

When to consider IBS systems in a project life cycle

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When is the best time to consider or introduce IBS systems in a project life cycle? The holistic approach outlined, as with all holistic approaches, benefits a project far more than the approach conventionally used in Malaysia.

Conventional approach

- 01 Preliminary design to tender or construction documentation uses conventional systems.
- 02 IBS structural systems are proposed as an alternative by the contractor at the tender or construction stage (at which time, the construction of the foundation would often be in progress and nearing completion).
- 03 The proposed IBS systems are adopted only if the original design could accommodate the proposed changes.
- 04 Systems are adopted in isolation for the proposed components only. The overall structure is not reassessed for the potential benefits from the IBS systems.

For example: If IBS floor slabs are proposed, and these are lighter than the original floor slabs, the columns and foundations could reduce in size resulting in material and consequent cost savings. However, the columns and foundations are often not redesigned to suit.
- 05 The specialist contractor undertakes the entire design of the IBS system.

Holistic approach

- 01 IBS structural systems are considered from the onset of the project.
- 02 The structural design is undertaken using the proposed IBS systems.
- 03 This allows the structural design to maximise the benefits of and account for the limitations of the IBS systems considered.
- 04 The C&S engineer undertakes outline design of the IBS system.
- 05 Specialist contractors are consulted as required.
- 06 Benefits and limitations are accounted for and designed for in the overall structural design.
- 07 The specialist contractor undertakes detail design, fabrication and as built drawings.

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