Building and Construction Authority

QUALITY FEE METHOD (QFM)

Guide to QFM Framework

Effective for Expression of Interest (EOI) exercises and tenders called on and after 1 March 2024

Section	Details of Amendment	Date of Amendment
2.4	Updated table with revised shortlisting method for projects with estimated construction cost of projects up to and above $50mil.	1 March 2024
2.9	Added exemptions to awarding tenders to the highest QFM scorer	
2.10	Updated description to give more clarity on giving feedback to tenderers on their performance.	
3.2	Revised approach to evaluate consultants past performance to enhance differentiation in quality scores.	
Annex A	Added new section on consultants' performance.	
Annex B	Updated examples on the scoring of the QFM arising from enhancement to differentiate quality scores.	
Annex D	Added guide on pilot revised fee score approach for all QFM consultancy tenders with estimated construction cost of projects $50mil and below.	
2.4	Updated Estimated Construction Cost of Project for determining shortlisting method	1 February 2023
3.2	Updated the changes to the Quality Component in this section a) Removed the Buildable Design Score Index; b) Included scoring approach for scenario where less than two tenderers has consultant's performance score. c) Reallocated the affected weightage of 16% (from BS Index) to the Quality component to allow GPEs higher weightage in assessing quality attributes such as Integrated Planning and Design (IPD), Advanced Manufacturing & Assembly (AMA), Environmental Sustainability and Design for Maintenance (DfM) under the Quality proposals	
3.7	Removed BS index in quality attribute	
Annex A	Removed FAQ 3 on Buildable Design Score Index	
Annex B	Updated examples on the scoring of the QFM.	

1	Updated QFM components and weightages arising from changes in the Productivity (PD) component.	1 June 2022
2	- Updated changes to PD component • Removed all references to Productivity scores, • Transferred BS Index (16%) to Quality component • Removed Technology Adoption (TA(D)) Index and the Workforce Development (WD(D)) Index, and 4% weightage reallocated to Quality component - Updated project cut-off values in shortlisting method table (Cl 2.3.3) - Clause amended and added footnote to remind GPEs to provide the template for Breakdown of Fees Man-weeks and Man-week rates for tenderers' submissions in excel format (Cl 2.9) - Clause amended to highlight that GPEs should not deviate from the QFM framework to award to the highest QFM scorer. If otherwise, GPEs shall inform BCA with justifications. (Cl 2.13)	
3	- Updated Quality score arising from changes in the PD component. - Added note to make clear the tender evaluation methodology for Collaborative Bidding shall also apply to other Joint Ventures arrangement (Cl 3.7)	
Annex A	FAQ6 added for situations where there are less than five tenderers who have expressed interest	
Annex B	Updated QFM components and weightages arising from changes in the Productivity (PD) component.	

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1. Introduction to QFM

GENERAL

1.1. The QFM is a structured framework for the selection of the most suitable bid proposal that provides the best value for the tender. It is a competitive selection method that considers both Fee and Quality proposals submitted by firms.

KEY PRINCIPLES AND FEATURES OF QFM FRAMEWORK

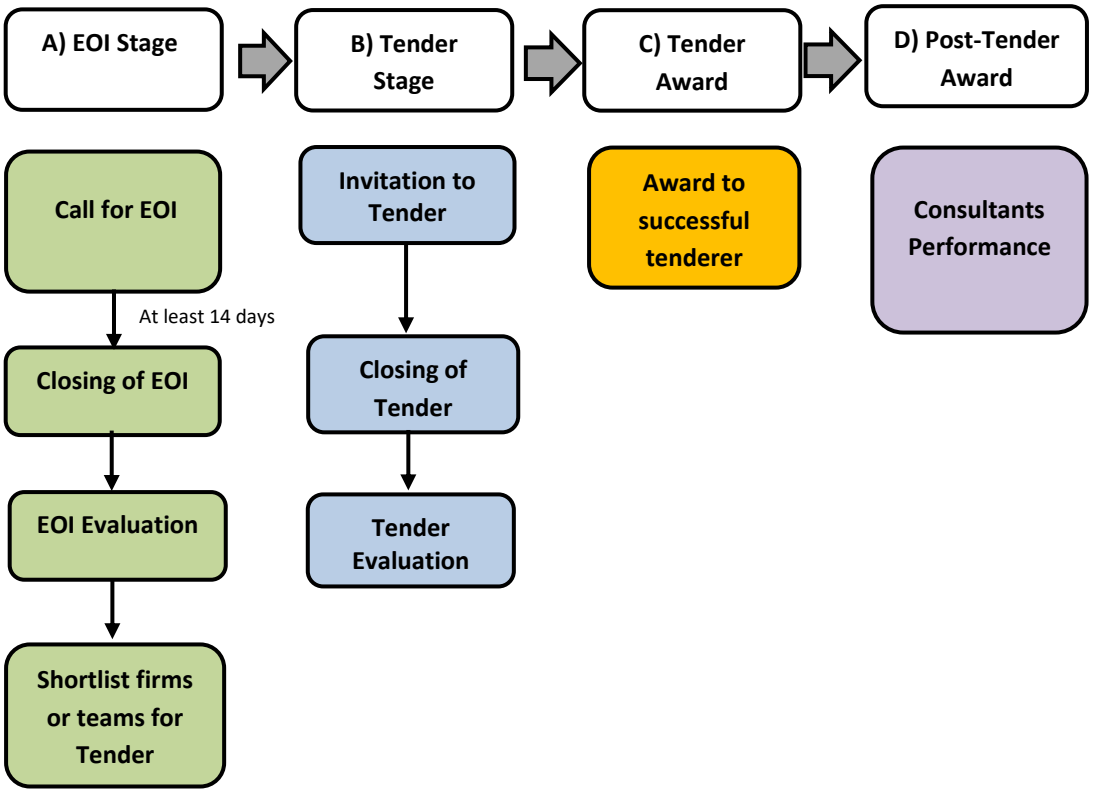
1.2. The QFM framework is underpinned by the following three key principles and its distinct features.

<table>
<tr><th>Key Principles</th><th>Features of QFM framework</th></tr>
<tr><td>1) Quality-focused
Emphasis on firms' capacity and capability to undertake the project and quality of service; Discourage fee-diving behaviour in tenderers.</td><td>i. Higher weightage for Quality component
<table><tr><td>Component</td><td>QFM Weightage</td></tr><tr><td>Quality</td><td>70% - 90%</td></tr><tr><td>Fee</td><td>30% - 10%</td></tr></table>ii. Mechanism to reduce fee-diving.</td></tr>
<tr><td>2) Open and transparent
Ensure all tenderers' proposals are evaluated objectively and not affected by the fees proposed.</td><td>i. Two-envelope system
Quality proposals are first opened and evaluated before Fee proposals</td></tr>
<tr><td>3) Resource efficient
Reduce tendering efforts.</td><td>i. Public Sector Panels of Consultants (PSPC)
Tenders are only opened to tenderers from specific PSPC panels, which provides the first sieve to ensure firms' capacity and capability.
ii. Expression-of-Interest (EOI) stage
5 tenderers are selected for tender stage through the EOI shortlisting process.</td></tr>
</table>

2. QFM Procedures

QFM TENDER

2.1. There are four key stages of a QFM tender.



A) EOI Stage

2.2. EOI Duration. The EOI stage shall be at least 14 days.

2.3. Tender Eligibility

2.3.1. Public Sector Panel of Consultants (PSPC)

i. As part of the QFM framework, a central panel called PSPC is to be adopted for procurement of public sector consultancy services in the discipline of Architectural (AR), Civil and Structural (CS), Mechanical and Electrical (ME), Quantity Surveying (QS) and Project Management (PM).

ii. The eligibility of PSPC firms is pegged to the estimated construction cost of project and only firms listed in PSPC under the corresponding panels are eligible.

iii. PSPC-registered firms (within the same discipline) may pool their resources to be eligible to tender for projects beyond their panels' current allowable tendering limits under Collaborative Bidding.

2.3.2. *Single-discipline and Multi-disciplinary Team (MDT) approach*. The tenderers or members of MDT shall fulfil the eligibility criteria stipulated at the point of EOI closing. In an MDT, the lead consultant shall not participate as a lead consultant in another MDT for the same tender.

2.4. Shortlisting Method. Tenderers shall be shortlisted for tender stage through i) Balloting (1-stage QFM), or ii) Selection by merits (2-stage QFM) depending on the Estimated Construction Cost of Project as below.

Project value	**Up to $50mil (inclusive of $50mil)**	**Above $50mil**
Shortlisting method	Shortlist by merit or balloting	Shortlist by merit

2.5. EOI Evaluation

2.5.1. *EOI Shortlisting process*

a) *1-stage QFM*. The EOI Stage involves balloting of five eligible firms.

i. There shall be no request for or evaluation of Quality and Fee proposals, other than those used to fulfil critical criteria.

ii. Balloting shall be performed on firms which have expressed interest and fulfilled the critical criteria (e.g. correct PSPC panel)

b) *2-stage QFM*. The EOI Stage involves selection of five eligible firms based on agencies' stipulated Quality criteria.

i. Quality proposals (i.e. no design sketches or drawings involved) can be requested and evaluated at the EOI Stage. Fee proposals and Concept Design Proposals (if any) shall be requested only at tender stage.

ii. Scoring criteria are to be stated upfront clearly in the EOI document.

B) Tender Stage

2.6. Submission by tenderers. Each shortlisted single-disciplinary firm or MDT shall submit a Quality proposal and Fee proposal (including the Breakdown of Fees in Man-weeks and Man-week rates[1]) in two separate envelopes.

[1] Tenderers shall fill in and submit the Template for Breakdown of Manpower Deployment and Man-week Rates in excel document provided by the agencies.

2.7. Eligibility at Tender. Only shortlisted firms/MDTs are eligible to participate in tender.

2.8. Tender Evaluation.

2.8.1. Quality proposals would be first opened and the Quality scores computed and finalised, followed by the Fee proposals where Fee scores are computed and finalised.

2.8.2. The QFM score shall be the sum of Quality and Fee scores.

C) Tender Award

2.9. Award to highest QFM scorer. The firm or MDT with the highest QFM score shall be awarded the project. Agencies reserve the right not to award to the highest QFM scorer if it is a low outlier bid.

2.10. Feedback on tenderers' tender performance. After tender has been awarded, unsuccessful tenderers can submit a written request to the agencies to find out about their individual tender performance. This includes sharing with the tenderer:

a) the overall ranking based on QFM score;

b) the ranking based on overall Quality-score so that unsuccessful tenderer is aware of its relative performance compared to its competitors;

c) the areas for improvement; and

d) one-to-one feedback on its strengths and weaknesses.

D) Post Tender Award

2.11. Consultants' Performance Appraisal System (CPAS). Upon tender award, a Project Registration Report would be submitted by the agencies for subsequent consultants' performance appraisals. Please refer to **Annex A** for list of evaluation attributes that could be adopted by agencies to assess consultants' performance.

2.12. Bi-annual performance assessment[2]. Consultants' performances under CPAS are assessed by agencies on a six-monthly basis.

[2] More information on CPAS can be obtained at BCA website

3. QFM Scoring Methodology

GENERAL

3.1. The QFM score shall be derived from the summation of Quality and Fee scores. Please refer to Annex A for working examples.

QFM score =	**Quality score** (Q-score)	**+**	**Fee score** (F-score)

QUALITY SCORE

3.2. The Quality score shall be derived from the summation of Consultants' Performance score (CP-score) and other quality attributes:

Quality score (Q-score) =	**Consultants Performance score** (CP-score)	**+**	**Other Quality Attributes** (Q sub-score)

3.2.1. *Mandatory attribute: Consultants' Performance score*.

a) The CP-score shall be based on the overall consultants' performance scores derived from Consultants' Performance Appraisal System (CPAS) i.e. CPAS-score and/or agencies' in-house consultants' performance score. The CP-score shall have a minimum weightage of 10% out of the total QFM weightage.

b) Tenderers shall be awarded raw scores based on the rankings of tenderers past performance scores:

Ranking based on tenderers' CPAS scores	Points (assuming 10% weightage is assigned to past performance)
1st	10
2nd	7
3rd	5
4th	3
5th	1

c) For cases where less than two (i.e. only one or none) of the tenderers has consultant's performance score (e.g. because the tenderer has not completed any public sector projects before), all tenderers (including the tenderer that has consultant's past performance score) will have 0 point for the CP-score.

d) For cases where at least two of the tenderers have consultant's past performance score, those without a past performance score shall be given the average performance score across all conforming tenderers and accorded points after ranking.

3.2.2. *Other Quality attributes*. This is generally derived from the assessment of the other quality attributes which can include the following:

a) *Written Proposal*. It is a written outline of the firm's approach and understanding of agencies' project requirements and constraints but does not include any form of drawings or presentation (e.g. sketches or visuals with design solutions).

i. The written proposal shall be limited to two A4 sheets to minimise wastage of tendering efforts and resources by firms.

b) *Concept Design Proposal (for 2-stage QFM tenders only)*. Within the Quality component, the evaluation criterion on Concept Design Proposal is usually given significant Quality points.

Written Proposal and Concept Design Proposal could include evaluation of innovative proposals in the relevant key transformation areas under the Built Environment Transformation Map:

i. **Advanced Manufacturing & Assembly (AMA) / Construction productivity**. For example, adoption of Prefabricated Prefinished Volumetric Construction, Mass Engineered Timber, structural steel, mechanical & electrical (M&E) buildable design features, standardisation and any other proposed innovations to improve construction productivity,

ii. **Integrated Planning and Design (IPD)**. For example, proposed BIM team and its BIM capabilities and experience both at organisation and personnel level, pre-contract BIM Executive Plan (e.g a write-up on how the Consultants, together with the BIM team, intends to adopt BIM from the commencement of preliminary design through project completion),

iii. **Environmental Sustainability**. For example, considerations of passive design strategies,

iv. **Design for Maintainability (DfM)**. For example, improves building performance for long-term benefits

c) *Other quality attributes*. Other quality attributes could include but not limited to the following:

i. Firm's track records

ii. Relevant expertise, accreditation and experience of the proposed project team

iii. Awards attained by firm

3.3. The tenderer with the highest total raw points shall be given maximum Quality score (e.g. 70 points for a quality weightage of 70%). The Quality scores for the other tenderers shall be calculated proportionally to the highest total Quality points:

$$\textbf{Quality score (Q -score)} = \frac{\textbf{Tenderer's total Quality Points}}{\textbf{Highest total Quality Points among all tenderers}} \times \textbf{Quality weightage}$$

FEE SCORE

This section is <u>applicable for tenders with estimated construction cost of project above $50mil and all tenders of standalone consultancy services</u> (e.g. feasibility study that does not lead on to subsequent design and construction stage) and/or where the estimated construction cost of project has yet to be determined (e.g. demolition work)**.**

For consultancy tenders in which the estimated construction cost of project is <u>$50mil and below, the reduced fee score approach in Annex E applies instead of section 3.4 to 3.6 below</u>. Please refer to BCA's circular issued on 18 January 2024 for more information.

3.4. Tenderers shall quote for Fee proposals as specified in the tender documents, which could be one of the following.

a) By Percentage of final construction cost (%), or
b) By Lump Sum ($)

3.5. <u>Measures to reduce fee diving</u>. To discourage firms from quoting excessively low fees, the formula in 3.6.2b) shall be employed for the calculation of Fee score where there are fees which are more than 20% below of the average quoted ("perceived fee-diving"). Tenderers with fees which are more than 20% below the average shall be awarded no further advantage than the score awarded to the fee at 20% below the average ($F_{average}$).

3.6. <u>Fee score computation</u>.

3.6.1. *<u>Calculation of average Fee ($F_{average}$)</u>*. To prevent skewing of the average fee, outlier bids shall be excluded from the calculation of the average fee. Outlier bids are defined as bids that are more than 20% below (low outlier) or 50% above (high outlier) the average fee of all conforming bids. The steps to discard outlier bids in the calculation of $F_{average}$ are as below:

a) Exclude the outlier bid sequentially by first excluding any high outlier and computing the new average. After which, based on the new average, exclude any low outlier and compute the $F_{average}$.

b) Check that the number of outlier bids is less than half of the qualified bids. Otherwise, agencies shall disregard para 3.6.1 a) and consider all qualified bids in the calculation of $F_{average}$.

3.6.2. *Apply Fee-score formula*. The two fees formula to be adopted are as below:

a) Scenario A – Where the lowest fee quoted is higher than or equal to $0.8F_{average}$

$$\textbf{Fee score (F-score)} = \frac{\textbf{Lowest Proposed Fee}}{\textbf{Tenderer's Proposed Fee}} \times \textbf{Weightage}$$

b) Scenario B – Where there is perceived fee-diving i.e. the lowest fee quoted is lower than $0.8F_{average}$

$$\textbf{Fee score (F-score)} = \frac{\textbf{0.8}F_{\textbf{average}}}{\textbf{Tenderer's Proposed Fee}} \times \textbf{Weightage}$$

where, $$F_{average} = \frac{\sum \textbf{Proposed Fees of all Conforming Bids}}{\textbf{No. of Conforming Bids}}$$

Any fee quoted lower than 0.8Faverage will get the maximum F-score.

EVALUATING COLLABORATIVE BIDDING

3.7. The table below indicates the evaluation methodology for the various attributes when evaluating collaborative bids by firms i.e. a consortium of two or more PSPC firms of the same discipline which wish to tender for higher value projects under Collaborative Bidding.

QFM Components	QFM Attributes	Evaluation Methodology
Quality (Q)	Past performance i.e. CPAS scores	Take highest score amongst the firms within the consortium
	Firm's Track Record	
	Awards/Certifications	
	Expertise and experience of personnel	Assessed as one consortium
	Design Proposal/Approach	
Fee (F)	Fee Proposal	

Note: The above approach shall be applicable to other Joint Ventures arrangement between firms of same the same discipline

Annex A – Consultants' Performance Appraisal System

LIST OF SUGGESTED EVALUATION ATTRIBUTES.

Agencies can make the necessary adjustment based on the nature of their projects.

Feasibility Studies and Preliminary Design Stage

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDERATION WHEN ASSESSING
Technical Considerations	Quality of Study	Perform sufficient and well-planned site survey, investigation and consultation with authorities, government departments and stakeholders. Collect all relevant information and data, correct interpretation and make good use of information and data collected. Conduct detailed analysis taking into account the information and data collected.
	Quality of recommendations	Comply with development parameters, functional, economical, practical, sustainable, and well-balanced recommendations & deliverables which weight favourably among technical, costs, risks, environment, health and safety, public aspirations and other relevant factors. Put forward recommendations & deliverables and identify risk, constraints and development opportunities with proper judgement and constructive thoughts. Apply innovative ideas in the recommendations & deliverables to enhance quality, optimize costs, and minimize risks & impacts.
	Buildability	Fulfil requirements on buildability and constructability and strives towards higher productivity.
	Health and Safety	Design for safety. Provide adequate and effective mitigation measures to reduce health & safety hazards that may occur during construction, operation, maintenance and subsequent replacement. Conduct risk assessment and risk management of workplace.
Documentation	Quality of Report	Produce drawings, plans and figures which are legible and appealing to the readers. It should allow readers to visualize conceptual schemes proposed in the recommendations & deliverables. Clear reporting of progress and issues.
	Quality of Delivery	Deliver the report in a timely and professional manner including proper compilation, indexing and pagination of the documents.
Service Quality	Responsiveness	Respond quickly to the request and instructions of client.
	Senior Management Commitment	Senior management attending the meetings and giving their opinions.
	Communication	Provide regular programme updates. Establish and maintain good communication with the client, other consultants and relevant authorities.

Design Stage

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDERATION WHEN ASSESSING
Design Quality	Quality of Design (Arch, CS, ME)	Able to provide clear design as shown by minimal Request for Information (RFIs) by client and other parties. Achieve minimal Variation Orders or changes due to discrepancies in design.
	Technical Considerations	Able to identify and comply with client's requirements and meet project objectives. Explore comprehensively,creatively, and imaginatively alternatives and innovative schemes. Adopt Value Engineering approaches to improve design efficiency and enhance cost-effectiveness in design (i.e. Value for Money solutions). Provide design solutions which are compatible with the surrounding environment with further environmental enhancement. Avoid using materials harmful to the environment and people. Adopt renewable energy technology and energy efficient features as appropriate. Reduce usage of non-renewable resources and relate people with the natural environment.
	Buildability	Fulfil requirements on buildability and constructability and strives towards higher productivity.
	Health and Safety	Design for safety. Provide adequate and effective mitigation measures to reduce health & safety hazards that may occur during construction, operation, maintenance and subsequent replacement. Conduct risk assessment and risk management of workplace.
Documentation	Quality of Drawings	Produce drawings, plans and figures which are legible,appealing to the readers and allowing the readers to visualize conceptual schemes proposed in the recommendations & deliverables.
	Quality of Delivery	Deliver the drawings in a timely and professional manner including proper compilation and indexing of the drawings.
Service Quality	Responsiveness	Respond quickly to the request and instructions of client. Performed statutory submission and fulfil regulatory requirements in timely and effectively manner.
	Senior Management Commitment	Senior management attending the meetings and giving their opinions.
	Communication	Provide regular programme updates. Establish and maintain good communication with the client, other consultants and relevant authorities.

Tender Stage

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDERATION WHEN ASSESSING
Technical Consideration	Tender Preparation	Comply with tender publishing and assessment procedures, etc. Select the most suitable contract packaging arrangements and procurement approach for the works.
	Tender assessment	Provide sufficient & adequate attributes with proper scoring for the Quality portion in the tender evaluation approach. Provide adequate technical support in facilitating a thorough tender assessment. Construct thorough evaluation and sound recommendations with due regard to all relevant factors and considerations.
	Cost estimate / Reliability (For QS only)	Prepare accurate, appropriate, clear and comprehensive tender evaluation reports.
Documentation	Quality of Tender documents	The contract documents are well coordinated, thorough and consistent in its use of graphic symbols and terminology or supported with sufficient calculations, data, and report. Provide clear and straight forward writing style/presentation with adequate back-up.
	Quality of Delivery	Produce contract documents and drawings which are complete, adequate and comprehensive for the works with little/no addendum issued in a timely fashion. All comments and review requests adequately incorporated into the report/documents.
Service Quality	Responsiveness	Respond quickly to the request and instructions of client.
	Senior Management Commitment	Senior management attending the meetings and giving their opinions.
	Communication	Provide regular programme updates. Establish and maintain good communication with the client, other consultants and relevant authorities.

Construction Stage

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDERATION WHEN ASSESSING
Construction Supervision	Time Control / Progress	Develop realistic and adequate programme by substantiating the time allowed in major critical activities and appropriate allocation of floats in the programme. Provide timely, accurate, appropriate, clear and comprehensive drawings, manuals and other records efficiently and effectively for the timely completion of the works.Minimal Request for Information (RFI) initiated by the contractors. Effective and efficient project progress monitoring and control. Provide clear and accurate programme updates and progress reports, as appropriate in relation to the assignment and the project as a whole and Extension of Time claims.
	Cost Control / Budget	Effective and efficient project cost budget monitoring and control. Minimal Variation Orders (VOS) initiated by the consultant. Provide timely updates on the financial position including prompt valuation of variations and claims. Forecast forthcoming expenditure and keep the client/client's representative abreast of the financial position of the works contracts including the likely costs of major variations. Alert client/client's representative timely on the likelihood of the approved budgetary expenditure being exceeded due to e.g. variation and other commitments and provide the necessary information and support. Prompt and fair and detailed assessment of contractor's claims and timely determination of the claims in accordance to the contract (including reasons for acceptance or rejections of claims) and prevailing Acts & Regulations. Keep the client/client's representative abreast of contractor's monetary and Extension of Time claims and the progress in the handling of the claims.
		Keep the client/client's representative well informed of progress & quality of works, milestone events and any latest development. Accurate and expeditious certification of payments.
	Management of site staff	Deploy sufficient and adequate site staff (in terms of qualifications and experience) for different construction stages to ensure proper supervision throughout the construction period. Implement effective site staff management plans. Effective management of the contractor in the aspects of its manpower, construction approach, project management and planning.
	Problem solving/ avoidance ability	Ability to anticipate, handle and resolve site problems. Capability in identifying potential problems to minimize future problems from happening.
	Safety and Health management	Take all necessary mitigation measures and follow-up actions promptly to ensure the quality, health & safety and environmental friendliness of the works and reduce health & safety hazards throughout the construction period. Conduct risk assessment and risk management of workplace.

Construction Stage (cont')

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDERATION WHEN ASSESSING
Documentation	As-built Drawings	Drawings which are complete, adequate and comprehensive for the works.
	Documentations required for TOP/CSC	The necessary ground works to obtain TOP/CSC have been done and the application/submission process is smooth.
	Quality of progress report	Clear and comprehensive reporting of progress and issues.
Service Quality	Responsiveness	Respond quickly to the request and instructions of client.
	Senior Management Commitment	Senior management attending the meetings. Senior management giving their opinions.
	Communication	Provide regular programme updates. Establish and maintain good communication with the client. Establish and maintain good communication with other consultants. Establish and maintain good communication with the contractors.
	Governance* **(mandatory attribute)**	Timely issuance of final accounts. Timely approval obtained for commencement of variation works. Proper cost reasonableness assessment of variation's star rate items.

* These are mandatory attributes when evaluating consultants' project performance.

Post-Construction Stage

3 BROAD ASSESSMENT CRITERIA	EVALUATION ATTRIBUTE	GUIDELINES FOR EACH EVALUATION ATTRIBUTE FOR CONSDER ATION WHEN ASSESSING
Maintenance	Defects Inspection	Develop inspection programme setting out the areas, periods and procedures of inspection.
		Perform proper inspection in accordance to the procedures set out.
	Defects Rectification	Monitor closely and ensure defects are properly rectified.
		Minimal re-occurrence of defects.
Documentation	Quality of defects rectification records	Clear reporting of defects rectification, progress and issues. Records are updated with accurate, clear and comprehensive provision of sketches, drawings and other documents.
	Settlement of outstanding claims	Keep the client/client's representative abreast of contractor's monetary and Extension of Time claims and the progress in the handling of the claims. Prompt, fair and detailed assessment of contractor's claims and timely determination of the claims in accordance to the contract (including reasons for acceptance or rejections of claims) and prevailing Acts & Regulations.
	Settlement of final account	Accurate, fair and expeditious preparation, settlement and certification of final accounts.
Service Quality	Responsiveness	Responding quickly to the request and instructions of client.
	Senior Management Commitment	Senior management attending the meetings. Senior management giving their opinions.
	Communication	Provide regular programme updates. Establish and maintain good communication with the client. Establish and maintain good communication with other consultants. Establish and maintain good communication with the contractors.
	Governance* **(mandatory attribute)**	Timely issuance of final accounts. Timely approval obtained for commencement of variation works. Proper cost reasonableness assessment of variation's star rate items.

* These are mandatory attributes when evaluating consultants' project performance.

Annex B – Frequently Asked Questions

Q1. Can a firm currently not listed on the PSPC participate in an Expression of Interest (EOI) for a consultancy tender?

A1. Firms which are not on the PSPC should apply to get listed on the PSPC in order to participate in public tenders.

For issues on PSPC listing, please check with BCA at bca_pspc@bca.gov.sg.

Q2. Where can I view my CPAS-scores?

A2. Consultants' CPAS scores can be obtained via PSPC login accounts.

Annex C – Illustration of QFM Scoring Methodology

Example 1a - Scoring of Single-discipline (Architectural) QFM tender

QFM Configuration: Quality (Q): Fee (F) = 80: 20, with consultants' performance weightage at 10% of overall QFM weightage

Fee proposal: Proportion of final construction cost (%)

Scenario: There are 5 conforming bids and less than half are outlier bids

		Tenderer A	Tenderer B	Tenderer C	Tenderer D	Tenderer E
Quality	CPAS score (out of 100)	55.20	64.00	75.10	45.0	67.80
	CPAS rank	4th	3rd	1st	5th	2nd
	CP-score (assigned, out of 10)	**3**	**5**	**10**	**1**	**7**
	$Q_{sub\text{-}score}$ (scored, out of 70)	**54**	**58**	**64**	**46**	**55**
	Q-score (out of 80)	**57**	**63**	**74**	**47**	**62**
	Normalised Q-score (80%)	**61.62**	**68.11**	**80**	**50.81**	**67.03**
Fee	F (%)	2.12	2.69	1.9	2.97	2.50
	Average of all qualified bids	2.43				
	Check high outlier bids	-	-	-	-	-
	Check low outlier bids	-	-	outlier	-	-
	$F_{average}$	5 qualified bids and less than half are outlier bids. Hence, to exclude outlier in $F_{average}$ computation $F_{average}$ = (2.12 + 2.69 + 2.97 + 2.50) / 4 = 2.57 $0.8F_{average}$ = 0.8*2.57 = 2.056				
	F-score (20%) Use fee formula 2	**19.40**	**15.29**	**20.00**	**13.85**	**16.45**
Total QFM score (Q-score + F-score) (100%)		**81.02**	**83.40**	**100**	**64.66**	**83.48**
Overall ranking		**4**	**3**	**1^**	**5**	**2**

Example 1b

Using the same example in 1a, except that at least half of the qualified bids are outlier bids

			Tenderer A	Tenderer B	Tenderer C	Tenderer D	Tenderer E
Fee	F	(%)	1.30	2.69	1.44	2.97	4.50
	Average of all qualified bids		2.58				
	Check high outlier bids		-	-	-	-	outlier
	Average of remaining qualified bids		(1.30 + 2.69 + 1.44 + 2.97) / 4 = 2.10				
	Check low outlier bids		outlier	-	outlier	-	-
	$F_{average}$		5 qualified bids and at least half are outlier bids. Hence, to include all qualified bids in $F_{average}$ computation $F_{average}$ = 2.58 $0.8F_{average}$ = 0.8*2.58 = 2.064				
	F-score **Use fee formula 2**	**(20pts)**	**20.00**	**15.35**	**20.00**	**13.90**	**9.17**

Example 1c

Using the same example in 1a, except that there are no low outlier bids

			Tenderer A	Tenderer B	Tenderer C	Tenderer D	Tenderer E
Fee	F	(%)	2.20	2.69	2.60	2.75	4.50
	Average of all qualified bids		2.95				
	Check high outlier bids		-	-	-	-	outlier
	Average of remaining qualified bids		(2.20 + 2.69 + 2.60 + 2.75) / 4 = 2.56				
	Check low outlier bids		-	-	-	-	-
	$F_{average}$		5 qualified bids and less than than half are outlier bids. Fee formula 1 shall apply since lowest quoted fee is higher than or equal to 0.8Faverage.				
	F-score **Use fee formula 1**	**(20pts)**	**20.00**	**16.36**	**16.92**	**16.00**	**9.78**

Fee-score computation template

Example 2 – Scoring of Multi-Discipline QFM tender

QFM Configuration: Quality (Q): Fee (F) = 80: 20, with consultants' performance weightage at 10% of overall QFM weightage

Discipline: Architectural, C&S and M&E Engineering and Quantity Surveying (MDT)

Note:

- The QFM scoring methodology for an MDT primarily follows that of a Single-Disciplinary tender as shown in example 1a where the evaluation is done on each discipline
- The QFM score for the MDT shall be derived by factoring the respective weightage [1] of each discipline within the MDT, as illustrated in example below

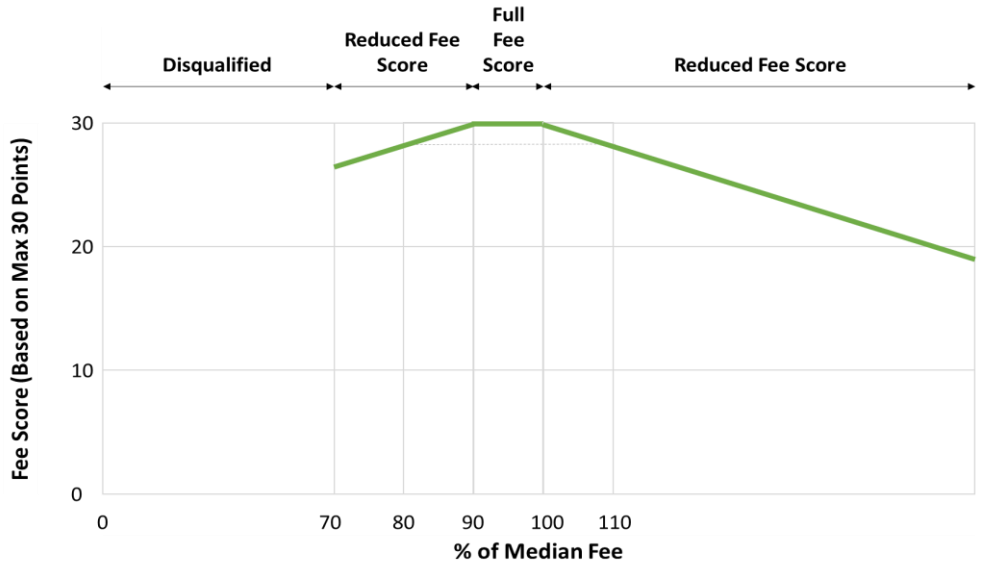
			MDT members	**AR**	**CS**	**ME**	**QS**
Weightage across each discipline within the MDT [1]				**40%**	**30%**	**20%**	**10%**
Quality	CP-score	(min 10%)		10%	10%	10%	10%
	$Q_{sub\text{-}score}$ [2]	(70%)		70%	70%	70%	70%
	Total Q-score weightage			**80%**	**80%**	**80%**	**80%**
Fee	**Total F-score weightage**			**20%**			
Total QFM Weightage (per discipline)				100%	100%	100%	100%
Normalised QFM score (per discipline)				**QFM_{AR}** =score/100*100	**QFM_{CS}** =score/100*100	**QFM_{ME}** =score/100*100	**QFM_{QS}** =score/100*100
Total QFM score (MDT)				**$40\%*QFM_{AR} + 30\%*QFM_{CS} + 20\%*QFM_{ME} + 10\%*QFM_{QS}$**			

Annex D - Pilot Reduced Fee Score

1 All consultancy QFM tenders in which the estimated construction cost of project is <u>$50mil and below</u> are required to adopt the pilot reduced fee score approach when deriving the Fee Score.

2 The Fee Score is computed as follows (with graphical illustration below):

Where a tenderer's bid is …	Tenderers will …
a) ≥ 90% and ≤ 100% of the median fee to the median fee	receive Full Fee Score
b) ⩾ 70% and < 90% of the median fee	receive Reduced Fee Score, using formula below: <u>Formula 1</br> $Maximum\ Fee\ Score \times [1 - \frac{2}{3}\left(0.9 - \frac{Tenderer's\ bid}{Median\ fee}\right)]$
c) > median fee	receive Reduced Fee Score, using formula below: <u>Formula 2</br> $Maximum\ Fee\ Score \times [1 + \frac{2}{3}\left(1 - \frac{Tenderer's\ bid}{Median\ fee}\right)]$ Lowest Fee Score is 0.
d) < 70% of median fee	be disqualified, unless: i. GPE receives three or less bids; ii. Low outlier bid has the highest quality score If tenderer meets any of the conditions above, Fee Score should be calculated using Formula 1 in (b).



3 Worked example for fee-score computation:

QFM Configuration: Quality (Q): Fee (F) = 80: 20

			Tenderer A	Tenderer B	Tenderer C	Tenderer D	Tenderer E
Fee	F	(%)	2.5	2.10	2.00	1.78	1.38
	Median bid		2.00				
	Percentage of bid out of median bid		125%	105%	100%	89%	69%
	Refer to Annex E for formula		Reduced Score (Formula 2)	Reduced Score (Formula 2)	Full Score	Reduced Score (Formula 1)	Disqualified
	F-score	**(20%)**	**16.67**	**19.33**	**20**	**19.87**	**-**

4 Worked examples of derivation of median fee for fee-score computation where there are less than 5 tenderers:

Tenderers	Tenderers fee (%)	Number of shortlisted tenderers is …		
		4 (A to D)	**3 (A to C)**	**2 (A &B)**
A	2.50	**median fee = 2.00 + 2.10 = <u>2.05</u>**	**median fee = <u>2.10</u>**	**median fee = 2.50 + 2.10 = <u>2.30</u>**
B	2.10			
C	2.00			
D	1.78			

<u>Fee-score computation template</u>

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QUALITY FEE METHOD FRAMEWORK