

We shape a safe, high quality, sustainable and friendly built environment.

Circular No : BCA/QCD/2016-12-CPQ Construction Productivity & Quality Group

Our Ref : BCA ID 88.2.6 Tel: 6730 4498 Fax: 6225 9225

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Dear Sir/Madam

ACHIEVING HIGHER QUALITY AND PRODUCTIVITY THROUGH CONQUAS® 9TH EDITION

BCA is pleased to announce the launch of CONQUAS® 9th edition which is aimed at strengthening the existing scheme / criteria to better promote and recognise the synergies between quality & productivity. CONQUAS (The Construction Quality Assessment System) was first introduced in 1989 to measure the quality of building projects. Since then, it has evolved to keep pace with changes and improvements in processes and technology and meet end-users' expectations.

- 2. The CONQUAS® 9th edition is the latest development with 2 main objectives, viz.
 - Promote the adoption of Design for Manufacturing and Assembly (DfMA) which supports both quality and productivity; and
 - Ensure CONQUAS score commensurate with end-users' expectations on workmanship quality
- 3. The key changes in this edition are summarised in the Annex.
- 4. The CONQUAS® 9th edition will apply to tenders for projects called on or after <u>1 January</u> <u>2017</u>. The soft copy of the CONQUAS® 9th edition manual can be accessed/downloaded at https://www.bca.gov.sg/Professionals/IQUAS/others/CONQUAS9.pdf.
- 5. I would be grateful if you could disseminate the contents of this circular to your staff/members. Please contact Mr Goh Thiam Lai at DID: 67304497 (email: goh_thiam_lai@bca.gov.sg) or Ms Gloria He at DID: 6730 4572 (email: gloria_he@bca.gov.sg) if you need further clarifications.
- 6. Thank you.

Yours faithfully

TAN BOON KEE
DIRECTOR
QUALITY & CERTIFICATION DEPARTMENT
for CHIEF EXECUTIVE OFFICER
BUILDING AND CONSTRUCTION AUTHORITY

Promote the adoption of DfMA which supports both quality and productivity

1. Higher bonus points are now awarded to projects to further encourage the use of prefabrication technologies and productive materials, which lead to higher quality and productivity. This not only supports BCA's buildability and constructability drive, but also recognises the efforts of builders which adopt less labour-intensive design and material choices. These include the use of prefabricated prefinished volumetric construction (PPVC), prefabricated bathroom unit (PBU), mass engineered timber such as cross laminated timber/glue laminated timber and productive materials such as engineered wood and vinyl flooring. The use of such prefabricated technologies and materials will also greatly reduce the need to deploy skilled manpower to carry out the finishing works which are highly labour intensive. A summary of the points given under the 9th edition bonus point framework is as follows:

Description	Bonus Points		
Usage of Precast Concrete (PC) Elements (PC elements supplied by SCI accredited precasters)	2 points (Structural Bonus point)		
Usage of Prefabricated Prefinished Volumetric Construction (PPVC supplied by suppliers accredited under SCI/SSSS MAS)	3 points (Architectural bonus point)		
Usage of Prefabricated Bathrooms Unit (PBU supplied by suppliers accredited under SCI MAS)	1.5 points (Architectural Bonus point)		
Usage of Mass Engineered Timber (e.g. cross laminated timber, glued laminated timber, etc.)	2 points (Architectural Bonus point)		
Usage of Productive Materials (e.g. engineered wood flooring, vinyl flooring, etc.)	Max. 3 points (Architectural Bonus point)		
Quality Mark Projects (Projects with Tiered Rating)	Max. 1.5 points (Architectural Bonus point)		
Employment of Certified CONQUAS/QM Personnel	Max. 1 points (Full CONQUAS point)		

Note:

Ensure CONQUAS Score commensurate with end-users' expectations on workmanship quality

2. Architectural trades are more visible to end-users as compared to structural works.. Thus the 9th edition places higher emphasis on architectural works and has increased the scoring weightage by 15% and reduced by a similar percentage for structural and mechanical & electrical works. In addition, a homeowners' survey and data analysis revealed that end-users are more concerned with ceiling, door and window elements among the architectural trades, particularly accessories defect, functionality and evenness of surface. Hence, the weightages of the quality standards for these elements have been adjusted accordingly to align with end-users

a) Award of bonus points for productive technologies will be aligned with definitions provided in Buildability Code of Practice;

b) MAS - Manufacturer Accreditation Scheme

expectations. The revised weightages for all categories of buildings under the 9th edition is as follows:

Components	CAT A Commercial, Industrial, Institution & others	CAT B		CAT C		
		Commercial, Industrial, Institution & others	Private Housing	Public Housing (Sold Flats)	Public Housing (Rental Flats)	CAT D Landed Housing
Structural Works	10%	15%	10%	15%	20%	10%
Architectural Works	75%	80%	85%	80%	75%	85%
M&E Works	15%	5%	5%	5%	5%	5%
CONQUAS Score	100%	100%	100%	100%	100%	100%

3. To further enhance the robustness of the CONQUAS score, scoring under the 9th edition will now take into consideration major defects (e.g. water seepages through wall/window, interfloor leakages, functionally deficient doors/windows etc.) detected during the internal finish assessments. The scoring will be adjusted to factor in the severity of these major defects. Adverse feedback from end-users on major defects that surface during the defects liability period of a project will also be considered when finalising the CONQUAS score.

DISTRIBUTION (via e-mail only):

President
Institution of Engineers, Singapore (IES)
70, Bukit Tinggi Road
Singapore 289758
ies@iesnet.org.sg
Cherie.lim@iesnet.org.sg

President
Association of Consulting Engineers Singapore (ACES)
18 Sim Ming Lane
#06-01, Midview City
Singapore 573960
secretariat@aces.org.sg

President
Real Estate Developers' Association of Singapore (REDAS)
190 Clemenceau Avenue
#07-01 Singapore Shopping Centre
Singapore 239924
enquiry@redas.com.sg

President
Singapore Contractors' Association Limited (SCAL)
1 Bukit Merah Lane 2
Construction House
Singapore 159760
enquiry@scal.com.sg

President
Singapore Institute of Architects (SIA)
79 Neil Road
Singapore 088904
info@sia.org.sg

President
Society of Project Managers (SPM)
Macpherson Road P.O.Box 1083
Singapore 913412
societyofprojectmanagers@gmail.com

President
Singapore Institute of Building Limited (SIB)
70 Palmer Road,
#03-09C Palmer House
Singapore 079427
info@sibl.com.sg

President
Singapore Institute of Surveyors & Valuers
110 Middle Road
#09-00 Chiat Hong Building
Singapore 188968
sisv.info@sisv.org.sg

Acting Group Director (Building Quality)
Housing & Development Board
HDB Hub
480 Lorong 6 Toa Payoh
Singapore 310480
neo_poh_kok@hdb.gov.sg

Director of InfrastructureSchool Campus Department
Ministry of Education
1 North Buona Vista Drive
Office Tower Level 9
Singapore 138675
contact@moe.gov.sg
eng_wee_tong@moe.gov.sg

Director (Master Planning & Development) Sport Singapore 3 Stadium Drive Singapore 397630 Ivan_chang@sport.gov.sg

Director (Contracts & Procurement Division)
JTC Corporation
The JTC Summit
8 Jurong Town Hall Road
Singapore 609434
tham wai wah@jtc.gov.sg

Director (Airport Development & Planning)
Civil Aviation Authority of Singapore
Singapore Changi Airport
P O Box1
Singapore 918141
gsm@caas.gov.sg

Group Director (Development Services)
Urban Redevelopment Authority
45 Maxwell Road
The URA Centre
Singapore 069118
<u>ura_dcd@ura.gov.sg</u>
ler_seng_ann@ura.gov.sg

Deputy Chief Executive Officer (Property & Development)
Sentosa Development Corporation
39 Artillery Avenue, Sentosa
Singapore 099958
jacqueline.tan@sentosa.gov.sg

Senior Director (Building & Estate Management)
People's Association
9 King George's Avenue
Singapore 208581
foo soon leng@pa.gov.sg

Director (Estates & Development) Singapore Polytechnic 500 Dover Road Singapore 139651 c_pannirselvam@sp.edu.sq

Director (Estate Management Office)
Ngee Ann Polytechnic
535 Clementi Road
Singapore 599489
shirley.chong@np.edu.sg

Director (Estates & Facilities Management)
Temasek Polytechnic
21 Tampines Avenue 1
Singapore 529757
garypng@tp.edu.sg

Director (Estates Management Office)
Nanyang Polytechnic
180 Ang Mo Kio Avenue 8
Singapore 569830
ang eng nam@nyp.edu.sg

Director (Resource Development)
National Arts Council
Goodman Arts Centre
90 Goodman Road, Block A #01-01
Singapore 439053
nac feedback@nac.gov.sg

Senior Director (Campus Development & Estates) Institute of Technical Education 2 Ang Mo Kio Drive Singapore 567720 lim_cheng_siong@ite.edu.sg Director (Infrastructure Planning & Policy)
Ministry of Health
College of Medicine Building
16 College Road
Singapore 169854
low chian siong@moh.gov.sg

Director (Government Infrastructure Group)
Government Technology Agency of Singapore
10 Pasir Panjang Road
#10-01 Mapletree Business City
Singapore 117438
info@tech.gov.sg

Director (Properties & Facilities Management)
National Library Board
278 Marine Parade Road
#B1-01 Marine Parade Community Building
Singapore 449282
chua kim pau@nlb.gov.sg

Director (Engineering Development & Procurement)
PUB, Singapore's National Water Agency
40 Scotts Road
#22-01 Environment Building
Singapore 228231
pub_qsm@pub.gov.sg
young_joo_chye@pub.gov.sg

Director (Office of Resource PlanningNational University of Singapore 21 Lower Kent Ridge Road Singapore 119077 enquiry@nus.edu.sg

Associate Provost (Faculty Affairs) Nanyang Technological University 50 Nanyang Avenue Singapore 639798 assocprovost-fa@ntu.edu.sg

Executive Vice President (Architecture Group)
CPG Consultants Pte Ltd
1 Gateway Drive
#25-01
Singapore 608531
cpgcorp@cpgcorp.com.sg

Director (Procurement & Project Facilitation)
National Environmental Agency
40 Scotts Road
#13-00 Environment Building
Singapore 228231
Tan kok hoe@nea.gov.sg

Group Director (Safety & Contracts)
Land Transport Authority
1 Hampshire Road
Block 5A, Level 4
Singapore 219428
Frederick wong@lta.gov.sg