#### **GUIDELINE NO. 16**

ARCHITECTS, PROFESSIONAL ENGINEERS AND QUANTITY SURVEYORS, ORDER 2011 AND

ARCHITECTS, PROFESSIONAL ENGINEERS AND QUANTITY SURVEYORS, RULES 2016

### PART II - SECTION 6 (b)

# PROFESSIONAL COMPETENCE EXAMINATION FOR ENGINEERS

-Professional Review Guidance-

## QUALIFICATION AND EXAMINATION COMMITTEE 30<sup>th</sup> March 2021

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#### 1. INTRODUCTION

The Professional Review is part of the Professional Competence Examination (PCE) and is the final step in becoming a BAPEQS Membership.

To sit a Professional Review, you must hold the appropriate qualifications (<u>educational base</u>) and have completed your initial professional development (IPD).

The Professional Review is an opportunity to demonstrate you have the level of ability, experience, knowledge and personal development that is required to become a Registered Professional Engineer. You'll be assessed by your peer reviewers against the attributes that apply to be BAPEQs Membership. The attributes are listed in *Appendix A*.

The Professional Review process comprises the following steps:

- Initial Application
  - If successful, upon notification, proceed to Professional Review Submission
- □ Professional Review Submission
  - If successful, upon notification, proceed to Professional Review
- Professional Review
  - Presentation and Interview
  - Written examination

This document provides detailed guidance for all steps of the process.

If you have any queries about the process, please contact BAPEQS Secretariat at Board Management Division, Ground Floor, Ministry of Development (MOD), Jalan Pembangunan, BB3510, Brunei Darussalam or email to apeqs.sec@mod.gov.bn

#### 2. INITIAL APPLICATION

Your ini	tial application should include:
	An application form
	Review fee (non-refundable)
	Sponsor questionnaires (sent separately by the sponsors) – also see <u>Section: 2.1</u>
	Evidence that you have the required qualifications
	Executive summary of experiences and how the attributes were achieved (which must be signed
	by the Lead Sponsor)
	Evidence of initial professional development (IPD) completion at the grade for which you are
	applying, which can be –
	A training Agreement completion certificate
	A Mentor-supported training completion certificate
	• Career Appraisal or Member Assessment decision letter confirming you can proceed to
	Professional Review
	A one-page precis of your Professional Review report – signed by your lead sponsor
	Evidence of any special requirements you wish to seek for the assessors consideration at your
	Professional Review – for example, if you have a hearing impairment or if there are restrictions
	on what you can discuss about particular project you've worked on.
	You can find out more in <u>Appendix C</u>
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If you're re-sitting you also need to include:

A one-page supplementary statement (signed by you and your lead sponsor) outlining what you've done since your last review. This should address the areas where you were unsuccessful. You can find more guidance on this statement on <a href="Section 5">Section 5</a>: Resit

All document (except the sponsor questionnaires) should be included – in the above order – within a single PDF file of no more than 5MB and emailed to BAPEQS at <a href="mailto:apeqs.sec@mod.gov.bn">apeqs.sec@mod.gov.bn</a>. For assistance kindly contact the BAPEQS Secretariat at +673-2382-076

#### 2.1 Sponsors

Your applications must have two sponsors (one as Lead Sponsor), who can confirm your suitability for Application. To do so, they must fill out a sponsor questionnaire and return it to us before you send your initial application.

It's important you also read the questionnaires as it provides guidance on who is eligible to sponsor your application and what they are required to demonstrate.

You need to select one sponsor to be your lead sponsor. This person has additional responsibilities and plays a particularly important role in the success of your application.

If you're re-sitting please refer to <u>Section 6</u> to find out what you sponsor need to do.

#### 2.1.1 Your lead sponsor:

- Must be a Registered Professional Engineer with BAPEQS
- Has a duty to act as a mentor during the Professional Review submission process
- Should be familiar with the current BAPEQS Professional Review process and the standards you are required to meet
- Does not necessarily has to be from the same organization but must have first-hand knowledge of your experience

#### 2.1.2 Your second sponsor:

- Must be a Registered Professional Engineer with BAPEQS
- Should be familiar with the current BAPEQS Professional Review process and the standards you are required to meet
- Does not necessarily has to be form the same organization but must have firsthand knowledge of your experience

Your lead sponsor should, provide constructive criticism of your report, advice on the presentation and arrange practice interview.

#### 2.2 Criminal Convictions

No persons with an unspent conviction relating to a Serious Criminal Offence will be admitted to any grade of membership unless there are special circumstances that show beyond reasonable doubt that the person is a fit and proper person to be registered with BAPEQS.

Sponsors of such persons will be required to make a specific declaration that they are aware of such person's conviction and the nature of the offence of which the person was found guilty.

If you have an unspent conviction relating to a serious criminal offence, please indicate this on your application form and a member of staff will contact you directly and in confidence.

You will be sent a pro forma, asking you to state the nature of the crime and to provide a statement on why you believe you are a fit and proper person to be admitted to membership. This must be countersigned by your lead sponsor and returned to BAPEQS.

This matter will be treated with the strictest confidence.

#### 3. PROFESSIONAL REVIEW SUBMISSION

This step of the process involves sending your detailed submission to BAPEQS. The Professional Review submission includes:

- A cover page and table of contents
   Logbook an Executive Summary of the record of your experiences and how you have achieved 9 Attributes as per Appendix A. It is a not a long list of projects or tasks undertaken. The logbook should be referring to a selected list of projects where you have undertaken roles and responsibilities. The Logbook is made to outline how these projects and your role in them have contributed to achieving the 9 Attributes.
   Professional Experience Record which a description of your roles and responsibilities held by you over the career and should outline the position held and outline of the various projects you have been responsible for in these positions of responsibility. Your Experience Report must be
- ☐ The Professional Review report, including —

signed by your Lead Sponsor)

- Executive summary of two (2) selected projects s and how the attributes were attained (limited to one (1) A4-Page.
- Introduction, description, your role and responsibilities of the selected projects. It may briefly describe issues which you are about to discuss further.
- Present the report by Projects. Introducing key details of the project background followed by the main content.
- A combined conclusion on your professional review report sums up the project, your experience that brought about achieving the 9 Attributes.
- Limit the write up of this report to 5,000-word with a minimum of two completed projects presented
- Appendices
- □ CPE records you may refer to <u>Guideline 2 (GD:2)</u> for the Continuous Professional Education Matrix.

You can find details on suggested guide for your report in Guideline 6 (GD:6).

Upon successful evaluation of your submission, you will be given approximately four weeks' notice of your Professional Review date.

You should send your submission to <a href="mailto:apeqs.sec@mod.gov.bn">apeqs.sec@mod.gov.bn</a> before the notified deadline. If you miss the deadline your Professional Review may be deferred.

#### 3.1 Professional Review Report

#### 3.1.1 Writing your report

Your report is a vehicle for you to demonstrate how you've achieved the relevant attributes, set out in Appendix A. However, you shouldn't try to address them in sequence.

Your report should be up to 5,000 words long. It should be your own work and presented in an orderly manner.

It's essential that you emphasize your responsibilities and experience for each attribute. You should expand on decisions you made, problems you met and occasions when you gained unusual or extensive experience and learned valuable lessons.

The report should put particular emphasize on a minimum of two projects in which you played a major part. You should also describe how you took a lead in some or all of the elements of the projects.

You must clearly indicate your role in any relevant aspects of the projects you have worked on by giving the background to the important decisions you were responsible for or made a significant contribution to. You must show where you've exercised independent judgement – as an engineer and a practicing professional.

#### 3.1.2 Executive summary of experiences

Your report should include an executive summary of experiences which gives an indication of the size and financial value of projects undertaken and your role and responsibilities in each project. This will not be included within the 5,000-word limit.

#### 3.1.3 Appendices

Numerical analyses, cost data, drawings or other relevant additional documentation should be included as appendices to support the content of your report. They are not included in the word count. Your appendices should include no more than:

I hree A:	3 drawings
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☐ Twelve A4 sides of additional information, including any relevant calculations

Exceeding this may result in your reviewers declining your submission.

#### 3.2 Continuing Professional Education (CPE) records

☐ Use an appropriate font and text size

You need to submit the following CPE records for your Professional Review:
<ul> <li>A development action plan (DAP) which details your objectives for the current/forthcoming year</li> <li>Your personal development record (PDR) for a minimum of three years (with a minimum of <a href="25 CPE Points">25 CPE Points</a> of effective learning per year)</li> </ul>
These records must include current formal training related to health safety and welfare (attribute
Group 6 Appendix A).
Before applying for Professional Review, you're required to complete a minimum of 180 hours effective
learning time at Registered Professional Engineer.
For more information, please read our CPE guidance
3.3 Submitting your review documents
Your submission may follow the guide below:
☐ The overall document must be —
<ul> <li>One self – contained PDF file</li> </ul>
<ul> <li>A4 – sized (A3 is suitable for drawings if required)</li> </ul>
<ul> <li>No larger than 15MB</li> </ul>
☐ The filename must include your number, initials, surname and review date
☐ The submission cover page must include —
o A recent photo of you
o Your signature
<ul> <li>The lead sponsor's signature</li> </ul>
☐ Include hyperlinks to link data in the appendices with the relevant text in your report
☐ Use color where necessary — for example, images and drawings
□ Where possible, convert individual documents to PDF electronically, rather than scan them
☐ Ensure file is printable in the correct format – and can be read in black and white

#### 4. THE PROFESSIONAL REVIEW

The Professional Review Shall comprises:

□ A presentation

An interview

□ A written exercise

#### 4.1 Presentation

Your Professional Review interview will begin with a 15-minute presentation to your reviewers based on a topic, or topics, covered in your Professional Review report. You should provide an in-depth description of what you have done, that expands on your report and highlights your involvement. You are encouraged to use visual aids to illustrate your presentation, but they should be no larger than A3. You're permitted to use a laptop computer but external power supplies will not be provided.

#### 4.2 Interview

You will then be interviewed by your reviewers, who will seek to confirm you have achieved the required level of competence, as stated in your report. The presentation and interview will last <u>approximately one hour.</u>

If you haven't demonstrated sufficient evidence of a particular attribute (As outlined in Appendix A) in your report, your reviewers will pose specific questions to try to draw out your knowledge and experience in that area.

#### 4.3 Written exercise

Structure of the examinations and assessment criteria are given in Appendix D.

#### 5. RESULTS

Your result will be notified to you.

If the outcome is a referral, you will be sent a referral report.

#### 5.1 Appeals

Candidates have the right to appeal where they feel there was an error in the process and in cases of unforeseen events. Appeals must be received by the BAPEQS Secretariat within <u>two (2) weeks</u> of the date of your results letter. We recommend you contact BAPEQS office for more information

#### 6. RE-SIT

If you're unsuccessful at the Professional Review, you may need to undertake the whole process again or as recommended by BAPEQS.

When you re-sit, you have to demonstrate all the required attributes (as outlined in Appendix A not just those that you were unsuccessful in. You are advised to consult with your sponsor's when preparing another application.

#### 6.1 Sponsors

Your sponsors must fill out a new sponsor questionnaire. If any of your original sponsors are unable to support your application again, you'll need to find new sponsors.

Your lead sponsor must also provide an additional statement on their questionnaire telling us what you have done to prepare for your re-sit.

#### 6.2 Supporting Information

If you sat your review more than three years ago your application will be treated as new. However, if it's been less than three years, you must send a one-page supplementary statement in addition to the submission, which is described on <u>page 2</u>. This statement (signed by you and your lead sponsor) <u>must</u> outline what you've done since your last review, to address the areas where you were unsuccessful.

#### 7. FEES

Candidates will be notified via a letter issued by the BAPEQS Secretariat Office (Board Management Division, BMD) to make payment at the Ministry of Development, Jalan Pembangunan, Berakas.

The Fees are as provided by Schedule of Fees, APEQS Rules 2016 which is available on our website.

#### **APPENDIX A -Attributes to be Achieved**

At any Professional Review you must have had responsible and relevant experience at a level such that you can demonstrate the attributes shown in the table below.

The interpretation of attributes A and B will relate to your fields of work as indicated to the reviewers on your application form. You must demonstrate a sound understanding of core engineering principles in those fields.

The reviewers will judge your level of attainment of attributes C to I with regard to their relative importance within your fields of work.

As a prospective professional engineer, in order to fulfill your obligation to society and to meet the requirements of Health, Safety and Welfare legislation, you must have a sound knowledge and understanding of the construction process together with the activities connected to it. You must have an appreciation of and be able to identify and manage, risks to all those engaged and affected by the design, creation, operation, use maintenance and demolition of any works. For those whose experience includes the construction process, site experience will ordinarily be required.

Attribute Group				Attributes of Engineer to be demonstrated at Professional Review
				Additional Attributes to be demonstrated
		Use a combination of general and specialist	A1	Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology and other relevant developments.
A	Knowledge and understanding of engineering	engineering knowledge and understanding to	A2	Apply engineering knowledge related to local practices, codes, standards, specifications, materials, products, environmental plans and other requirements.
		optimize the application of existing and emerging technology	А3	Apply engineering knowledge contributed by others including suppliers, consultants, contractors, manufactures, technologists, researchers and independent experts.
	Apply appropriate theoretical and practical methods to the analysis and solution of engineering application of engineering application of engineering covered in Competency Category B	theoretical and	B1	Identify potential projects and opportunities
			B2	Conduct appropriate research and undertake design and development of engineering solutions
В		В3	Implement design or construction solutions and evaluate their effectiveness	

Attribute Group			Attributes of Engineer to be demonstrated at Professional Review	
,	attribute Group			Additional Attributes to be demonstrated
	Managamont	Provide technical and	C1	Plan, budget, organize, direct and control tasks, people and resources
С	Management	commercial	C2	Lead teams and develop staff to meet changing technical and managerial needs
	and leadership	management	C3	Demonstrate continuous improvement through quality management
	Independent	Demonstrate sound	D1	Identify the limits of a team's skill and knowledge
D	judgement and responsibility	judgement and decision making	D2	Exercise sound holistic independent judgement and take responsibility
Е	Commercial ability		E1	Demonstrate sound judgement on statutory, contractual and commercial issues in relation to your area of responsibility
		Demonstrates	F1	Demonstrate Awareness of Actions to be taken for Hazards
F	Health, Safety and Welfare	Knowledge of Legislation, Hazards and Safe Systems of Work	F2	Manage and Apply Safe Systems of Work
		Demonstrates a Sound	G1	Manage Engineering Activities that Contributes to Sustainable development initiatives
G	Sustainable development	Knowledge of Sustainable Development Best practices	G2	Demonstrate Continuous improvement in Sustainable Development Learnings
	Interpersonal		H1	Communicate in English or Malay Language with other at all levels
Н	Interpersonal skills and communication	skills and Demonstrate effective interpersonal skills	H2	Present and discuss proposals competently and with confidence
''			H3	Demonstrate effective personal and social skills
			H4	Communicate new concepts and ideas to technical and non-technical colleagues
		Demonstrate a	I1	Understanding and compliance with the BAPEQS Code of conduct
I	Professional commitment	personal commitment to professional	I2	Carry out continuing professional development necessary to maintain and enhance competence in own area of practice
•		standards, recognizing	I3	Engage with Engineering Institution Activities
		obligations to society and the profession	I4	Exercise responsibilities in an ethical manner

#### Notes:

- 1) All attributes are required to be satisfactorily demonstrated.
- 2) The engineering process is held to include the conception, design, construction, commissioning, maintenance, decommissioning, removal, management and procurement of engineering works.
- 3) All Professional Reviews for BAPEQS registration will be conducted in English

#### **APPENDIX B – Professional Review Checklist**

Item	Professional Review preparation checklist	Completed
1	Ensure that you are using the current version of this guidance document.	
2	Check attributes required for the grade of membership for which you are applying	
3	and Complete current Professional Review (Professional Competence Examination)	
	application form.	
4	Complete current sponsor questionnaire form.	
5	Obtain lead sponsor and further sponsors as required for the applicable grade of	
	membership.	
7	Check submission dates and produce activity schedule of actions.	
	Collate report documentation, photographs, appendices etc.	
8	Prepare a one-page précis of your report.	
9	Prepare report.	
10	Collate development action plan and professional development records.	
11	Review report with lead sponsor to verify achievement of attributes. Ensure report	
	is	
12	Plan mock review (presentation, interview and written exercise) with your mento	
Item	Professional Review application checklist	Complete
Ittili	Trofessional Review application effectist	Complete
1	The following documentation should be submitted in a single PDF file of no more	
	han	
	5MB to the Professional Reviews office by email to <a href="mailto:apeqs.sec@mod.gov.bn">apeqs.sec@mod.gov.bn</a> :	
	· Completed Professional Review application form	
	· Completed sponsor questionnaires (ensure all sponsors have been submi	
	ed	
	directly to the BAPEQS)	
	<ul> <li>Evidence of academic qualifications (unless already approved or not relevance)</li> </ul>	
	nt to	
2	Payment of application fee:	
	An Invoice to pay Government of Brunei will be issued with instructions from	
	Minsitry of Development	
	· ·····s.i / ··· · · · · · · · · · · · · · · ·	
1		

#### **APPENDIX C – Individual Requirements**

We're committed to making reasonable adjustments to our Professional Review process to accommodate specific individual requirements. Individual requirements may include disabilities and security clearance.

You need to tell us about these requirements in the space provided in your Professional Review application form. We'll also need to see any evidence, like certified documents or statements.

#### 1. Disability or Sensory Impairment

We'll make whatever 'reasonable adjustments' are required for candidates with a disability, such as dyslexia, speech impairment or sensory loss, for example, Our Equality and Diversity Policy ensures everyone receives the same opportunities during the review process.

#### 2. Security – Mindedness and Security Clearance

You should consider whether information in your review submission should be omitted or reduced in its level of detail due to security reasons. However, there's no reason why this should detract from the quality of your report.

#### **APPENDIX D – Professional Review Written Exercise**

The Written Examination will be divided into three parts:

- Part 1 (40 marks): Based on report submission and questions on Engineering Knowledge and Understanding, Technical and Practical Application and Judgement and Responsibility;
- Part 2 (30 marks): Engineering in Society, Questions on HSE, Sustainable Development,
   Professional Ethics and Commitment.
- Part 3 (30 marks): Project Management Questions on local context, management and leadership, commercial ability, Project Management and Contracts.
- Candidates must answer three parts (1, 2 and 3) and
- Candidates must pass each of the three parts (i.e. achieve 50% marks and above)
- Assessment Criteria for Written Examination is as outlined below:

Item	Assessment Criteria
1	Understand the Question clearly and Answer with Suitable Technical
	Contents and Relevant Examples
2	Present the Answer in Good Structure, Proper Heading and Paragraphing as
	well as Conciseness and Coherence
3	Present the Answer Legibility with Good Grammar, Lexicon, Spelling and
	Punctuating
4	Understand the Scientific & Engineering Fundamentals of Related Discipline
	and own Specialisation
5	Apply Engineering Knowledge Related to Local Practices Codes, Standards,
	Specialisation, Materials, Product & Environment
6	Apply the Appropriate Theoretical & Practical Methods to the Analysis or
	Describe Solution to Engineering Problems

#### 1. Discussion Groups

Organized discussion groups can help develop your writing skills and encourage debates between engineers.

#### 2. Use of Computers

A computer will be provided for you to complete the written exercise,

#### 3. Plagiarism

Plagiarism is presenting the work of others as your own. This means using words or ideas, for example, without the permission of the original author and without acknowledgement of the original author. Plagiarism should be avoided at all stages of your Professional Review, including reports, drawings, presentation and the written exercise.

Here are some guidelines to help avoid plagiarism:

- □ Don't cut and paste material from others
- □ Where you've directly quoted others, or the work of others, attribute the source fully and where appropriate, use quotation marks. As a rule of thumb, material derived from others should be considered a quote, unless it's assumed to be common knowledge for example, standard equations that are in the public domain.

#### 4. Collusion

In the context of the Professional Review, collusion is any agreement to conceal someone else's contribution to your piece of work, when you know that they intend to submit the same material. The guidance above equally applies to avoiding collusion.

Plagiarism and collusion may lead to a ban on applying for membership or, for existing members, permanent expulsion from BAPEQS application.

If an allegation of plagiarism or collusion is made relating to your application for membership, no result will be given until an investigation has taken place.

#### **Example of Subjects for Professional Review Written Exercise Questions**

Please	note: This list is indicative not exhaustive.
Financ	cial
	The financial implications of decision made by engineers
	Whole – life asset management
	Budget management
	Cost control
	Private finance
	The financing of infrastructure development
	Operational and maintenance cost analysis
	Estimating / tendering
	Payment and compensation
Manag	gement
	Re-thinking construction
	Quality, Health, Safety Welfare and environmental management systems
	Effective delegation
	Team leadership
	Communication during the design and construction of engineering works
	Training/development of staff
	Partnering/alliances
	Business improvement
	Marketing
	Site/project management
Societ	al
	Equality and diversity in the Brunei, in relation to the engineering industry
	Sustainable development
	Influencing local, national and international political decisions
	The influence of recent international events on engineering
	The role of BAPEQS
	Overseas aid
	BAPEQS's Rules for Professional Conduct and Ethics
	Health and Safety management

		Aesthetical and environmental issues in engineering
		Health, safety and welfare during the design, construction, maintenance, operation and
		subsequent removal of the works
		Environmental impact of engineering projects
		Status of the engineer in society
Cor	nm	ercial
		Methods of funding and procuring construction projects
		Forms of contract for engineering works
		Joint venture contracts
		Risk analysis
		Target cost contracts
		Partnering/alliances
		Supply-chain management
Tec	hn	ical/academic
		Research and development
		Knowledge transfer
		The professional development of engineers
		Performance specifications
		National and international regulations on the control of pollution
		The role of an engineer as a specialist or a generalist
		Quality management
		Infrastructure maintenance