BCA Construction Quality Assessment System

CONQUAS® (Private Residential)

20 April 2026

CONQUAS®

THE BCA

CONSTRUCTION QUALITY ASSESSMENT SYSTEM

20 April 2026

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1.0 INTRODUCTION

Construction Quality Assessment System **(CONQUAS)** Private Residential is now the twelfth edition of the CONQUAS assessment scheme after more than 35 years of implementation.

1.1 Objectives of CONQUAS

The Building and Construction Authority (BCA) developed the CONQUAS in conjunction with major public sector agencies and various leading industry professional bodies, organisations and firms to measure the quality level achieved in a completed building project.

CONQUAS was designed with three objectives:

(a) To have a standard quality assessment system for new building projects.
(b) To make quality assessment objective by:
- measuring constructed works against workmanship standards and specifications; and
- using a sampling approach to suitably represent the whole project.

(c) To enable quality assessment to be carried out systematically within reasonable cost and time.

CONQUAS is an independent assessment. Unless specified in the building contract, project engineers or architects should not use CONQUAS to decide if the building or parts of the building project are acceptable. CONQUAS covers most aspects of general building architectural works and assessments shall be completed prior to application for Temporary Occupation Permit or Certificate of Statutory Completion inspection, whichever comes first.

1.2 Scope of CONQUAS (Private Residential)

CONQUAS (Private Residential) is specifically for private residential projects and the residential component of private mixed development projects. It places greater emphasis on major defects that impact functionality and liveability while maintaining balance between construction productivity and quality.

It also aims to provide a greater differentiation (by banding) in CONQUAS performance between projects/developers/builders.

The key enhancements of CONQUAS (Private Residential) from earlier editions are as follows:

Calibration of Project CONQUAS performance:

a. **New scoring methodology** with pre-requisites on critical tests, to provide greater differentiation (by banding) between projects' CONQUAS performances
b. **Higher passing rate of windows water-tightness test** to 10% non-compliance (from current 15%)
c. **Revised weightages of the assessment components** with greater emphasis on functional tests that affects liveability
d. **Revised classification of** major defects to place greater emphasis on areas with greater impact on homeowners in terms of liveability and functionality

Streamlined CONQUAS assessments:

e. **Streamlined Internal Finishes defects categories** by minimising checks on areas that have insignificant impact on functionality and liveability e.g. removable stains, floor tonality etc
f. **Removed Installation Method Verification** assessments to streamline assessment process

1.3 Development of CONQUAS (Private Residential)

CONQUAS (Private Residential) was co-developed by developers, consultants, builders and BCA.

During development, we refined the weightages and assessment standards by considering feedback from multiple sources: feedback and survey findings from homeowners, reported defect during the Defect Liability Period (DLP) and BCA's past CONQUAS assessment data. Extensive studies and numerous trials were also conducted to fine-tune the new assessment standards.

CONQUAS (Private Residential) focuses on addressing critical workmanship-related issues that impact liveability and functionality, whilst maintaining a balance between construction productivity and quality.

2.0 CONQUAS (Private Residential)

2.1 Components to be assessed

The CONQUAS assessment is divided into three main components –

(a) Internal Finishes,
(b) Functional Tests, and
(c) External Finishes

Each component is further divided into different items for assessment. However, the assessment excludes works such as piling, heavy foundation and sub-structure works which are heavily equipment-based, buried or covered and usually called under separate contracts or sub-contracts. Design, choice of materials and end users' aesthetic preferences are also excluded from the assessment.

The building is assessed primarily on workmanship standards achieved through factory and site inspection. For projects using Design for Manufacturing and Assembly (DfMA) technologies, assessments will be done throughout the construction process with some of the Functional Tests carried out in the factory.

The assessment on the functional performance of selected services and installations help to safeguard the interest of homeowners in relation to liveability, comfort and defects which surface only after some time.

(a) Internal Finishes

Internal finishes assessment deals mainly with the finishes and components. This is the part where the quality and standard of workmanship are most visible. The assessment covers:

(i) architectural finishes, which include floors, internal walls, ceiling, doors, windows and components. Components include permanent internal fixtures (such as wardrobe, kitchen cabinet, vanity top, mirror, bathtub, water closet, shower screen, basin etc.), and permanent external fixtures (such as signage, railings, unit number plates, lift fittings, letter box, lighting, metal gate, etc.).

(ii) basic M&E fittings, which include taps and mixers, WC, floor traps, electrical switches, trunkings, fan coil unit, air-con diffuser, light fittings, CCTV camera, shower head, etc. At the lift lobby, lift display and call-button panels are checked as M&E basic fittings.

The quality standards for Internal Finishes are given in **Appendix 1**.

(b) Functional Tests

Functional tests include checks on window, wet area water-tightness and water flow tests at common areas as well as QP's declaration on the results for 100% EN 14179-2 heat soak test for tempered glass (including laminated tempered glass) and Pull-Off-Test for Internal Wall Tiles. For projects that adopt PPVC, a maximum of 30% of the total window water-tightness test samples and 20% of the total wet area water tightness test samples could be carried out in the factory.

(c) External Finishes

External Finishes assessment covers the roofs, external walls and external works at the completion stage of the building.

2.2 The Weightages

The weightages allocation for Internal Finishes, Functional Tests, External Finishes are as follows:

Components	Weightages
Internal Finishes (IF)	40%
Functional Tests (FT)	40%
External Finishes (EF)	20%

2.3 Sampling

As it is resource intensive to assess all elements in a building, CONQUAS uses a sampling system for the assessment. The sampling system, which is based on the gross floor area of the building, will ensure that the assessment adequately represents the entire building.

The assessment is based on the sampling guidelines table as set out below:

Sampling Guidelines Table					
	Items	**GFA per Sample**	**Min Sample**	**Max Sample**	**Remarks**
1	Internal Finishes	70 m^2	90	800	For all private residential project & mixed development project with residential component
1a	Internal Finishes (Tier 2a)	-	90	1,440	50% Sampling (50% coverage for all units): Max Principal samples: 640 Max Service samples: 640 Max Circulation samples: 160
1b	Internal Finishes (Tier 2b)	-	90	2,160	100% Sampling (100% coverage for all units): Max Principal samples: 1000 Max Service samples: 1000 Max Circulation samples: 160
2	External Wall	-	100%	-	100% of the blocks or units
3	External Work	-	1	-	1 for each type of external work
4	Roof	-	50%	-	Minimum 50% of the blocks or units
5	Field Window Water-tightness Test (WTT)	-	20	100	Conducted by BCA. A sample is defined as 2m length of joint. 5% of total number of window panels or 5% of total curtain wall area, whichever is applicable For PPVC project, maximum 30% of the test samples could be from factory

5a	Field Window Water-tightness Test (WTT) (Tier 2a)	-	40	200	50% Sampling 10% of total number of window panels or 10% of total curtain wall area, whichever is applicable For PPVC project, maximum 30% of the test samples could be from factory For all private residential project & mixed development project with residential component
5b	Field Window Water-tightness Test (WTT) (Tier 2b & Tier 3)	-	40	200	100% Sampling 20% of total number of window panels or 20% of total curtain wall area, whichever is applicable For PPVC project, maximum 30% of the test samples could be from factory For all private residential project & mixed development project with residential component
5c	Field Window Water-tightness Self-Test (WTT)	-	25%	-	Self-Testing with declaration by project Qualified Person
6	Wet Area Water-tightness Test (WPT)	-	60	300	Conducted by BCA: Residential projects: • 30% of all bathrooms and/or toilets (by location) • all will be tested if less than the minimum sample (for all projects) For PPVC project, maximum 20% of the test samples could be from factory

6a	Wet Area Water-tightness Test (WPT) (Tier 2a)	-	100	600	50% Sampling (50% of all bathrooms and/or toilets): Based on number of bathrooms and/or toilets For PPVC project, maximum 20% of the test samples could be from factory For all private residential project & mixed development project with residential component All will be tested if less than the minimum sample
6b	Wet Area Water-tightness Test (WPT) (Tier 2b)	-	120	1000	100% Sampling (100% coverage for all units): Based on number of bathrooms and/or toilets For PPVC project, maximum 20% of the test samples could be from factory For all private residential project & mixed development project with residential component All will be tested if less than the minimum sample
6c	Wet Area Water-tightness Self-Test (WPT)		100%		• Self-Testing with declaration by project Qualified Person • Including flat roof
7	Pull-Off-Test for Internal Wall tiles	10,000 m^2	1 set	5 sets	• 5 tiles per set (by location) • Self-Testing with declaration by project Qualified Person

8	Water Flow Test for dwelling unit corridor, lift lobbies, footpaths, exposed walkway in carpark and basement carpark	1,500 m^2	10	70	For all private residential project & mixed development project with residential component Sample distribution between internal and external areas at 70%:30% Maximum 10m length for unit corridor, footpath, exposed walkway, driveway in basement carpark per sample Not more than 3 carpark lots per sample in basement carpark Each lift lobby = 1 sample
9	100% EN 14179-2 Heat Soak Test for tempered glass used at balcony, roof canopy and shower screen (Self-Testing) + 3-year warranty for all glasses	-	100%	-	For all private residential project & mixed development project with residential component • Self-Testing with declaration by project Qualified Person • The 3-year warranty for all glasses to start from date of DLP commencement

A location for **internal finishes** assessment is a functional space of a building such as a room, hall, toilet, kitchen, yard, corridor or lobby. Locations are further categorised into three types:

- **Principal locations** are major functional places such as halls and rooms.
- **Circulation locations** include lift lobbies, corridors and staircases.
- **Service locations** are utility areas such as toilets, kitchens, balconies and yards.

The computed number of locations will be distributed according to "Principal", "Circulation" and "Service" based on the percentages set out for private residential development as follows:

Locations	Internal Finish sample Distribution
Principal	40%
Service	40%
Circulation	20%

In general, any item which is not available in a project will not be considered for project banding computation. For such case, the result will be pro-rated accordingly. However, any available item that is not offered for assessment will be considered as non-compliance (NC).

An item under assessment will be considered as NC if it does not meet the standards. In addition, any item found to be defective functionally such as evidence of water seepage in the window, wall, slab, ceiling or roof, is considered to have failed the assessment. Likewise, for a particular defect that is found excessive in an item (e.g. excessive cracks on a wall).

For the assessment of the **roof**, a minimum 50% of the total number of buildings will be assessed. For the assessment of **external walls,** 100% of the total number of buildings will be assessed. For a building, the external wall will be divided into 4 walls for assessment.

The External Works assessment consists of the following locations:

(a)	Link-way / Shelter	- 10m length section per sample and minimum 2 samples
(b)	Apron & Drain	- 10m length section per sample and minimum 2 samples
(c)	Roadwork & Carpark	- 10m length section per sample and minimum 1 sample
(d)	Footpaths & Turfing	- 10m length section per sample and minimum 2 samples
(e)	Playground	- 1 location
(f)	Court	- 1 location
(g)	Fencing & Gate	- 10m length section per sample and minimum 1 sample
(h)	Swimming Pool	- 10m length section per sample and minimum 1 sample
(i)	Club House	- 1 location
(j)	Guard House	- 1 location
(k)	Electrical Substation	- 1 location
(l)	Suspended Swimming Pool – 1 location	

Each item in the **External Works** will be assessed separately and all the locations listed above must be assessed where applicable.

Under the functional tests, self-test items like field window water-tightness test for 25% of windows and 100% wet area water-tightness test (including flat roof) are set as pre-requisites and based on declaration by the project Qualified Person (QP).

3.0 THE ASSESSMENT

3.1 Assessment Approach

In general, the Assessor would select the actual locations to be assessed prior to each assessment. Selection of samples shall be based on drawings and location plans. The samples shall be distributed as uniformly as possible throughout the construction stages.

The assessment will be done on the works that are inspected for the first time. Rectification and correction carried out after the assessment will not be used to adjust the original result. The objective of this practice is to encourage contractors ***"doing things right the first time".***

When an assessed item does not comply with the corresponding CONQUAS standards, it is considered failed, and an "**X**" will be noted in the assessment form. Likewise, a "✓" is given for an item meeting the standards. A "**blank**" will indicate that the item is not applicable. The non-compliance (NCs) rate is computed based on the number of "**X**" over the total applicable number of NCs.

3.2 Assessment

Assessment should be carried out upon completion of the building and before handing over of the project to the owner. The functional tests would be carried out at progressive stages of the construction.

The CONQUAS assessment is divided into three main components –

(a) Internal Finishes,
(b) Functional Tests, and
(c) External Finishes

(a) Internal Finishes

The assessment of Internal Finishes categorises defects into three distinct areas namely Finishings, Functionality and Liveability. These categories distinguish minor ("1X") and major defects ("2X" and "3X") based on their severity and impact on functionality and liveability. Builders are required to rectify major defects and declare completion of rectification through QP. BCA reserves the right to audit the rectification work.

- Finishings ("1X") refers to minor or superficial defects that do not significantly impact user's functionality or liveability
- Functionality ("2X") refers to defects that impact the functionality i.e. usability or inconvenience user
- Liveability ("3X") refers to defects that impact user's liveability i.e. fit for living

The NC weightages for the internal finishes and M&E fittings assessment of Private Residential projects allocated at the defect level are as follows:

Element	Categories	NC weightages	List of Defects (Non-exhaustive)
Floor	Finishings	1X	Stains, Alignment, Jointing, Damages - Scratches, dents, chips
	Functionality / Liveability	2X	Unevenness (> 6mm/1.2m), Hollowness (for tiled floor as long as it is hollow)
		3X	Damages-Cracks, Open veins felt with hand (>0.5mm width and >100mm length), Chipped timber, Delamination (≥1 spot on timber finishing), Lippage for tiled floors
Wall	Finishings	1X	Cracks on plastered walls, Patchy/roughness, Alignment, Jointing, Damages - Scratches, dents, chips
	Functionality / Liveability	2X	Unevenness (>6mm/1.2m), Squareness (>8mm over 300mm), Hollowness (for tiled wall as long as it is hollow)
		3X	Damages - Visible cracks on finished walls OR open veins felt with hand (>0.5mm width and >100mm length), Delamination (≥1 spot on timber finishing)
Ceiling	Finishings	1X	Stains, Patchy/roughness, Jointing, Damages - Hairline cracks on plastered ceiling, chips, dents, scratches
	Functionality / Liveability	3X	Damages - Cracked ceiling board (>0.5mm width and 100m length)
Door	Finishings	1X	Inconsistent joints/gaps, Damages - Scratches, dents, chips
	Functionality / Liveability	2X	Fitting - movement, difficulty in open/closing, loose, functionally deficient
		3X	Misalignment & unevenness (>3mm/m or 1.2m spirit level), Damages - Cracked timber door leaf/frame, Accessories Defects - Missing/broken/improper fixing of accessories, corroded accessories etc
Window	Finishings	1X	Inconsistent joints/gaps, Damages - Scratches, dents
	Functionality / Liveability	2X	Fitting - movement, difficulty in open/closing, loose, functionally deficient
		3X	Damages - Cracked/chipped frame, cracked/chipped/ broken windowpanes, Accessories Defects - Missing/broken/improper fixing of accessories, corroded accessories etc

Element	Categories	NC weightages	List of Defects (Non-exhaustive)
Component	Finishings	1X	Inconsistent joints/gaps, Unevenness, Tonality, Misalignment, Damages - Scratches, dents,
	Functionality / Liveability	2X	Fitting - movement, difficulty in open/closing, loose, functionally deficient
		3X	Damages - Cracked sanitary ware, cracked/chipped/broken shower screen, mirror and any glass items, Accessories Defects - Missing/broken/improper fixing of accessories, corroded accessories, etc
M&E Fittings	Finishings	1X	Inconsistent joints/gaps, Unevenness, Misalignment, Damages - Scratches, dents
	Functionality / Liveability	2X	Fitting - movement, difficulty in open/closing, loose, functionally deficient
		3X	Damages - All types of damages e.g. crack, chip, etc, fan coil unit leaking
			Accessories Defects - Missing/broken/improper fixing of accessories, corroded accessories etc
Note: The list of assessable defects is subject to change by BCA as appropriate			

(b) Functional Tests

Functional tests include checks on window water-tightness (WTT), wet area water-tightness (WPT), water flow tests (WFT) and the status of the functional tests (based on QP's declaration and supporting documents of test results) for:

- Pull-Off-Tests for internal wall tiles
- 100% EN 14179-2 heat soak test for tempered glass (including laminated tempered glass) + 3-year warranty for all glasses
- WTT self-test
- WPT self-test

(c) External Finishes

The assessment of External Finishes covers the roofs, external walls and external works at the completion stage of the building.

3.3 CONQUAS Project Bands

The CONQUAS project banding system encourages consistent quality performance across all the assessment components. The project band is determined by evaluating the overall Project Non-Compliance (NC) rate, Window Watertightness Test (WTT) NC rate, Wet area Watertightness Test (WPT) NC rate and the status of the functional tests (based on QP's declaration).

Project NC rate is derived by totalling the weighted NC results from all assessment items covered under CONQUAS i.e. Internal Finishes (IF) at 40%, Functional Tests (FT) at 40%, and External Finishes (EF) at 20%. The assessment component calculation is as follows:

a) Internal Finishes (IF) NC Rate is calculated by dividing the total number of NCs across floors, walls, ceilings, doors, windows, components, and M&E fittings by the total applicable number of NCs, multiplied by 100%.

b) Functional Tests (FT) NC Rate is calculated by dividing the total number of NCs in Window Watertightness Tests (WTT), Wet area Watertightness Tests (WPT) and Water Flow Tests (WFT) by the total applicable number of NCs, multiplied by 100%.

   - WTT NC Rate refers to WTT failures divided by Total WTT checks, multiplied by 100%.
   - WPT NC Rate refers to WPT failures divided by Total WPT checks, multiplied by 100%.
   - WFT NC rate refers to WFT failures divided by Total WFT checks, multiplied by 100%

c) External Finishes (EF) NC Rate is calculated by dividing the total number of NCs in roof, external walls, and external works by the total applicable number of NCs, multiplied by 100%.

<u>Illustrating NC rate</u>

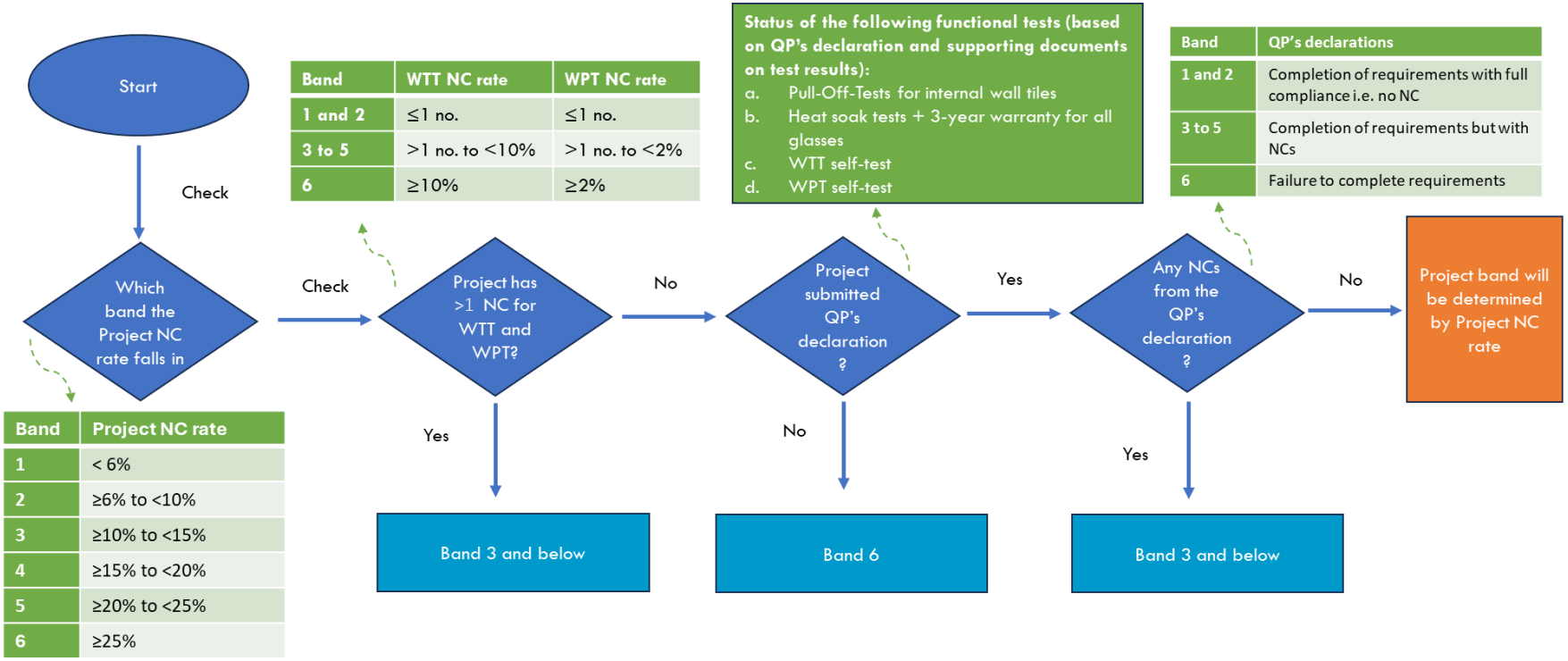
- Project NC rate = IF %X* 0.4 + FT %X *0.4 + EF %X *0.2
- IF NC rate = (Total no. of X for Floor, Wall, Ceiling, Door, Window, Component, M&E/ Total applicable no. of NCs for all these assessment items) *100%
- FT NC rate = (Total no. of X for WTT, WPT and WFT / Total applicable no. of NCs for WTT, WPT and WFT) *100%
- EF NC rate = (Total no. of X for Roof, Ext Wall and Ext works/ Total applicable no. of NCs for these assessment items)*100%

Criteria to Determine Project Band

The criteria to determine the project band are as follows:

Project Band	Thresholds			
	Project weighted NC rate	WTT NC rate	WPT NC rate	Status of the following functional tests (based on QP's declaration and supporting documents on test results): a. Pull-Off-Tests for internal wall tiles b. Heat soak tests + 3-year warranty for all glasses c. WTT self-test d. WPT self-test
1	<6%	≤1 no.	≤1 no.	Completion of requirements with full compliance i.e. no NC
2	≥6% to <10%			
3	≥10% to <15%	>1 no. to <10%	>1 no. to <2%	Completion of requirements but with NCs
4	≥15% to <20%			
5	≥20% to <25%			
6	≥25%	≥10%	≥2%	Failure to complete requirements
Note: The criteria to derive project bands are subject to change by BCA as appropriate				

Illustrations on the derivation of project band based on criteria



Band	WTT NC rate	WPT NC rate
1 and 2	≤1 no.	≤1 no.
3 to 5	>1 no. to <10%	>1 no. to <2%
6	≥10%	≥2%

Band	QP's declarations
1 and 2	Completion of requirements with full compliance i.e. no NC
3 to 5	Completion of requirements but with NCs
6	Failure to complete requirements

Band	Project NC rate
1	< 6%
2	≥6% to <10%
3	≥10% to <15%
4	≥15% to <20%
5	≥20% to <25%
6	≥25%

Examples on project band derivation:

Projects	Project NC rate	WTT NC rate	WPT NC	QP declared functional tests status	Project band
A	9%	3%	0%	Completed with no NCs	3
B	18%	12%	1%	Completed with NCs	6
C	22%	5%	1.5%	Incomplete	6

3.4 Major Defects

Major defects are largely classified as defects that would either: (i) affect liveability and hence, are generally not acceptable to end-users; or (ii) affect the functionality of the architectural, mechanical and/or electrical components in the building or common areas. Examples are as follows:

a) Any missing/ broken accessories for the architectural items assessed;
b) Any cracked/ chipped/ broken windowpanes, shower screens, mirrors and any glass items;
c) Any visually visible cracked tiles/ stones, timber doors & flooring, 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, ceilings, floors or windows, etc.;
f) Misaligned door frame – only for cases where verticality tolerance > 3mm per door frame height;
g) Water seepage, shattered glass, tripping of electricity, popped out tiles, malfunctioned/misaligned gate/lock, water ponding (due to insufficient gradient being provided, chokage of drainage points), leaking water pipe etc at common areas.

When a major defect is identified during the assessment by BCA, it is considered as a NC. Declaration by the project QP shall be required on the satisfactory rectification of these major defects before the issuance of the CONQUAS band.

To ensure the robustness of the CONQUAS band, major defects will be taken into consideration depending on when such major defects are detected, or adverse feedback on such major defects are received as follows:

(a) Where major defects are detected during the assessment, such major defects will be factored into the project CONQUAS band computation;
(b) Where adverse feedback on valid latent major defects is received from homeowners during the period from the completion of the assessment to the issuance of the CONQUAS band, the CONQUAS band will be moderated before being issued;
(c) Where valid adverse feedback on valid latent major defects is received from homeowners after the issuance of the CONQUAS band, the CONQUAS band will be further moderated and project will be issued the moderated CONQUAS band.

3.5 3-Tier CONQUAS scheme

The 3-tier CONQUAS Scheme (see Table A) was introduced to help developers/contractors further raise the quality of their new private residential developments including private mixed developments with residential component. This involves a higher sampling rate assessment where more samples will be covered and more areas for improvement identified.

The 3-tier CONQUAS Scheme is applicable where:

(a) developers or main contractors, in the past 3 years,
   i. with no CONQUAS track record for private residential development, or
   ii. has at least one private residential development[1] graded Band 4 or 5, or
   iii. has at least one private residential development in Band 6 or with major defects[4] affecting ≥ 20 units or 5% of all units, whichever is lower or at common areas in ≥ 3 or ≥ 5 common area locations for projects with < 500 units and ≥ 500 units respectively, or
   iv. has from the time after the application is made to any time before 20% of the required internal finishes of the project have been completed at least one private residential development in Band 6 or with major defects[4] affecting ≥ 20 units or 5% of all units, whichever is lower or at common areas in ≥ 3 or ≥ 5 common area locations for projects with < 500 units and ≥ 500 units respectively

   (Upon the expiry of the 3-year period, BCA retains the discretion to impose Tier 3 CONQUAS assessment if BCA assesses that the major defects have not been reasonably addressed.)

(b) all other developers or main contractors
   i. to be decided after the initial CONQUAS band [3] is generated

Table A – 3-Tier CONQUAS Scheme

S/N	Applicants	Tier 1	Tier 2a	Tier 2b	Tier 3
		25% sampling (25% of the units will be checked, and sampling will be conducted within units)	**50% sampling[1] (50% of the units will be checked, and sampling will be conducted within units)**	**100% sampling (all units will be checked, and sampling will be conducted within units)**	**100% checks[2] (all locations within all units will be checked)**
a)	<u>Developers or main contractors</u> i. with no CONQUAS track record for private residential development in the past 3 years, or	-	During CONQUAS application	When the initial CONQUAS band[3] is in Band 4 or 5	-
	ii. has at least one private residential development in the past 3 years in Band 4 or 5, or	-			-
	iii. has at least one private residential development in the past 3 years in Band 6 or with major defects[4] affecting ≥ 20 units or 5% of all units, whichever is lower or at common areas in ≥ 3 or ≥ 5 common area locations for projects with < 500 units and ≥ 500 units respectively Upon the expiry of the 3-year period, BCA retains the discretion to impose Tier 3 CONQUAS assessment if BCA assesses that the major defects[4] have not been reasonably addressed.	-	-	-	During CONQUAS application
	iv. has from the time after the application is made to any time before 20% of the required internal finishes of the project have been completed at least one private residential	-	During CONQUAS assessments[5]	During CONQUAS assessments[5]	-

	development in Band 6 or with major defects[4] affecting ≥ 20 units or 5% of all units, whichever is lower or at common areas in ≥ 3 or ≥ 5 common area locations for projects with < 500 units and ≥ 500 units respectively				
b)	<u>All other developers or main contractors</u> i. to be decided after the initial CONQUAS band [3] is generated	During CONQUAS application	When the initial CONQUAS band [3] is in Band 4 or 5	When the CONQUAS score, after 50% of the required architectural internal finishes samples are completed, fall in Band 4 or 5	-

[1]Additional samples will be taken on: architectural internal finishes samples, wet areas water tightness tests for toilets/bathrooms, window water tightness tests.
[2] 100% checks refer to all locations within all dwelling units in a project will be checked. Projects will be required to meet prevailing CONQUAS Band 2.
[3] The initial CONQUAS band will be derived after 20% (for tier 2a) and 50% (for tier 2b) of the required architectural internal finishes samples are completed.
[4] Major defects refer to defects as specified under section 3.4 in this manual.
[5] Projects will be escalated one tier up from the prevailing tier imposed.

3.6 Moderation Framework

(a) Adverse Feedback and High Incidence of Major Defects

This is to allow for moderation of the CONQUAS band (which is computed on the completion of assessment) where valid adverse feedback on major defects, including latent defects, design related issues, are received from homeowners. The CONQUAS band may also be moderated where projects are found to have contravened regulatory requirement(s).

(b) Restricted Samples Given for Assessment

To ensure that the sampling system adequately represents the quality of the whole project, CONQUAS band will be adjusted based on the areas provided for assessment as follows:

Average *Areas Offered for Assessment	CONQUAS Band and downgrade
≥75 ~ 95%	Start at Band 3 or Downgrade 1 band, capped at Band 5
≥50 ~ 75%	Start at Band 4 or Downgrade 1 band, capped at Band 5
Less than 50%	Start at Band 5 or Downgrade 1 band, up to Band 6

*Note: *Based on number of units for residential projects*

A project may not be issued with the CONQUAS band if less than 90% of the required internal finishes samples were assessed.

3.7 Publication of CONQUAS Bands

The CONQUAS bands of private residential projects are published and accessible for viewing on the Quality Housing Portal at BCA's website. CONQUAS Banding consists of 6 bands, ranging from Band 1 i.e. very low incidence of major defects to Band 6 i.e. higher incidence of major defects. Developers and builders' CONQUAS bands would be derived based on the average CONQUAS performance of their completed projects in the past 6 years i.e. track record, while projects' bands would be derived from their CONQUAS performance.

Appendix 1

QUALITY STANDARDS FOR INTERNAL FINISHES WORKS

Element	Categories	Quality standards
Floor (e.g. tiles, timber)	Finishings	Stains • No permanent stain marks
		Alignment • Falls in wet areas should be in right direction • No ponding in falls for wet area • Skirting size and joint aligned with floor if of same material
		Jointing • Consistent joint size • Neat pointing • Consistent skirting thickness • No visible gap between wall & skirting • No visible gaps in between timber strips • Edges of the floor to be properly sealed • Expansion joints should be provided at interval as stated by architect
		Damages • No visible damage e.g. scratches / dents / chips
	Functionality / Liveability	Unevenness • Evenness of surface (not more than 6 mm per 1.2m)
		Hollowness for tiled floor • No hollow sound when tapped with a hard object
		Damages • No cracks or open veins felt with hand (no more than 0.5mm width and no more than 100mm length) • No visible chipped timber • No warpage for timber
		Delamination (for timber floor) • No sign of delamination (≥1 spot on timber finishing)
		Lippage for tiled floors • No lippage between 2 tiles (felt by touch)

Element	Categories	Quality standards
Wall (e.g. plaster, tiles, architectural coating, painting, wood panel, fair face concrete)	Finishings	Cracks on plastered walls • No visible cracks
		Patchy/roughness • No rough / patchy surface
		Alignment • Verticality of wall (not more than 3 mm per 1.2m) • Edges (wall to wall) to appear straight and aligned
		Jointing • Straightness of corners and joints
		Damages • No visible damage e.g. scratches / dents / chips
	Functionality / Liveability	Unevenness • Evenness of surface (not more than 6 mm per 1.2m)
		Squareness • Squareness (not more than 8mm over 300mm)
		Hollowness for tiled wall • No hollow sound when tapped with a hard object
		Damages • No cracks or open veins felt with hand (no more than 0.5mm width and no more than 100mm length)
		Delamination for timber wall • No sign of delamination (≥1 spot on timber finishing)
Ceiling (e.g. skim coat, boarding, false)	Finishings	Stains • No permanent stain marks
		Patchy/roughness • No patchy surface • Paintwork with good opacity and with no brush marks
		Jointing • Consistent, aligned and neat
		Damages • No visible hairline cracks on plastered ceiling • No visible damage e.g. scratches / dents / chipped surfaces or corners
	Functionality / Liveability	Damages • No cracked ceiling board (no more than 0.5mm width and no more than 100m length)

Element	Categories	Quality standards
Door	Finishings	Inconsistent joints/gaps • No visible gaps between door frame and wall • Consistent & neat joints • Consistent gap between door leaf and frame and not more than 5mm • No visible gaps within door leaf and door frame • Consistent and no visible gaps for mitre joints
		Damages • No visible damage e.g. scratches / dents / chips
	Functionality / Liveability	Fitting - movement, difficulty in open/closing, loose, functionally deficient • Ease in opening, closing and locking • No squeaky sound while swinging the leaf
		Misalignment & unevenness • Alignment/level with walls (no more than 3mm/m or 1.2m spirit level) • Door frame and leaf to flush • Door and frame corners maintained at right angles • No rattling sound when door is closed
		Damages • No visible cracks on door leaf/frame
		Accessories defects - missing/broken/improper fixing of accessories, corroded accessories etc • Lock sets with good fit • No sign of corrosion in ironmongery • No missing or defective accessories

Element	Categories	Quality standards
Window	Finishings	Inconsistent joints/gaps • No visible gap between window frame and wall • No visible gaps within window leaf and frame • No visible gaps between window leaf and frame • Consistent gap between window leaf and frame and not more than 5mm (timber window only) • Neat joint between window and wall internally and externally • Consistent and no visible gaps at mitre joints
		Damages • No visible damages e.g. scratches, dents
	Functionality / Liveability	Fitting - movement, difficulty in open/closing, loose, functionally deficient • Ease in opening, closing and locking • No sign of rainwater leakage • No squeaky sound while swinging the leaf
		Damages • No visible cracks/chips on frame and windowpanes • No broken frame and windowpanes
		Accessories defects - missing/broken/improper fixing of accessories, corroded accessories etc • Lock sets with good fit and aligned • No sign of corrosion • No missing or defective accessories • Countersunk screws levelled and flushed. No over-tightened screws • Stainless steel screws at hinges for swing window

Element	Categories	Quality standards
Component	Finishings	Inconsistent joints/gaps • Consistent joint width & neat joint • No visible gap • Welding joints grounded or flushed
		Unevenness • Leveled and straight
		Tonality • Consistent in color tone
		Misalignment • Aligned
		Damages • No visible damage e.g. scratches, dents
	Functionality / Liveability	Fitting - movement, difficulty in open/closing, loose, functionally deficient • Functional, secure and safe
		Damages • No cracked WC • No cracked/chipped/broken glass items (e.g. shower screens, mirrors etc)
		Accessories defects - missing/broken/improper fixing of accessories, corroded accessories etc • No missing accessories • No sign of corrosion • No visible damages / defects

Component refers to:

- Internal fixtures such as wardrobe, kitchen cabinet, vanity top, mirror, bathtub, water closet, shower screen and basin
- External fixtures such signage, emergency lightings, railings, unit number plates, lift fittings, letter box, lightings, metal gate etc

Element	Categories	Quality standards
M&E Fittings (e.g. gully & floor trap, pipes, fittings, power point, telephone point, air-con diffuser, fan coil unit, lighting, smoke alarm, sprinkler heads, CCTV camera, etc)	Finishings	Inconsistent joints/gaps • No visible gap • Consistent joint width and neat
		Unevenness • Leveled and straight
		Misalignment • Aligned • Floor trap's top lower than the surrounding floor level • Pipes visually aligned horizontally, vertically and parallel to building surface
		Damages • No visible damage e.g. scratches, dents
	Functionality / Liveability	Fitting - movement, difficulty in open/closing, loose, functionally deficient • Functional, secure and safe • No chokage, securely fixed for gully & floor trap • No leakage at joints for pipes and fittings
		Damages - All types of damages e.g. crack, chip, fan coil unit leaking etc • No visible damage
		Accessories defects - missing/broken/improper fixing of accessories, corroded accessories etc • No missing accessories • No visible damage • Brackets firmly secured & adequately spaced for pipes • No exposed wiring

Appendix 2

QUALITY STANDARDS FOR EXTERNAL FINISHES WORKS

Roof

	Item*	Standards
1	**Construction**	
1a	**General Requirements**	1) **Stain / Painting** • No stain marks • Good paint works 2) **Rough / Uneven / Falls** • Look smooth and with no tool marks • Even and level esp no potential in tripping • Good falls in right direction 3) **Crack / Chip / Damage** • No visible damages / defects 4) **Joint / Sealant / Alignment** • Consistent joint width, neat & aligned 5) **Chokage / Ponding** • No sign of chokage and ponding 6) **Construction** • No sign of leaking • Proper dressing for any protrusion • Neat & secure installation of fixtures
1b	**Flat Roof**	1) Ponding less than 3mm 2) Surface to level to avoid tripping 3) Proper dressing for any protrusion 4) Openings to be sealed to prevent pest invasion 5) Clean and no stain marks

	Item*		Standards
1c	**Pitched Roof**	1)	No leaking
		2)	No rust or stains
		3)	Good painting to roof structural members
		4)	Roof tiles in alignment
		5)	Openings to be sealed to prevent pest invasion
		6)	Consistent colour tone
		7)	Proper dressing for any protrusion
1d	**Waterproofing (exposed)**	1)	Should be evenly installed, no sharp protrusion
		2)	Complete adhesion to base
		3)	Good laps at joints and proper vertical abutment details
		4)	No leaking and sign of damage to membrane/coating
		5)	Clean and no mortar stains
		6)	No paint defects

* An item is deemed to have failed if any one of the standards is not met

External Wall

	Item*		Standards
1	**General Requirements**	1)	**Evenness / Roughness** • Overall surface should be even, not wavey & not patchy
		2)	**Staining / Painting** • No visible stain marks • Good paint works
		3)	**Cracking / Damages** • No visible damage / defects
		4)	**Jointing / Alignment** • External features visually in alignment • Corners of wall maintained at right angles and straight • Consistent joint width, neat & aligned
2	**Plaster Finish**	1)	As above
3	**Tiled Finish**	1)	Tile joints aligned and between 2-4mm wide unless specified
		2)	Plumb tolerance and evenness of surface (3mm / 1.2m)
4	**Claddings / Curtain Walls**	1)	Gaps around openings to be properly sealed
		2)	Joints of regular widths as specified
		3)	Plumb tolerance as specified
		4)	Evenness of surface, no dents or scratches
		5)	Sealant material compatible with cladding
5	**Facing Brickwork**	1)	10mm joint with pointing
		2)	Weepholes are provided as specified
		3)	No mortar droppings and other stains
		4)	No efflorescence

* An item is deemed to have failed if any one of the standards is not met

	Item*		Standards
6	**Architectural Coating**	1)	Substrate - see plaster finish
		2)	Finished texture and colour to be uniform
		3)	No paint drips and other stains
7	**Painting**	1)	Substrate - see plaster finish
		2)	Surfaces are evenly painted; no patchiness due to touch up work
		3)	Good opacity, no discolouring and free from peeling
8	**Fair-Faced Concrete**	1)	No exposed aggregate
		2)	Consistent tonality when viewed as a whole
9	**MET**	1)	Crack tolerance: a) Domestic grade - Not more than 200 mm long and 2 mm width b) Industrial and Standard grade - Not more than 400 mm long and 4 mm width

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External Works

	Item*		Standards
1	**General Requirements**	1)	No stain marks and visible damages / defects
		2)	Finishes must be even, level, align & consistent
		3)	Consistent joints width and neat
		4)	Paintworks with good opacity, no patchiness and brush marks
		5)	Constructed according to Contract Specifications
		6)	Fixtures installed must be safe, secured and functional
		7)	Standards defined under Appendix 1: Internal Finishes, Appendix 2: Roof and External Wall shall apply for similar items
		8)	MET (Mass Engineered Timber) standards applied for MET finishes as in Appendix 1 Internal Finishes
1a	**Link-Way / Shelter**	1)	**Floor** as per Internal Finishes - Floor
		2)	**Column** as per Internal Finishes - Wall
		3)	**Ceiling** as per Internal Finishes – Ceiling
		4)	**Other Finishes** as per Internal Finishes – Components
		5)	**M&E Fitting** as per Appendix 1 : Internal Finishes

	Item*		Standards
1b	**Apron & Drain**	1)	**Drain** • Free flowing and no ponding of water
		2)	**Drain Cover** • level and do not jolt or rock • Gaps between drain covers and side of drain between 5-10mm wide • Drain grating properly painted
		3)	**Apron 1** • Bitumen joints with neat edges and sufficient length • No ponding
		4)	**Apron 2** – as per Apron 1
		5)	**Inspection Chamber** • Inspection chambers are level with surrounding without depression and with tolerance of • Covers to be level with frames
1c	**Roadwork & Carpark**	1)	**Side Drain** as per 1b Apron & Drain
		2)	**Road Surface** • No ponding • Road painting according to drawings; dimensional tolerance of 5mm • Gaps between aeration slabs properly filled up with sand • Aeration slabs stable and not broken
		3)	**Kerbs** – as per General Requirements
		4)	**Road Sign** Provided according to specifications Firm and secured at base – with footing if required Metal parts below ground are corrosion treated
		5)	**Lightings** – as per 1c Road Sign

	Item*	Standards
1d	**Footpaths & Turfing**	1) **Footpath** as per Appendix 1: Internal Finishes - Floor 2) **Turfing** • No depression or bald patches • Turfing done evenly, no dead grass or weeds 3) **Lightings** as per 1c Road Sign 4) **Fencing & Railing** • As per 1c Road Sign • Wire fencing is PVC covered • Footings provided for supports • Vertical tolerance (4mm / 1.2m) 5) **Other Fixtures** • as per Appendix 1: Internal Finishes - Components
1e	**Playground**	1) **Floor** as per Appendix 1: Internal Finishes - Floor 2) **Permanent Fixture1** as per Appendix 1: Internal Finishes - Components 3) **Permanent Fixture2** as per Appendix 1: Internal Finishes - Components 4) **Lightings** as per 1c Road Sign 5) **Signage** as per Internal Finishes - Components
1f	**Court**	1) **Floor 1** as per Appendix 1: Internal Finishes - Floor 2) **Floor 2** as per Appendix 1: Internal Finishes - Floor 3) **Signage** as per Appendix 1: Internal Finishes - Components 4) **M&E Fitting** as per M&E Works – Part 5 Basic M&E Fittings 5) **Permanent Fixture** as per Appendix 1: Internal Finishes – Components

	Item*		Standards
1g	**Fences & Gates**	1)	**Fence Left** as per 1d – item 4)
		2)	**Gate** as per Appendix 1: Internal Finishes - Components
		3)	**Fence Right** as per 1d – item 4)
		4)	**M&E Fitting** as per M&E Works – Part 5 Basic M&E Fittings
		5)	**Signage** as per Appendix 1: Internal Finishes - Components
1h	**Swimming Pool**	1)	**Side Drain** as per Appendix 1: Internal Finishes - Floor
		2)	**Foot Path 1** as per Appendix 1: Internal Finishes - Floor
		3)	**Floor Path 2** as per Appendix 1: Internal Finishes - Floor
		4)	**M&E Fitting** as per M&E Works – Part 5 Basic M&E Fittings
		5)	**Other Fixture** as per Appendix 1: Internal Finishes - Components
1i	**Club House**	1)	**External Wall 1** as Appendix 2: External Wall
		2)	**External Wall 2** as Appendix 2: External Wall
		3)	**External Wall 3** as Appendix 2: External Wall
		4)	**External Wall 4** as Appendix 2: External Wall
		5)	**Apron & Drain** as per 1b
1j	**Guard House**	1)	**External Wall 1** as Appendix 2: External Wall
		2)	**External Wall 2** as Appendix 2: External Wall
		3)	**Apron & Drain** as per 1b
		4)	**Gantry** as per Appendix 1: Internal Finishes - Components
		5)	**Other Fixture** as per Appendix 1: Internal Finishes - Components

	Item*		Standards
1k	**Electrical Substation**	1)	**External Wall 1** as Appendix 2: External Wall
		2)	**External Wall 2** as Appendix 2: External Wall
		3)	**External Wall 3** as Appendix 2: External Wall
		4)	**External Wall 4** as Appendix 2: External Wall
		5)	**Apron & Drain** as per 1b
1l	**Suspended Swimming Pool**	1)	No water leakage

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Appendix 3

QUALITY STANDARDS FOR FUNCTIONAL TESTS

Functional Tests

	Item*	Standards
1	Field Window Water-tightness Test	1) No sign of leakage using BCA's Window Water-tightness Test method. Leakage is defined as "*any appearance of uncontrolled water, other than condensation, on the indoor face of any part of the wall & window*". 2) BCA's Water-tightness Test parameters: Water intensity: 300mm/hr : 1 litre/min/m of joint Wind Pressure: 240 Pa Nozzle inclination: 90° to window 1 sample = 2m length of joint Spray duration: 10 minutes
2	Wet Area Water-tightness test (i.e. Bathrooms, toilets & flat roof)	1) No sign of leakage after ponding wet areas over a minimum period of 24 hrs 2) Ponding with final finish in-place
3	Pull-off test (POT)for internal wall tiles	1) Minimum tensile strength of 0.15 N / mm^2
4	Water Flow Test for dwelling unit corridor, lift lobbies, footpaths, exposed walkway in carpark and basement carpark	1) Ponding should not be more than 3mm 2) Water falls in the right direction 3) No pipe chokage
5	100% EN 14179-2 Heat Soak Test for tempered glass (including laminated tempered glass) used at balcony, canopy and shower screen + 3-year warranty for all glasses	1) Test method based on EN 14179-2 as stated in SS 653:2020 Code of Practice for glazing in buildings 2) The 3-year warranty for all glasses to start from DLP commencement

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CONQUAS (Private Residential) Revision Log

Rev	Description	Released Date	Date Effective
R0	Launch for Implementation *Applicable to private residential projects and residential component of private mixed development projects with construction tenders called from 1 April 2026.*	13 November 2025	1 April 2026
R1	Include mention of Water Flow Test in areas related to Functional Tests	20 April 2026	20 April 2026