

Our Ref.: APPBCA-2019-15

Construction Productivity and
Quality Group

16 Nov 2019

See Distribution

Dear Sir/Madam

AMENDMENTS TO BUILDING CONTROL (BUILDABILITY AND PRODUCTIVITY) REGULATIONS 2011 AND REVISIONS TO CODE OF PRACTICE ON BUILDABILITY TO RAISE PRODUCTIVITY IN THE BUILT ENVIRONMENT SECTOR

Objective

1 This circular informs the industry of the changes to the Building Control (Buildability and Productivity) Regulations 2011 (the “Buildability Regulations”) and the enhancements made to the Code of Practice (“COP”) on Buildability which will take effect on **15 December 2019**. The changes are:

- (A) Exemption of projects with Gross Floor Area (“GFA”) < 5,000m² from buildability legislation;
- (B) Higher minimum Buildable Design Score (“B-Score”) for residential non-landed (“RNL”) projects with GFA ≥ 25,000m²; and
- (C) Introduction of outcome-based options for projects to adopt in lieu of meeting the minimum B-Score.

Background

2 The minimum Buildable Design Score (B-Score) for building projects have been raised progressively since 2013. In May 2017, the buildability framework was enhanced to place greater emphasis on Design for Manufacturing and Assembly (DfMA) to encourage designers to embrace DfMA concepts early during the design process. As part of the larger drive towards wider adoption of prefabrication technologies along the DfMA continuum, there

is a need to enhance the buildability framework to raise DfMA adoption for higher construction productivity. The changes to the Buildability Regulations and COP on Buildability are detailed below.

A) Exemption of projects with Gross Floor Area (GFA) < 5,000m² from buildability legislation

3 Industry has provided feedback that smaller projects have limited scope for prefabrication, due to lack of economies of scale and modularization. We will hence exempt projects with GFA < 5,000m² from meeting buildability requirements, to allow the industry to focus on larger projects which have greater scope for DfMA adoption and more significant impact on productivity improvement.

B) Higher minimum B-Score for Residential Non-landed (RNL) projects with GFA ≥ 25,000m²

4 In line with the focus on larger projects with greater scope for DfMA adoption, the minimum B-Score for superstructure works of RNL developments with GFA ≥ 25,000m² will be raised from the current 88 points to 92 points (see Annex).

C) Introduction of outcome-based options for RNL projects with GFA ≥ 25,000m² to adopt in lieu of meeting the minimum B-Score

5 DfMA covers a wide continuum of prefabrication ranging from individual prefabricated components such as drywall, precast panels and structural steel to integrated sub-assemblies such as Prefabricated Bathroom Units (PBU), Prefabricated Kitchen Units, prefabricated Mechanical, Electrical and Plumbing (MEP) modules to fully integrated assemblies such as Prefabricated Prefinished Volumetric Construction (PPVC). To allow designers flexibility to choose the types of DfMA designs and technologies that best meet their project needs, three deemed acceptable solutions and one 'open' option will be made available. Designers can choose to adopt any of these in lieu of meeting the minimum required B-Score for their projects¹:

¹ Designers will be required to submit documents to support their deemed acceptable solution or 'open' option on how their proposal can achieve the stipulated productivity improvement at plan approval stage and upon completion of the project.

Deemed acceptable solutions

- i. Minimum 50% prefabrication level + minimum 70% system formwork + minimum 50% prefabricated Mechanical, Electrical and Plumbing (MEP);
or
- ii. Minimum 65% prefabrication level + minimum 70% system formwork; or
- iii. Minimum 60% PPVC adoption; or

Open option:

- iv. Open option – any proposal which can achieve minimum 20% productivity improvement (from 2010's level)

Pilot for new buildability framework (to be implemented in 2020)

6 To transform the industry and make DfMA the 'default' way of construction, the COP on Buildability will be revamped to have DfMA as a major component in each of the three sections of buildability framework i.e. structural works, architectural works and Mechanical, Electrical and Plumbing works.

7 BCA will pilot the new framework before full implementation in 2020. BCA will invite firms to participate in the pilot to walk-through the proposed changes, so that key learning points can be included in the revamped framework.

Implementation Timeline

8 The changes outlined in paragraphs 3, 4 and 5 apply to projects submitted to the Urban Redevelopment Authority (URA) for Planning Permission on or after **15 December 2019**.

Clarification

9 Should you or your members have any queries concerning this circular, please contact Mr. Ooi Seow Min at 6804 4233 or email: Ooi_Seow_Min@bca.gov.sg or Ms Jenny Tan at 6804 4230 or email: Jenny_XY_Tan@bca.gov.sg.

Thank you.

Yours faithfully



FOO-LEOH CHAY HONG (MRS)
DIRECTOR
BUILDABILITY DEVELOPMENT DEPARTMENT
CONSTRUCTION PRODUCTIVITY AND QUALITY GROUP
for COMMISSIONER OF BUILDING CONTROL

DISTRIBUTION (via e-mail):

President
Professional Engineers Board, Singapore (PEB)
52 Jurong Gateway Road #07-03
Singapore 608550
registrar@peb.gov.sg

President
Board of Architects, Singapore (BOA)
5 Maxwell Road
1st Storey Tower Block MND Complex
Singapore 069110
boarch@singnet.com.sg

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

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

President
Association of Consulting Engineers, Singapore (ACES)
18 Sin 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
redas_secretariat@redas.com

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

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

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

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

All CORENET e-Info subscribers

A New Minimum Buildable Design Score for Superstructure Works of Residential Non-landed Projects with GFA \geq 25,000m²

Year	From 15 December 2019*	
CATEGORY OF BUILDING WORK/ DEVELOPMENT	MINIMUM BUILDABLE DESIGN SCORE (FOR SUPERSTRUCTURE WORKS)	
	5,000 m ² \leq GFA < 25,000 m ²	GFA \geq 25,000 m ²
Residential (landed)	78	81
Residential (non-landed)	85	92
Commercial	87	90
Industrial	87	90
School	82	85
Institutional and others	79	82

**based on date of planning application made to URA*