Enhanced Buildability Framework to Improve Site Productivity

Since 2001, BCA’s mandatory buildability framework has encouraged more labour efficient building designs and is one of the key contributing factors towards improving productivity on site. To give productivity a further boost, BCA is enhancing the buildability framework to require designers to deliver more buildable designs upstream, and builders to adopt more labour-efficient construction methods / technologies downstream through the following ways.

2. **Requiring more buildable design upstream.** The existing Buildable Design Score will be tightened by *dis-incentivising designs which need labour-intensive construction processes* such as brick walls and walls with plastering finishes, while at the same time, *encouraging designers to adopt labour-saving and standardized designs*. Buildable features such as the use of off-form external finished walls, prefabricated bathrooms and industry-wide standardised floor heights with standardised precast staircases would be recognised with more points. The enhanced buildable design scoring system would thus bring about wider use of buildable and easy-to-build construction that would help to reduce dependence on labour.

3. **Requiring more labour-efficient construction methods – New Constructability Score.** While the Buildable Design Score focuses on the use of buildable designs during the upstream design process, the introduction of a new Constructability Score would impact on the construction methods used during the downstream construction phase. Through the Constructability Score, the builders’ contribution to raising site productivity can be increased by getting them to *move away from traditionally labour-intensive construction methods and switching to more labour-efficient construction processes*.

4. The Constructability Score would assess the builders’ choice on their usage of labour efficient systems and processes under the structural, architectural, mechanical, electrical and plumbing scope of construction works. For example, under the structural component, the use of traditional timber formwork and external scaffolding would be given much lower points to dis incentivise their use. Comparatively, a builder who adopts the use of system formwork and climbing scaffolding, which would reduce the manpower usage on site, would be awarded with more points. Besides labour efficient construction methods, the adoption of good site practices, such as good project and site management is also critical to improving site productivity. Thus, the Constructability Score framework also awards points for Good Industry Practices such as use of BIM and trade productivity monitoring on site to achieve higher productivity.
5. **Scope and Timeline for Enhanced Buildability Framework.** For a start, the constructability score requirement will apply to projects with GFA more than $5,000m^2$. Builders will be required to submit the Constructability Score when they apply for the permit to commence work, or within 3 months after the permit has been issued (6 months for Design and Build projects) in the event that they require more time to plan for the type of construction methods / technologies to be adopted in the project.

6. BCA will **launch the enhanced buildability framework by 1H 2011.** The new requirements will **take effect by 2H 2011.**