

## **MEDIA RELEASE**

### **6 QUALITY LEADERS CONFERRED NEW AWARD FOR CONSISTENTLY DELIVERING QUALITY HOMES**

-Construction industry celebrates 25 years of quality excellence

-Strong call for the built environment sector to embrace productivity when pursuing high quality

**Singapore, 16 May 2013** – Six developers and builders received the inaugural Quality Excellence Award at the Building and Construction Authority (BCA) Awards ceremony today. Among the winners, City Developments Limited (CDL), Woh Hup (Private) Limited and Dragages Singapore Pte Ltd were given the top Quality Champion (Platinum) accolade.

2. The Quality Excellence Award recognises leading progressive developers and builders who have embraced quality workmanship through the BCA Construction Quality Assessment System (CONQUAS) and Quality Mark (QM) Scheme, and delivered high quality projects consistently.

3. With over 5,300 private residential units committed under QM and an average CONQUAS score of 93.3 for its projects in the past five years, CDL is the only developer out of the three winning developers to be conferred the Quality Champion (Platinum) title. Builders Dragages and Woh Hup also attained the platinum award for committing more residential units under QM and consistently achieving higher QM and CONQUAS scores.

4. “As Singapore’s property pioneer, CDL has long been committed to building quality. For over a decade, we have harnessed state-of-the-art technology and introduced innovative construction methodology for quality excellence at our developments. For continual improvement, we work closely with our builders to achieve stringent building quality targets for each development and have also implemented a benchmarking scheme for our projects against industry standards,” said Mr Kwek Leng Joo, Managing Director, City Developments Limited.

5. As part of its key quality initiatives, CDL has been adopting buildable design and productive construction methods at its residential developments. These include using Prefabricated Bathroom Units (PBU) and drywall to achieve better quality standards and product consistency. While PBU improves water tightness and the

overall workmanship quality of bathrooms by enabling rigorous checks and testing under a controlled factory environment prior to its installation, drywalls have a superior quality finish and acoustic performance compared to traditional brick walls.

6. Similarly, local builder Woh Hup ensures high quality standards through the use of system formwork and precast for structural works as well as PBU and drywall partitions for architectural works. While these construction methods require less manpower, they also result in better quality control, fewer mistakes and less downtime needed for rectification works.

7. Commenting on the achievement, Mr Neil Yong, Director of Woh Hup (Private) Limited said: "I am very pleased and honoured to receive this award as it is a testimony of our commitment to deliver quality homes. We have dedicated much time, effort and resources to deliver high quality, well finished homes to the clients and eventual home owners. We employ a rigorous quality management system, aiming to eliminate defects to ensure each home owner of a Woh Hup building project is a satisfied customer. We will continue to work hard and strive to consistently deliver not only on quality but also on all other commitments made in hope of creating a brand name that Woh Hup is a world class, premium contractor."

8. Since the CONQUAS was launched 25 years ago, the quality of buildings has improved steadily with industry average CONQUAS scores rising significantly from 67.9 points in 1989 to 86.1 points in 2012. This is partly due to higher quality internal finishes as well as more water-tight windows and bathrooms in newer buildings.

9. Although the CONQUAS and QM are voluntary schemes, their take-up rates have also risen over the years. More than 3,250 new construction projects have been assessed using CONQUAS to date, with 95% of private residential and commercial buildings in Singapore subscribing to it. There is also strong buy-in for the QM, with over 260 projects or 60,000 private residential units being committed to or assessed under QM currently.

10. This is fuelled by higher public expectations for building quality and a stronger focus on delivering quality in the industry. As these schemes provide enhanced assurance of workmanship quality to home buyers, they also boost the marketability of new projects. For instance, private residential projects committed or certified under QM generally experience 40% less defects per unit compared to non-QM projects.

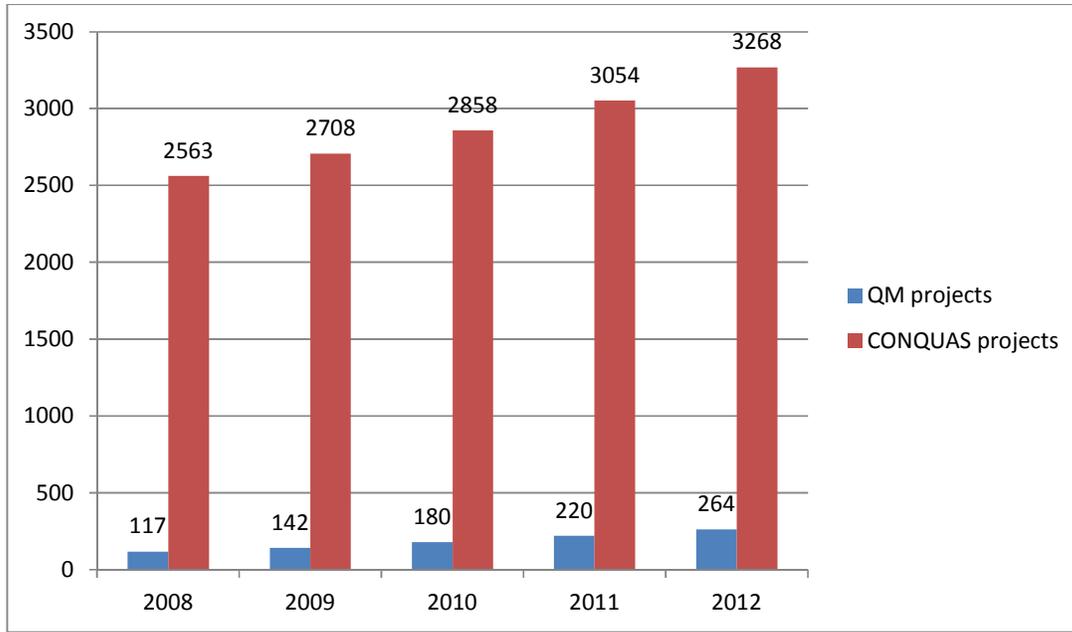


Chart 1: Cumulative number of CONQUAS and QM projects over the past 5 years (2008 to 2012)

11. “From the business perspective, pursuing high quality can be a key differentiator when meeting heightened customer expectations and improving corporate reputation. However, it is important for firms in the built environment sector to drive quality in the most efficient and effective manner through upstream planning and greater integration in the value chain. As the Quality Excellence Award winners have shown, quality excellence and productivity can go hand-in-hand as productive technologies offer not only speedier construction with fewer workers, but also quality finishes with better control and precision,” said Dr John Keung, CEO of BCA.

12. More than 2,200 guests attended the BCA Awards ceremony where close to 300 awards were given for construction excellence, design and engineering safety, universal design, construction productivity and green buildings.

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About BCA

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA’s mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, it aims to differentiate Singapore’s built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "the best built environment for Singapore, our distinctive global city". Together with its education arm, the BCA Academy of the Built Environment, BCA works closely with its industry partners to develop skills and expertise that help shape the best built environment for Singapore. For more information, visit [www.bca.gov.sg](http://www.bca.gov.sg).

#### About CONQUAS

The Construction Quality Assessment System (CONQUAS®) was introduced in Singapore in 1989 and serves as a standard assessment system on the quality of building projects. It assesses structural works, architectural and mechanical & electrical works. CONQUAS® is widely recognised as the de facto yardstick for quality in Singapore and also accepted internationally as a benchmarking tool for quality. Countries such as Hong Kong and Malaysia have adapted CONQUAS ® to their construction industry. CONQUAS ® is now a registered trademark in Singapore, Malaysia, China, Hong Kong SAR, United Kingdom, Australia, South Africa, Thailand and India.

#### About BCA's Quality Mark for Good Workmanship Scheme

The BCA Quality Mark for Good Workmanship was launched on 1 July 2002 to help developers meet the rising expectations of homeowners for better quality homes. The Scheme encourages developers to consistently deliver quality homes. Under the Scheme, BCA will assess every unit of newly completed residential project. A typical unit undergoes about 480 checks during the assessment on the internal finishing and all bathrooms in each unit are also subjected to a water-tightness test to ensure zero leakage. The Quality Mark for Good Workmanship will be issued to each individual unit that achieves the stipulated quality workmanship standard (a minimum CONQUAS ® score for internal finishes) set by BCA. The Quality Mark certifies the condition of the unit at the time of inspection and only units that have achieved the standard will be issued the Quality Mark certificate.

## BCA Quality Mark for Good Workmanship



**BCA QUALITY MARK**

The BCA Quality Mark for Good Workmanship was launched on **1 July 2002** to help developers meet the rising expectation of Singaporeans for better quality homes. It encourages developers to consistently deliver quality homes.

Under the Scheme, BCA will assess every unit of newly completed residential projects. The Quality Mark for Good Workmanship will be issued to individual apartment unit that achieves the stipulated quality workmanship standard (a minimum CONQUAS score for internal finishes) set by BCA. The Quality Mark certifies the condition of the apartment unit at the time of inspection. Any unit that fails to achieve the standard will not be issued the Quality Mark.

### Scope of Assessment

The scope of assessment will be the workmanship standards of the internal finishes of the following 6 architectural elements:

1. Floor
2. Internal wall
3. Ceiling
4. Door
5. Window
6. Components - fixtures such as wardrobe, kitchen cabinet, vanity top, mirror, bathtub, water closet, shower screen and basin

The assessment for the 6 architectural elements will cover all locations within the units (bedrooms, bathrooms, kitchen, living & dining rooms, utility yard, where applicable). **In addition, the assessment will include water ponding test for bathrooms.**

Water-tightness tests on windows will be optional. The conduct of the water-tightness test, if carried out, will be reflected in the Quality Mark.

The assessment does not cover quality of material or issues of design or aesthetic preferences.

### Assessment Criteria

The assessment criteria and workmanship standard will be the relevant portions set out in the manual, "CONQUAS®: The BCA Construction Quality Assessment System". The assessment is based on a combination of visual assessment and

measurement by tools to verify compliance to tolerances and standards set in the CONQUAS® standard.

### Eligibility for the Quality Mark Scheme

The voluntary scheme is open to developers that meet the following conditions:

- Have earlier projects subjected to the CONQUAS® and achieved a minimum CONQUAS® score stipulated by BCA;
- Have at least one project that has undergone full unit assessment (not required if appointed builder has prior QM experience); and
- Have the project that is submitted for Quality Mark assessment also undergoes CONQUAS® scoring.

### Re-scoring

Developers can request for re-scoring for those units that failed to meet the stipulated score for the issue of the Quality Mark. However, developers will have to rectify the defects before the re-scoring is done.

### Quality Mark Tiered Rating System

The Tiered Rating System for Quality Mark (QM) was launched on 6 October 2010 to recognise developers and builders for achieving quality excellence. Projects that performed better than the prevailing minimum threshold/ requirements for QM are rated into 3 categories. This serves to distinguish developers and builders who have achieved quality excellence beyond the high minimum standard specified in the QM scheme.

QM projects are accorded “MERIT”, “EXCELLENT” or “STAR” rating subject to qualifying performance.

<b>QM Rating</b>	<b>Average QM Unit Score*</b>	<b>Overall Waterponding Test Passing Rate</b>
Star	85 points and above	100%
Excellent	83 to < 85 points	99% and above
Merit	80 to 83 points	98% and above

\*Based on initial assessment results of the entire project; the wet area waterponding test passing rate is derived as illustrated below:-

Wet area waterponding test passing rate = no of residential units meeting the QM wet area waterponding test requirement / total no of residential units in a project

**Note:** 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 clear the initial wet area water ponding tests.

The rating system applies to QM applications received and all current QM projects completing on or after 1 Nov 10. The developer and builder of the qualified project will each receive a certificate for their achievement.

## **QUALITY EXCELLENCE AWARD**

The inaugural Quality Excellence Award recognises developers and builders for their commitment and achievement in delivering high quality homes. It recognises leading progressive developers and builders who have embraced workmanship excellence through quality assurance programmes and delivered high quality projects consistently. The award encourages more developers and builders to set high quality standards for their projects and improve the image of the industry.

### **TYPES OF AWARD**

- Quality Champion (Platinum)
- Quality Champion (Gold)

### **EVALUATION CRITERIA**

#### Developers

1. Number of residential units committed/certified under Quality Mark
2. Quality Mark tiered rating performance
3. CONQUAS performance

#### a) Platinum award

- Overall score  $\geq$  90 points
- Commit all private residential units to Quality Mark
- No projects with CONQUAS scores below the industry category average in the past 5 years

#### b) Gold award

- Overall score  $\geq$  75 points
- Commit at least 80% of all its private residential units to Quality Mark

#### Builders

1. Number of residential units committed/certified under Quality Mark
2. Quality Mark tiered rating performance
3. CONQUAS performance
4. Number of residential units committed/certified under Quality Mark as a result of builder's initiative

#### a) Platinum award

- Overall score  $\geq$  90 points
- No projects with CONQUAS scores below the industry category average in the past 5 years

#### b) Gold award

- Overall score  $\geq$  75 points
- No projects with CONQUAS scores below the industry category average in the past 3 years

**AWARD WINNERS (DEVELOPERS)**

<b>Quality Champion (Platinum)</b>	
<b>City Developments Limited</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 5300 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 3 “Star” and 1 “Excellent” projects
	<b>CONQUAS Performance:</b> Average CONQUAS score - 93.3

<b>Quality Champion (Gold)</b>	
<b>CapitaLand Limited</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 2100 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 1 “Excellent” project
	<b>CONQUAS Performance:</b> Average CONQUAS score - 89.8

<b>Quality Champion (Gold)</b>	
<b>Allgreen Properties Limited</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 1000 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 2 “Star”, 1 “Excellent” & 1 “Merit” projects
	<b>CONQUAS Performance:</b> Average CONQUAS score - 93.1

**AWARD WINNERS (BUILDERS)**

<b>Quality Champion (Platinum)</b>	
<b>Woh Hup (Private) Limited</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 4000 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 3 “Star” and 2 “Excellent” projects
	<b>CONQUAS Performance:</b> Average CONQUAS score - 94.6

<b>Quality Champion (Platinum)</b>	
<b>Dragages Singapore Pte Ltd</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 1700 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 2 “Star” projects
	<b>CONQUAS Performance:</b> Average CONQUAS score - 94.4

<b>Quality Champion (Gold)</b>	
<b>Tiong Seng Contractors (Pte) Ltd</b>	<i>Key Achievements (2008 ~2012)</i>
	<b>Quality Mark (QM) Participation:</b> Over 990 residential units committed/certified under QM
	<b>Quality Mark (QM) Tiered Rating Performance:</b> 1 “Star” project
	<b>CONQUAS Performance:</b> Average CONQUAS score - 91.7

# **CONSTRUCTION QUALITY ASSESSMENT SYSTEM CONQUAS ®**

## **INTRODUCTION**

The Construction Quality Assessment System (CONQUAS ®) was introduced in Singapore since 1989 to serve as a standard assessment system on the quality of building projects. As defacto national yardstick for the industry, CONQUAS ® has been periodically fine-tuned to keep pace with changes in technology and quality demands of a more sophisticated population. In 1998, BCA introduced a number of new features to CONQUAS ® resulting in the launch of CONQUAS ® 21. Such refinements make CONQUAS ® scoring more comprehensive and customer oriented.

By using CONQUAS ® as a standardized method of quality assessment, developers are able to use the CONQUAS ® score to set targets for contractors to achieve and also assess the quality of the finished building.

Today, CONQUAS ® is widely recognised and also accepted internationally as a benchmarking tool for quality. Indeed, countries like UK and Hong Kong have successfully adapted CONQUAS ® to their construction industries. CONQUAS ® is now a registered trademark in Singapore, Malaysia, China, Hong Kong SAR, United Kingdom, Australia, South Africa and India.

## **SCOPE OF CONQUAS ®**

The assessment consists of 3 main components:

1. Structural Works,
2. Architectural Works
3. M&E Works.

Each component is further divided into different items for assessment. The sum of the 3 components will give the CONQUAS ® score for the project.

The building is assessed based primarily on workmanship standards through site inspection. The assessment is done throughout the construction process for Structural and M&E Works and on the completed building for Architectural Works.

The assessment also includes tests on the materials and the functional performance of selected services and installation. These tests helps to safeguard the interest of building occupants in relation to safety, comfort and aesthetic defects, which surface only after sometime.

## CATEGORISATION OF PROJECT

In CONQUAS ®, the weightages for Structural, Architectural and M&E works are allocated according to four categories of buildings.

Components	<b>CAT A</b>	<b>CAT B</b>	<b>CAT B</b>	<b>CAT C</b>	<b>CAT C</b>	<b>CAT D</b>
	Commercial, Industrial, Institution & Others	Commercial, Industrial, Institution & Others	Private Housing	Public Housing (Sold Flats)	Public Housing (Rental Flats)	Landed Housing
Structural Works	20%	25%	20%	30%	40%	25%
Architectural Works	60%	65%	70%	65%	55%	70%
M&E Works	20%	10%	10%	5%	5%	5%
<b>CONQUAS ® Score</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note: In general, projects with central cooling system having cooling tower, chiller system etc are classified under CAT A. Otherwise, it will be classified under CAT B. Appendix 5 of CONQUAS manual provides a guide with listing of buildings under the various categories.

The weightage system, which is aimed at making the CONQUAS ® score objective in representing the quality of a building, is a compromise between the cost proportions of the three components in the various buildings and their aesthetic consideration.

The CONQUAS ® score of a building is the sum of points awarded to the three components in each category of buildings.

## SAMPLING

As it is impractical to assess all elements, CONQUAS ® uses a sampling system for the assessment. The sampling system, which is based on the size of the building, will ensure that the assessment adequately represents the entire building.

## ASSESSMENT APPROACH

The samples shall be distributed as uniformly as possible throughout the construction stages. The scoring will be done on the works that are inspected for the first time. Rectification and correction carried out after the assessment will not be re-scored. The objective of this practice is to encourage "doing things right the first time".