities</b>
Apply fundamental knowledge to investigate new and emerging technologies;	
Apply mathematical and computer-based models to solve problems, and assess their limitations;	
Extract data pertinent to a problem, and apply it to solving the problem, using computer based engineering tools when appropriate.	

<b>Design</b>	<b>Activities</b>
Apply a wide knowledge and comprehensive understanding of design processes and methodologies, and adapt them in unfamiliar situations;	
Generate an innovative design for products, systems, components or processes;	
<b>Economic, social and environmental context</b>	<b>Activities</b>
Apply an extensive knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately;	
Make general evaluations of commercial risks through an understanding of the basis of such risks.	
<b>Engineering Practice</b>	<b>Activities</b>
Apply a thorough understanding of current engineering practice and its limitations, and appreciate likely new developments;	
Apply an extensive knowledge and understanding engineering materials and components.	
Apply engineering techniques, taking account of a range of commercial and industrial constraints.	
<b>Management and leadership</b>	<b>Activities</b>
Develop, monitor and update a plan, to reflect a changing operating environment.	
Monitor and adjust a personal programme of work on an on-going basis.	
Understand the different roles within a team, and exercise leadership.	
Learn new theories, concepts, methods etc in unfamiliar situations.	