



## BCA Quality Mark Scheme



### Guide on Quality Mark Scheme

#### **Application & Pre-Assessment**

1. Applicants are advised to apply early, preferably together with the CONQUAS application for a project. This is to ensure that assessments on key processes highlighted under item 2 are adequately covered.
2. Enclose project's approved method statement on the following key processes together with the completed application form:
  - a) Waterproofing work to bathrooms in the unit;
  - b) Stone/tiling installation work in the unit;
  - c) Parquet/timber installation work in the unit;
  - d) Window installation work in the unit.
3. Developer/Contractor are encouraged to send the project team for the CONQUAS training workshop (1-day course at BCA Academy) to better equip them with knowledge on the standard and scoring system.

#### **Assessment**

##### **In-Process Inspection**

1. Random in-process check on the following 4 trades will be carried out during the construction stage of the project:
  - a) Waterproofing works to bathrooms
  - b) Stone/tiling installation works
  - c) Timber flooring installation
  - d) Window installation
2. The entire process for the above-mentioned trades will be verified by BCA against the submitted approved method statements and also compared against BCA's good industry practice guides. Arrangement for the in-process inspection can be made through the CQM on-line system at <http://www.bca.gov.sg/cqmonline/>.
3. A report on the observations arising from the review of the submitted approved method statements and the random in-process site verification will be given to the project team upon completion of each session.

#### **Waterponding Test**

##### **1. Bathrooms within unit**

- a) All residential units will be subjected to waterponding test (bathrooms only).
- b) All the bathrooms found within the residential units are to be ponded at least 24 hours on the completed bathroom flooring (with final finish in place).
- c) The joints between the floor tiles and floor trap cover or discharge outlet must be exposed to the waterponding test. Only the perforated areas are to be sealed. The entire floor should be flooded to a minimum of 25mm of water as measured from the highest point of the area.
- d) BCA assessors will verify whether there are any leakages at the immediate unit below the ponded unit.
- e) If the false ceilings for the bathrooms are already installed during assessment, please arrange to remove the access panel and provide proper access to the false ceiling opening together with torchlight to facilitate the assessment.

## 2. Roof above residential units, Planter Box and/or Space that span over the living and/or bedrooms

1. All RC roofs above the residential units, planter box and/or space that are located above the living and/or bedrooms will be subjected to waterponding test.
2. The ponding duration should be at least 24 hours, on the finished flooring.
3. Units detected with leakages will have to be re-assessed.
4. A method statement on the waterponding test providing details on method of ponding & sealing of all floor openings is to be submitted to BCA at least 2 weeks before the actual ponding test.

### Internal Finish Assessment

1. Assessment will cover **all** locations of the unit but excludes household shelters.
2. Project is to provide the unit layout plan for all units prepared/scheduled for assessment.
3. Assessment is based on objective criteria as set out in the CONQUAS manual on workmanship standards for internal finish.
4. Ensure water and electricity supply including the air-condition is turned on in each unit to facilitate assessment. The water supply is to enable the assessors to visually check for any leakages in the plumbing and sanitary pipes & fittings. The electrical supply has to be turned on to enable the assessors to determine whether the wirings in the electrical sockets are correctly wired using socket tester. The air-conditioning has to be turned on (at least 1 hour before assessment) to enable the assessors to determine whether it is functionally working and also ensure there are no leakages.
5. Units are to be ready prior to the scheduled time of assessment.
6. Ensure all protective provision made to easily damaged architectural items such as doors, iron mongeries, windows, wardrobe, cabinets and fan coil units etc are removed prior to assessment by BCA.
7. The presence of the developer's site representative during assessment is required.
8. Unit that fails to meet the minimum threshold score set by BCA are allow re-score opportunities. Defects are to be rectified before arranging for the re-score.
9. Provide access to units with major defects for follow-up verification by BCA on the status of these defects. This applies to units that meet the minimum internal finish unit score stipulated by BCA for the issue of the Quality Mark certificate. Major defects are largely classified as defects that would generally not be acceptable to homeowners. Examples are as follow:
  - a) Any missing/broken accessories for the architectural items assessed (not informed prior to assessment).
  - b) Any cracked/chipped/broken window panes, shower screens, mirrors and any glass items.
  - c) Any visually visible cracked tiles/stones, timber doors & floorings, ceiling boards and cracks on painted walls etc.
  - d) Functionally deficient doors, windows, wardrobes and cabinets, tap, water closet, switches etc.
  - e) Fan coil unit leaking; water seepage through walls or windows etc.
  - f) Misaligned door frame - only for cases where verticality tolerance > 3mm per door frame height.
10. Units that are selected for window watertightness test under CONQUAS and failed will have to be re-tested.



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### 11.\*Weightage for QM Assessment:

Architectural Item	Weightage (%)	Defect Category	Defect Weightage
			CONQUAS 9 <sup>th</sup> Edition / CONQUAS 2019
1.Floor	24	Finishing	7.2
		Alignment & Evenness	4.2
		Crack & Damages	7.2
		Hollowness	3
		Jointing	2.4
2.Internal Wall	15	Finishing	3.75
		Alignment & Evenness	1.8
		Crack & Damages	6.75
		Hollowness	1.5
		Jointing	1.2
3.Ceiling	15	Finishing	3.0
		Alignment & Evenness	3.0
		Crack & Damages	4.5
		Roughness	3.75
		Jointing	0.75
4.Door	12	Joints & Gap	1.2
		Alignment & Evenness	1.2
		Material & Damages	3.0
		Functionality	3.6
		Accessories Defects	3.0
5.Window	12	Joints & Gap	1.2
		Alignment & Evenness	1.2
		Material & Damages	3.0
		Functionality	4.8
		Accessories Defects	1.8
6.Component	11	Joints & Gap	1.1
		Alignment & Evenness	2.2
		Material & Damages	4.4
		Functionality	1.65
		Accessories Defects	1.65
7.M&E Fittings	11	Joints & Gap	1.1
		Alignment & Evenness	1.1
		Material & Damages	3.3
		Functionality	4.4
		Accessories Defects	1.1
Total	100		

\*Subject to change

**CONQUAS Internal finish and Internal Wet Area Scoring**

1. All the units in the residential development will be considered for the CONQUAS internal finish scoring. Likewise, all toilets and bathrooms that are subjected to the waterponding test will be considered for the CONQUAS wet areas watertightness scoring. This provides an actual representation on the internal finish quality and internal wet area integrity of the project.

**QM Tiered Rating System**

1. The tiered rating system provides recognition to developers and builders that achieve quality excellence beyond the minimum requirements.

Performance criteria for award of “Star”, “Excellent” and “Merit” ratings are as follows:

Applicable to QM projects with construction tender called from 1 <sup>st</sup> June 2020			
QM Tiered Rating	Average QM Unit Score*	Waterponding Test Passing Rate**	Window Water-Tightness Test Passing Rate*** (Based on CONQUAS sampling)
<b>Star</b>	92 Points and above	100%	100%
<b>Excellent</b>	90 to < 92 Points	99% and above	99% and above
<b>Merit</b>	85 to < 90 Points	98% and above	98% and above
Applicable to QM projects with construction tender called before 1 <sup>st</sup> June 2020			
<b>Star</b>	85 Points and above	100%	NA
<b>Excellent</b>	83 to < 85 Points	99% and above	NA
<b>Merit</b>	80 to < 83 Points	98% and above	NA

- i. \*Based on initial assessment results of all locations (include balconies/private enclosed spaces) within all the dwelling units of the entire project.
- ii. \*\*Based on initial assessment results of bathrooms/toilets in all the dwelling units of the entire project.
- iii. \*\*\*Based on initial assessment results of CONQUAS sampling.
- iv. A unit is deemed to have met the wet area waterponding test requirement only if all the toilets/bathrooms within the unit and roofs/wet areas located directly above the unit cleared the initial wet area waterponding tests.
- v. A Project's QM tiered rating may be downgraded if there is/are valid complaint(s) on major workmanship defects received by BCA e.g. window/wall seepage, interfloor leakages, functionally deficient doors/windows etc.



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### Request for Assessment

1. Arrangement for Quality Mark assessment can be made through the CQM on-line system at <http://www.bca.gov.sg/qcdcqmonline/>. The respective blocks and unit nos. that are ready for assessment must be stated in the request, failing which, request will be rejected. Bookings open on every Tuesday 08:00 hrs to Wednesday 23:59 hrs and all requests should reach BCA by every Wednesday of the week; one week before the assessment.
2. In order to better manage the assessment schedule, projects are requested not to over-book assessments but rather book schedules that reflect the actual units that are ready for assessment.
3. Projects that do not fulfill the requested numbers of units to be assessed or cancel any assessment more than twice in a week, shall be accorded a lower priority in the scheduling when they request for subsequent QM assessments.

### Post Assessment

1. Applicants are required to provide feedback on homeowners' concern pertaining to internal finish defects found within the units during the defects liability period. These data will enable BCA to determine the areas of concern and fine-tune the corresponding weightages so that the scoring system continues to effectively address homeowners' expectation.

### Contact Number

Queries on Quality Mark Assessment	Linn Naing Win – 6730 4488 (linn_naing_win@bca.gov.sg)
In Process Check - Waterproofing & Window Installation, Marble, Tiling & Timber Flooring	Ken Ho – 6730 4496 (ken_ho@bca.gov.sg)