



BOARD OF QUANTITY SURVEYORS MALAYSIA

GUIDELINE TO TWO – TIER REGISTRATION

TIER 1 - PROFESSIONAL QUANTITY SURVEYORS

REVISION 2.2

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GUIDELINE TO TWO-TIER REGISTRATION OF QUANTITY SURVEYORS

1st Tier : Professional Quantity Surveyors (PQS)

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1 Introduction

The Assessment of Professional Competence (APC) for Quantity Surveyors is the key route to professional registration with the Board of Quantity Surveyors Malaysia (BQSM).

- 1.1 The APC is the qualifying assessment conducted by BQSM for registration as Professional Quantity Surveyor (PQS) and Consultant Quantity Surveyor (CQS). The APC emphasizes the technical competencies of a professional quantity surveyor through structured training for the minimum levels of requirements in knowledge, skills and abilities.
- 1.2 The objectives of the APC include :-
 - 1.2.1 To ensure candidates are equipped with the necessary competencies to be employed as a Professional and Consultant Quantity Surveyor
 - 1.2.2 The candidate has learned to apply his theoretical knowledge through professional training and experience for practical quantity surveying skills
 - 1.2.3 The candidate has achieved a satisfactory level of understanding and application of the skills that form an essential part of the knowledge base of the chosen specialists' practice
 - 1.2.4 The candidate is aware of the need to pay particular attention to accuracy and essential detail to safeguard the interests of employers and clients
 - 1.2.5 The candidate is aware of and acts in accordance with the BQSM's Rules of Conduct to possess the highest level of professional integrity and objectivity
 - 1.2.6 The candidate recognizes the ethical duties to clients, employers and the community, and
- 1.3 The BQSM Qualifications and Registrations Committee will be the sole and final authority in the implementation of the APC.

2 Registration and Eligibility

- 2.1 Full registration with BQSM comes in two-tiers:
 - a) Tier 1 - Professional Quantity Surveyor (PQS)
 - b) Tier 2 - Consultant Quantity Surveyor (CQS)
- 2.2 This Guideline is to guide only for Tier 1 – Professional Quantity Surveyor
- 2.3 The requirements for registration of PQS are as follows:
 - a) must be a valid Provisional Quantity Surveyor (PVQS) (not a defaulter)
 - b) has a permanent address in Malaysia
 - c) be physically present in Malaysia for not less than 183 days in the 12 months prior to the application
 - d) has obtained the local practical experience under supervision as may be prescribed by BQSM
 - e) has passed an Assessment of Professional Competence sanctioned by BQSM

3 Obtaining the Professional Experience

3.1 To ensure that the candidate achieves sufficient breadth and depth to the assessment, the APC for Tier 1 – PQS is structured around the active involvement of the following parties to obtain the training and professional experience :

3.1.1 The Candidate

- a) After the candidate has registered as a PVQS, the candidate is required to obtain local experience, supervise by an Internal Supervisor or External Supervisor, and fulfil other requirements as stated under respective route to registration of PQS.

3.1.2 The Supervisor

- a) The Supervisor must either be a Professional or Consultant Quantity Surveyor (PQS or CQS). However, a PQS must have at least one-year post experience after the PQS registration.
- b) There are 3 types of supervisor allowed for the supervision of the candidate as follows :
 - o Internal Supervisor
The supervisor is working in the same organization with the candidate.
 - o External Supervisor (Direct)
For Graduate/Experience route, the supervisor is NOT working in the same organization but both the supervisor and candidate have a work relationship in the same project. The candidate and the External Supervisor are required to declare their roles in the project. For the Academician Route, the supervisor is related to candidate's attachment of Quantity Surveying programme such as an External Examiner (academician) or Industry Advisory Panel (academician). The candidate must apply to BQSM with a supporting letter from the External Supervisor and provide necessary evidence.
 - o External Supervisor (Indirect)
If the candidate does not have either Internal Supervisor or External Supervisor (Direct), he can choose an External Supervisor (Indirect). This supervisor can be any PQS or CQS who is willing to supervise the candidate. The candidate must apply to BQSM with a supporting letter from the External Supervisor and provide necessary evidence. The candidate must write to BQSM to inform the reason for selecting the supervisor. Both the candidate and the supervisor will be called for interview by BQSM before supervision can commence.
- c) The supervisor is responsible with the candidate's day-to-day supervision.
- d) The supervisor is expected to provide guidance on practical experience and training.

- e) The supervisor is expected to timely endorse the candidate's progress in work diary and log book under the Graduate Route.
- f) The supervisor is expected to meet with the candidate for scheduled and timely discussion prior to submission of the Critical Analysis report.

3.2 The APC will gauge and signify the levels of competencies of the candidates in their skills and abilities. There are 3 basic levels of attainment which are progressive in terms of skills and abilities:

Level 1	<ul style="list-style-type: none"> • Knowledge and understanding
Level 2	<ul style="list-style-type: none"> • Practical application of knowledge and understanding • Conflict management, data management • Communication and negotiation
Level 3	<ul style="list-style-type: none"> • Reasoned analytical advice and depth of technical knowledge • Leadership, management of resources and people • Client care, Ethics and professional practice

ROUTES TO REGISTRATION AS PQS

4 The Graduate Route

- 4.1 The PVQS who is eligible to go through the Graduate Route **SHALL** register with the Royal Institution of Surveyors Malaysia (RISM) as a Graduate Member within 6 months of registering with BQSM or earlier
- 4.2 Candidate for the above category is required to complete **TWO** parts of the requirement to be registered as PQS :
- a) Part I – Work Diary and Log Book to record TWO years supervised professional training by an Internal Supervisor or THREE years supervised professional training if by External Supervisor
 - b) Part II – Critical Analysis Report and Professional Interview
- 4.3 The key elements of the APC for Graduate Route for PQS are as follows:
- a) Selection and planning of the APC Competency
 - b) Professional training, experience and professional development – a minimum of 208 days in 12 months. The candidate must be under single supervisor with continuous 6 months of working at one time
 - c) Proper recording of Professional Training and experience with monthly summary in an APC Work Diary and Log Book
 - d) Candidate must complete a minimum period of structured Professional Training of 2 years (416 days) if supervised experience is by Internal Supervisor or 3 years (624 days) if supervised experience is by External Supervisor
 - e) Regular supervisory meetings
 - f) Signing off of competencies by Supervisor, with revision in the training plan should this be necessary
- 4.4 The APC Work Diary and Log Book can be downloaded from BQSM website. The pages downloaded are to be in A4 size printed one side only for filling in by the Candidate.

APC Part 1 – Professional Training, Work Diary and Logbook

4.5 Professional Training

4.5.1 Arrangement for Professional Training

- a) Candidate must ascertain if their employment provides sufficient opportunity to acquire the necessary experience and exposure of the Areas of Professional Experience with adequate coverage.
- b) Areas of professional experience in the Work Diary are as follows:-

TABLE 1 : AREAS OF PROFESSIONAL EXPERIENCE

AREA	Category	Coverage
A	Pre- Construction	Covers pre-contract work on construction in both contract and cost including on material selection and evaluation, requirements under Buildings Ordinance / Regulations and other legislations. Candidate is expected to be involved with drafting of specifications, preparation of record drawings, including measurement and preparation of tender documentation, feasibility studies and preparation of estimates and/or cost plan.
B	Contract Administration	The administration of construction contracts of the norm in the industry including preparation and interpretation of clauses. Candidate is expected to be well versed with the tendering and procurement procedures as well as the appraisal of tenders, matters of cost estimating, cost control and measurement of works, project scheduling, resource planning and control of work and personnel, as well as contracts valuation and certification. Candidate must know the common standard forms of contract that are available in the market, the basis of law in Malaysia and the construction law practice
C	Construction Contract Operations	Covers the performance of construction contracts and operations. Candidate is expected to be knowledgeable in, amongst others, the preparation and review of sub-contract tenders (finding the most suitable sub-contractors for particular sections of work), the measurement and pricing of construction work to be performed by the sub-contractors and the day to day running of construction / building projects. Candidate must know the common standard forms of contract that are available in the market in relation to sub-contract.

AREA	Category	Coverage
D	Cost Planning and Quantification of Construction Work	Covers the cost planning process during the construction stage including the preparation, issuance and implementation of the cost plans, as well as the quantification for all stages of the construction works. Candidate is expected to know the components of a cost plan, the measuring rules related to cost planning, sources of data and factors affecting the cost efficiency of a construction work.
E	Post Contract Cost Control	This covers the costing and financial management of a project and construction works prior to final accounts. Candidate is expected to be knowledgeable in the cost control procedures and reporting; in particular forecasting and cash flows, the valuing in expenditure of provisional and prime cost sums, the expenditure of contingencies, the carrying out of interim valuations and variations, dealing with claims, authentication of actual costs and the reporting and issuance of the final accounts.
F	Construction Services	Covers the issues of design and specification of installations of construction related materials or equipments, with candidate expected to know the role of supervision for the compliance with relevant regulations, the requirements necessary during inspection and testing as well the factors and issues arising should there alterations and/or improvement to the initial design.
G	Project Management	Covers the overall aspect of managing a construction project with candidates expected to know the issues involved in either the development or re-development potential in a construction project as well as the related technical and legal implications. Areas of experiences include the preparation of budgets and development programme, the appointment of specialist consultants, project coordination as well as progress monitoring and budget control.
H	Research and Development	Covers research activities relating to the competencies and the relevance to the development of the quantity surveying profession.
I	Public Development Policy	Covers the private sector's role and participation in public infrastructure projects as well as regulatory requirements for the construction and property development sector in regards to the quantity surveying profession.

AREA	Category	Coverage
J	General Management and Construction Finance	Covers the evaluation of consultant's reports on environmental impact assessment, energy conservation and similar studies in regards to construction industry. Involved in the financial matters in the project implementation, private funding initiatives, partnering and the like.
K	Life Cycle Costing	Covers the financial management tool for monitoring and management of costs over an asset's life to enable a comparison of predicted against actual cost of a construction project, including the cost operation, maintenance and future refurbishment needs.
L	Facilities Management	Covers the outsourcing buildings and facilities operation and maintenance from design, build and to management to ensure functionality of the built environment.
M	Sustainability and Green Building Index (GBI)	Covers the accreditation and certification process for buildings including construction, design, materials use and regulatory requirements in regards to sustainability and GBI.
N	Building Information Modeling (BIM)	Covers the integrated platform in producing, reading and maintaining a virtual 3D drawing of a construction project, which includes parties involved in the planning and implementation of a construction project into a mindset for process integration.

- 4.5.2 Candidate is required to attain minimum 50% from **THREE AREAS** of Professional Experience and reasonably balanced working knowledge preferably in as many other areas as practicable.
- 4.5.3 Candidate is required to attain Levels 1 to 3 in at least **THREE AREAS** and reasonably balanced working knowledge preferably in as many other areas as practicable.
- 4.5.4 Private practices and public bodies offering professional quantity surveying services are suitable grounds for acquiring practical experience. Other organizations providing professional services in the construction industry may also provide opportunities in specialized areas.
- 4.5.5 Candidates should take initiatives to seek professional knowledge from their supervisors and to acquire experience through hands-on involvement in their assignments if there is no structured training providing in the organization.
- 4.5.6 Candidates should ensure that they have sufficient exposure to the required training areas and be prepared to consider alternative arrangements, such as secondment to another office to make up for any inadequacy.

- 4.5.7 Should a candidate undergo a change in employment, approval must be sought from the APC Committee for the alteration of the APC programme arrangements by making a supplementary application
- 4.5.8 If in doubt, candidate may write to BQSM for opinion on the suitability of their proposed employment and training arrangements.

4.6 Work Diary and Log Book

4.6.1 Work Diary

- a) Candidate must maintain a Work Diary throughout their approved period of Professional Training and any extended period of training that may be required.
- b) Entries in the Work Diary should be clear and concise as candidates are required to analyze the work carried out every month for summary in their Log Books. Entries for the work carried out in any one week should appear only on the page relating to that week.
- c) If a candidate changes employment, the Work Diary should be continued in the usual way, but a clear indication of the change (with details of the new employment and date) must be given on the relevant page.
- d) The Work Diary must be signed by the candidate and his supervisor at the end of every week, certifying correctness of entries. This provides an opportunity for the supervisor to review the progress and to ensure the adequacy and relevance of the candidate's training.
- e) The Work Diary provides important evidence of the candidate's Professional Training and should therefore be kept in safe custody. It is advisable that a copy is made before **THE ORIGINAL** is submitted for Interim Assessment. **ONLY ORIGINAL** submission is accepted.

4.6.2 Log Books

- a) Candidate must to keep a Log Book which is an analytical account of their Professional Training in chronological order based on entries in the Work Diary, to enable the evaluation of the adequacy and balance of their professional training.
- b) The details required should be drawn from the Work Diary. The Professional Training received in each month must be analyzed and entered in weekly under the area and month headings of the relevant Analysis of Diary Sheet. At the end of every 3 months, it must be signed by the candidate and his supervisor.
- c) The Log Book provides important evidence of the candidate's Professional Training and should therefore be kept in safe custody. It is advisable that a copy is made before **THE ORIGINAL** is submitted for Interim Assessment. **ONLY ORIGINAL** submission is accepted.

4.6.3 Interim Assessment Submission

- a) An Interim Assessment is required to steer the candidate in the acquisition of working knowledge and Professional Training
- b) Immediately after 12 months comprising at least 208 working days of the approved period of Professional Training, the candidate must submit the Work Diary, the Log Book and an Interim Summary of Experience to BQSM for Interim Assessment. The candidate must be a valid PVQS member (Not a defaulter).
- c) In the Interim Summary of Experience approximately 500 words, the candidate should summarize and describe the Professional Training so far received and a self-assessment of his own training progress.

4.6.4 Final Assessment Submission

- a) After completion of the full approved period of Professional Training or such extended period that may be required, the candidate shall submit for the Final Assessment.
- b) When applying for Final Assessment, the candidate should also submit the Work Diary, the Log Book and a Final Summary of Experience to BQSM. The candidate must be a valid PVQS member (Not a defaulter).
- c) In the Final Summary of Experience approximately 1,000 words, the candidate should summarize and describe the Professional Training received and a self-assessment of the candidate's own training progress for the total period of assessment.

APC Part 2A – Critical Analysis Report and Assessment

4.7 Critical Analysis Report

- 4.7.1 A Critical Analysis report is to illustrate the candidate's local practical experience and professional knowledge in different aspects of quantity surveying in which the candidate has been engaged and concentrated on the chosen APC Competency.

The areas of professional experience to obtain competencies are as per **TABLE 1 in Item 4.5.1.**

- 4.7.2 Candidate is required to prepare and submit a Critical Analysis report consists of the respective 2 chosen separate areas of local professional experience based on either similar or different project, in triplicate, not less than 3,000 words but not exceeding 4,500 words (excluding appendices) describing and critically examining projects which the candidate has personally involved with and gained sufficient experience.
- 4.7.3 Candidate should highlight and demonstrates their knowledge and understanding of the core competencies within the Critical Analysis report.
- 4.7.4 The Critical Analysis report should be set out in a neat and orderly manner, typeset in double spacing on A4 size paper, printed one side only. It should have sectional headings and numbered pages for convenient reference and assessment.

4.7.5 As a guide, the submission of Critical Analysis report should comprise of the following:

4.7.5.1 Summary of Experience

- a) The candidate should summarize and describe the local experience acquired during the full period of professional training of 2 or 3 years. It should give an account of personal involvement in the engagements and an evaluation of the experience that has been acquired. The candidate should also illustrate and assess the candidate's own aptitude for specialization in the professional career. The Summary should not exceed 500 words.
- b) The *Summary of Experience* should comprise the following elements:
 - i) chronological account of employment and job descriptions
 - ii) summary/analysis of on-job training and personal involvement
 - iii) summary/analysis of the competencies applied in the chosen APC

4.7.5.2 Critical Analysis Report (applicable for each chosen Area)

- a) In the Introduction, provide a brief description of the chosen area, role of the candidate in the project and other details specific to the chosen area/project;
- b) Highlight the background of the issues;
- c) Identify the key issue (one main issue only). Do not include irrelevant issues;
- d) Describe the methodology and options to solve the key issue, decision making and project control, including, where applicable, rationale for rejecting other available options;
- e) Discuss the options proposed in relation to the risk assessment and implication in terms of contractual implications, time and cost;
- f) Discuss the factors affecting the progression of activity or anticipated performance;
- g) Discuss the result achieved vis-a-vis the original intention, and if relevant, a cost-effectiveness study; and
- h) Conclude with lessons learnt and self-assessment of personal involvement in the project presented.

4.7.6 Confidential information must not be disclosed. Where necessary, fictitious names and addresses may be used. Extracts from Ordinances, case law, Codes of Practice and other source materials SHOULD NOT be quoted at length but essential reference must be given. They could be included as appendices.

- 4.7.7 Candidate must confirm that permission has been given by the relevant party to use the project for the purpose of submitting the Critical Analysis report.
- 4.7.8 Candidate shall submit and sign a declaration that the Critical Analysis is original in content and is the candidate's own work. (Refer to Appendix A)

4.8 Assessment of Critical Analysis

- 4.8.1 The Critical Analysis provides an opportunity for the candidate to demonstrate their ability in report writing, logical expression, professional analysis and judgment, as well as their ability to be objectively critical of the practical activities undertaken personally and their aptitude for a professional quantity surveyor.
- 4.8.2 Assessment of the Critical Analysis will be based on the following elements:
 - a) Presentation and clarity of expression
 - b) Comprehensiveness of case documentation and the decision-making process
 - c) Critical analysis of a selected project
 - d) Incorporation and illustration of the candidates' understanding and knowledge of core competencies as required under the APC
 - e) Personal involvement and objectivity of self-assessment
 - f) Ethics and codes of conduct
- 4.8.3 If the Critical Analysis is unsatisfactory, the candidate may be required to prepare in 3 to 6 months' time a supplementary Critical Analysis on another project as the assessors may direct.

APC Part 2B – Structured Professional Interview

- 4.9 The Interview will be conducted by a panel of minimum 2 assessors. The candidate will be assessed on the following:
 - 4.9.1 Adequacy and relevance of the candidate's professional development and training
 - 4.9.2 Competency of the candidates in the listed APC Competencies within the Areas of Professional Experience
 - 4.9.3 Experience and level of involvement in either completed, planned and on-going projects. This will be in relation to the Critical Analysis submitted
 - 4.9.4 General knowledge and current trends of professional quantity surveying practices
 - 4.9.5 Grasps of professional and work ethics and code of conduct
 - 4.9.6 General interaction abilities

5 The Experience Route

- 5.1 The PVQS who is eligible to go through the Experience Route should have a minimum of 5 years relevant working experience starting from the BQSM's accredited qualification.
- 5.2 The Candidate for the above category is required to complete 1 year supervised local working experience by Internal Supervisor or 2 years supervised local working experience by External Supervisor (Direct and Indirect) after registration as a PVQS.
- 5.3 The Candidate for the above category are to complete and pass only 1 part of the requirement to be registered as a PQS :

Part II – Critical Analysis Report and Professional Interview

APC Part 2A – Critical Analysis Report and Assessment

5.4 Critical Analysis Report

- 5.4.1 A Critical Analysis report is to illustrate the candidate's local practical experience and professional knowledge in different aspects of quantity surveying in which the candidate has been engaged and concentrated on the chosen APC Competency.

The areas of professional experience to obtain competencies are as per TABLE 1 in Item 4.5.1.

- 5.4.2 Candidate is required to prepare and submit a Critical Analysis report consists of the respective 2 chosen separate areas of local professional experience based on either similar or different project, in triplicate, not less than 3,000 words but not exceeding 4,500 words (excluding appendices) describing and critically examining projects which the candidate has personally involved with and gained sufficient experience.
- 5.4.3 Candidate should highlight and demonstrates their knowledge and understanding of the core competencies within the Critical Analysis report.
- 5.4.4 The Critical Analysis report should be set out in a neat and orderly manner, typeset in double spacing on A4 size paper, printed one side only. It should have sectional headings and numbered pages for convenient reference and assessment.

5.4.5 As a guide, the submission of Critical Analysis report should comprise of the following:

5.4.5.1 Summary of Experience

- a) The candidate should summarize and describe the local experience acquired during the full period of professional training of 2 or 3 years. It should give an account of personal involvement in the engagements and an evaluation of the experience that has been acquired. The candidate should also illustrate and assess the candidate's own aptitude for specialization in the professional career. The Summary should not exceed 500 words.
- b) The *Summary of Experience* should comprise the following elements:
 - i) chronological account of employment and job descriptions
 - ii) summary/analysis of on-job training and personal involvement
 - iii) summary/analysis of the competencies applied in the chosen APC

5.4.5.2 Critical Analysis Report (applicable for each chosen Area)

- a) In the Introduction, provide a brief description of the chosen area, role of the candidate in the project and other details specific to the chosen area/project;
- b) Highlight the background of the issues;
- c) Identify the key issue (one main issue only). Do not include irrelevant issues;
- d) Describe the methodology and options to solve the key issue, decision making and project control, including, where applicable, rationale for rejecting other available options;
- e) Discuss the options proposed in relation to the risk assessment and implication in terms of contractual implications, time and cost;
- f) Discuss the factors affecting the progression of activity or anticipated performance;
- g) Discuss the result achieved vis-a-vis the original intention, and if relevant, a cost-effectiveness study; and
- h) Conclude with lessons learnt and self-assessment of personal involvement in the project presented.

5.4.6 Confidential information must not be disclosed. Where necessary, fictitious names and addresses may be used. Extracts from Ordinances, case law, Codes of Practice and other source materials **SHOULD NOT** be quoted at length but essential reference must be given. They could be included as appendices.

- 5.4.7 Candidate must confirm that permission has been given by the relevant party to use the project for the purpose of submitting the Critical Analysis report.
- 5.4.8 Candidate shall submit and sign a declaration that the Critical Analysis is original in content and is the candidate's own work. (Refer to Appendix A)

5.5 Assessment of Critical Analysis

- 5.5.1 The Critical Analysis provides an opportunity for the candidate to demonstrate their ability in report writing, logical expression, professional analysis and judgment, as well as their ability to be objectively critical of the practical activities undertaken personally and their aptitude for a professional quantity surveyor.
- 5.5.2 Assessment of the Critical Analysis will be based on the following elements:
 - a) Presentation and clarity of expression
 - b) Comprehensiveness of case documentation and the decision-making process
 - c) Critical analysis of a selected project
 - d) Incorporation and illustration of the candidates' understanding and knowledge of core competencies as required under the APC
 - e) Personal involvement and objectivity of self-assessment
 - f) Ethics and codes of conduct

APC Part 2B – Structured Professional Interview

- 5.6 The Interview will be conducted by a panel of minimum 2 assessors. The candidate will be assessed on the following:
 - 5.6.1 Adequacy and relevance of the candidate's professional development and training
 - 5.6.2 Competency of the candidates in the listed APC Competencies within the Areas of Professional Experience
 - 5.6.3 Experience and level of involvement in either completed, planned and on-going projects. This will be in relation to the Critical Analysis submitted
 - 5.6.4 General knowledge and current trends of professional quantity surveying practices
 - 5.6.5 Grasps of professional and work ethics and code of conduct
 - 5.6.6 General interaction abilities

6 The Academician Route

6.1 The PVQS who is eligible to go through the Academician Route are as follows:-

- a) Holds a degree qualification accredited by BQSM and a Masters degree related to Quantity Surveying or construction;
- b) Employed as a full-time faculty member in an approved Institute of Higher Learning offering the Quantity Surveying degree or diploma or both; whereby the programme is recognized and accredited by BQSM;
- c) minimum teaching/tutorial of 2 QS core subjects, or 1 QS core subject with 2 other QS related subjects;
- d) For each subject taught, the candidates are required to submit the syllabus, lecture programmes, lecture contents, sample of tests, assignments and number of students involved;
- e) The relevant subjects are as follows:-

QS Core Subjects	QS Related Subjects
Measurement (Building)	Project Management
Measurement (Engineering)	Sustainability
Professional Practice and Procedure	International Construction
Construction Technologies	Value Management
Building/Construction Economics	Facilities Management
Estimating/Cost Planning	BIM/ Information Technology for QS
Construction Law and Contract	Other subjects (candidate to specify)
Construction Management	
Building Construction Services	

- f) must complete a minimum of 3 years approved academic experience and have acquired the teaching experience after obtaining the Masters Degree; and
- g) under supervision for 1 year if Internal Supervisor or 2 years for External Supervisor (Direct or Indirect).

6.2 The candidate for the above category are to complete only 1 part of the requirement to be registered as a PQS :

Part II – Critical Analysis Report and Professional Interview

APC Part 2A - Critical Analysis Report and Assessment

6.3 Critical Analysis Report

6.3.1 A Critical Analysis report is to illustrate the candidate's professional experience and knowledge in the candidate's employment as an academician.

6.3.2 The areas of professional experience to obtain the necessary competencies as an academician are as per TABLE 2.

TABLE 2 : AREAS OF PROFESSIONAL EXPERIENCE (Academician)

Area	Category	Coverage
1	Paper in indexed journals	It covers construction related research papers published in the Web of Science (WoS) or SCOPUS indexed journals.
2	Paper in refereed journal	It covers construction related research papers published in other than the Web of Science (WoS) or SCOPUS indexed journals.
3	Paper in professional journal/ magazine/ newspaper/ electronic media	A professional journal/magazine is a publication addressed to a particular professional audience and published by a professional organisation/institution. It may include research articles, reports, or practical articles applicable to the profession or the industry. A construction related research paper published in the newspaper or electronic media is also accepted.
4	Book	It covers construction related books published by either local or international publisher.
5	Book chapter/module	It covers construction related book chapters published by either local or international publisher. It also covers course modules which are prepared and endorsed by the respective academic institution and used for a particular QS or related course.
6	Conference/Seminar paper	This is to include construction related papers orally presented in the conference and published in the conference proceedings, as well as papers used for CPD seminar or short courses.
7	Consultancy/technical report	It covers report or other outputs derive from a construction related consultancy work.

Area	Category	Coverage
8	Supervision of thesis, dissertation, research project or final year project	This area covers the supervision of student's research work at both undergraduate and postgraduate level. Sufficient details of the supervision work should be provided which include, i.e., the student's name, title of research, abstract, the year and the degree awarded. The chosen student's research topic should be construction related and contribute to the quantity surveying field.
9	Research and development	The chosen research and development area should be construction related and contribute to the quantity surveying field. Sufficient details should be provided which include, i.e., research title, abstract, the candidate's role, name of co-researchers, sponsoring organisation for the research grant, amount of grant, duration and the research contributions (eg. new theory, product, prototype etc).
10	Innovative Teaching Strategies	It refers to academicians' innovative teaching strategies in imparting knowledge and skills in teaching students to learn while promoting innovation.

Notes:

¹The work for each area should be construction related and contribute to the quantity surveying field.

²For areas 1-7, the candidate should properly highlight the candidate's role in the publication work. The candidate should be directly involved in the publication work, i.e., preferably as the main author/first author, corresponding author or paper presenter. This is to reflect not only the candidate's hands-on experience, i.e., in dealing with the technical requirements of preparing a paper for publication/seminar or report, but also the candidate's ability to expand knowledge of the chosen field. In addition to area 7, the candidate is required to indicate the candidate's responsibilities in the consultancy project, area and type of consultancy works rendered.

³For area 9, preferably the candidate should be the principal investigator or project leader. In the event if the candidate is just a member or co-researcher, the candidate should properly highlight the candidate's role in the research grant, i.e., candidate's area of expertise that is relevant to the grant, as a 'consultant/expert' for a specific research methodology, or any other roles/contribution that the candidate think is significant to the grant.

6.3.3 Candidate is required to prepare and submit a Critical Analysis report consists of the respective 2 chosen separate areas of professional experience, in triplicate, not less than 3,000 words but not exceeding 4,500 words (excluding appendices) describing and critically examining the areas which the candidate has personally involved with and gained sufficient experience.

- 6.3.4 Only 1 specific paper/book/conference paper/student's supervision work, etc. shall be used in respect of the 2 chosen areas.
- 6.3.5 Candidate should highlight and demonstrates their knowledge and understanding of the core competencies within the Critical Analysis report.
- 6.3.6 The Critical Analysis report should be set out in a neat and orderly manner, typeset in double spacing on A4 size paper, printed one side only. It should have sectional headings and numbered pages for convenient reference and assessment.
- 6.3.7 As a guide, the submission of Critical Analysis report should comprise of the following:

6.3.7.1 Summary of Experience

- a) The candidate should summarize and describe the experience acquired during the full period of professional training of 2 or 3 years. It should give an account of personal involvement in the engagements and an evaluation of the experience that has been acquired. The candidate should also illustrate and assess the candidate's own aptitude for specialization in the professional career. The Summary should not exceed 500 words.
- b) The *Summary of Experience* should comprise the following elements:
 - i) chronological account of employment and job descriptions
 - ii) summary/analysis of on-job training and personal involvement
 - iii) summary/analysis of the competencies applied in the chosen APC

6.3.7.2 Critical Analysis Report (*applicable for each chosen Area*)

- a) In the Introduction, provide a brief description of the chosen area, role of the candidate and other details specific to the chosen area;
- b) Highlight the background of the issues.
- c) Identify the key issue (one main issue only). Do not include irrelevant issues;
- d) Describe the methodologies/options available to solve the key issue;
- e) Discuss the chosen methodology/option to solve the key issue (decision-making), and rationale for rejecting other available options;
- f) Discuss the factors affecting the progression of activity or anticipated performance;
- g) Discuss the result achieved vis-a-vis the original intention, and if relevant, a cost-effectiveness study, impact to the industry or academic contribution; and

- h) Conclude with lessons learnt and self-assessment of personal involvement in the area presented.

6.3.8 Confidential information must not be disclosed. Where necessary, fictitious names and addresses may be used. Extracts from Ordinances, case law, Codes of Practice and other source materials **SHOULD NOT** be quoted at length but essential reference must be given. They could be included as appendices.

6.3.9 Candidate must confirm that they have received permission from the relevant party to use the respective documents for the purpose of submitting the Critical Analysis report.

6.3.10 All published work presented must be of a quality that is recognized nationally in terms of its originality, significance, rigour and contribution to research and / or policy agendas.

(Note: A national publication is not necessarily inferior to an international publication)

6.3.11 Candidates shall submit and sign a declaration that the Critical Analysis is original in content and is the candidate's own work. (Refer to Appendix B)

6.4 Assessment of Critical Analysis

6.4.1 The Critical Analysis provides an opportunity for the candidate to demonstrate their ability in report writing, logical expression, professional analysis and judgment, as well as their ability to be objectively critical of the practical activities undertaken personally and their aptitude for a professional quantity surveyor.

6.4.2 Assessment of the Critical Analysis will be based on the following elements:

- a) Presentation and clarity of expression
- b) Comprehensiveness of case documentation and the decision-making process
- c) Critical analysis of the selected areas
- d) Incorporation and illustration of the candidates' understanding and knowledge of core competencies as required under the APC
- e) Personal involvement and objectivity of self assessment

APC Part 2B – Structured Professional Interview

- 6.5 The Interview will be conducted by a panel of minimum 2 assessors with one of the assessor is an academician. The candidates will be assessed on the following:
 - 6.5.1 The application of his / her theoretical knowledge through relevant teaching and research activities
 - 6.5.2 Understanding and ability to apply the skills that form the knowledge base of his / her chosen specialist study
 - 6.5.3 Awareness of the professional and commercial implications of his / her work
 - 6.5.4 General knowledge and current trends of professional quantity surveying practices
 - 6.5.5 Grasps of professional and work ethics
 - 6.5.6 General interaction abilities

7 Results and Appeals

7.1 Result of the Work Diary and Log Book

- 7.1.1 Results will not be publicized and marks awarded will not normally be disclosed.
- 7.1.2 Results of the Work Diary and Log Book will be sent to the candidates. All results are final and are not subject to appeal.
- 7.1.3 Arrangement for Unsuccessful Candidate
 - 7.1.3.1 Candidate whose professional training is considered deficient in coverage or depth may be required to undertake an extended period of training before re-assessment. Such further period of training may relate to specific areas of deficiency and will normally be from 6 to 12 months.
 - 7.1.3.2 The candidate will need to maintain a Work Diary and Log Book for such extended period and apply for re-assessment after the period of deferral with a supplementary submission of the summary of experience covering that period.

7.2 Result of the Critical Analysis Report

- 7.2.1 Only when the candidate passes Critical Analysis Report, the candidate will be called to attend the Professional Interview
- 7.2.2 In certain circumstances, the candidate may be called for interview although the marks of the Critical Analysis Report are marginal. The panel can request for resubmission of Critical Analysis Report during the interview.
- 7.2.3 If the CA is unsatisfactory, the candidate may be required to prepare in 3 to 6 months' time a supplementary Critical Analysis on another project, change the chosen area or re-write as the assessors may direct.
- 7.2.4 Results of the Critical Analysis report will be sent to the candidate. All results are final and are not subject to appeal.

7.3 Results of the Structured Professional Interview

- 7.3.1 All results from the Structured Professional Interview will be announced and endorsed by the Committee within one month of the interview session. Results will not be publicized and marks awarded will not normally be disclosed.
- 7.3.2 All decisions on the Structured Professional Interviews are final and not subject to appeal.
- 7.3.3 Candidate who fails the Structured Professional Interview could apply for a re-interview to be conducted within 3 months of the APC Committee's endorsement of the results.

APPENDICES

Declaration

I hereby declare that this critical analysis (CA) report is prepared based on my original work except for citations and quotations which have been duly acknowledged. Permission to use the material for this CA report has also been sought and granted. I also declare that the information provided in this CA report is true, accurate and in accordance to the requirements for the application of registration with the Board of Quantity Surveyors Malaysia (BQSM) under Section 7(C) of the Quantity Surveyors Act (Amendment) 2015 as a Professional Quantity Surveyor (PQS) under graduate/experience route.

Candidate's Signature, Name & PVQS Registration

Declaration

I hereby declare that this critical analysis (CA) report is prepared based on my original work except for citations and quotations which have been duly acknowledged. Permission to use the material for this CA report has also been sought and granted. I also declare that the information provided in this CA report is true, accurate and in accordance to the requirements for the application of registration with the Board of Quantity Surveyors Malaysia (BQSM) under Section 7(C) of the Quantity Surveyors Act (Amendment) 2015 as a Professional Quantity Surveyor (PQS) for Academician Employed in Accredited Institution of Higher Learning.

Candidate's Signature, Name & PVQS Registration

BQSM REGISTRATION ROUTE

ROUTE	ACADEMIC QUALIFICATION	ADDITIONAL QUALIFICATION	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY
ROUTE 1	Accredited QS Degree Programme					PVQS	NIL	<ul style="list-style-type: none"> 2 years of local working experience under the supervision of a PQS/CQS (3 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part I (Log Book & Work Diary) Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS
ROUTE 2	Accredited Master Programme			Master must be related to Quantity Surveying Profession	NIL	PVQS	NIL	<ul style="list-style-type: none"> 2 years of local working experience under the supervision of a PQS/CQS (3 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part I (Log Book & Work Diary) Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS
ROUTE 3	Accredited QS Degree Programme					PVQS	<ul style="list-style-type: none"> Master related to Construction Industry Teaching QS Programme in Institution accredited by BQSM or Programme related to QS 	<ul style="list-style-type: none"> 3 years teaching experience QS Programme in Institution accredited by BQSM or Programme related to QS Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 2 years approved local working experience in the industry Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS

APPENDIX C

ROUTE	ACADEMIC QUALIFICATION	ADDITIONAL QUALIFICATION	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY
ROUTE 4	Accredited QS Degree Programme					PVQS	<ul style="list-style-type: none"> 5 years approved working experience in QS related profession after graduation 	<ul style="list-style-type: none"> 1 year of local working experience under the supervision of a PQS/CQS (2 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS
ROUTE 5	Recognized QS Degree Programme			<ul style="list-style-type: none"> Full membership in an institution approved by BQSM 10 years approved working experience related to construction industry 	NIL	PVQS	NIL	<ul style="list-style-type: none"> 1 year of local working experience under the supervision of a PQS/CQS (2 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS

APPENDIX C

ROUTE	ACADEMIC QUALIFICATION	ADDITIONAL QUALIFICATION	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	REGISTRATION QUALIFICATION	ADDITIONAL QUALIFICATION	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY	UPGRADING REQUIREMENT	UPGRADING REGISTRATION CATEGORY
ROUTE 6	Cognate Degree Programme		QST	<ul style="list-style-type: none"> Full membership in an institution approved by BQSM 	<ul style="list-style-type: none"> Registered with RISM as a Probationer Member Passed Topping-Up Scheme via passing RISM Direct Final Exam 	PVQS	<ul style="list-style-type: none"> 5 years approved working experience in QS related profession after passed RISM Direct Final Exam 	<ul style="list-style-type: none"> 1 year of local working experience under the supervision of a PQS/CQS (2 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS
ROUTE 7	Accredited Diploma Programme	<ul style="list-style-type: none"> Registered with RISM as a Probationer Member Working in construction related organisation Passed 3 Direct Final Exam papers in the as follows:- <ul style="list-style-type: none"> (i) Professional Practice 1 (ii) Measurement 1 & 2 	QST	NIL	<ul style="list-style-type: none"> Passed the remaining papers of RISM Direct Final Exam 	PVQS	<ul style="list-style-type: none"> 5 years approved working experience in QS related profession after passed RISM Direct Final Exam 	<ul style="list-style-type: none"> 1 year of local working experience under the supervision of a PQS/CQS (2 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS
ROUTE 8	Accredited Diploma Programme	<ul style="list-style-type: none"> Registered with RISM as a Probationer Member Working in construction related organisation Passed 3 Direct Final Exam papers in the as follows:- <ul style="list-style-type: none"> (iii) Professional Practice 1 (iv) Measurement 1 & 2 	QST	NIL	<ul style="list-style-type: none"> Passed the remaining papers of RISM Direct Final Exam 	PVQS	NIL	<ul style="list-style-type: none"> 2 years of local working experience under the supervision of a PQS/CQS (3 years if Supervision by External (Direct/Indirect) Supervisor after the date of registration with APC Passed Part I (Log Book & Work Diary) Passed Part II (Critical Analysis Report and Assessment and Structured Professional Interview) 	PQS	<ul style="list-style-type: none"> 1 year approved local working experience Passed Professional Practice 1 & 2 Examination Passed Interview Session 	CQS

