

3 MATERIALS ASPECTS 3.1 EFFICIENT USE OF MATERIALS

MA 3 PREFABRICATION

EXCLUSIONS None.

OBJECTIVE Encourage prefabrication building elements in order to reduce wastage of materials and quantities of on-site waste.

CREDITS ATTAINABLE 2

PREREQUISITE None.

CREDIT REQUIREMENT 1 credit when the manufacture of 20% of listed prefabricated building elements has been off-site.
2 credits where the manufacture of 40% of listed prefabricated building elements has been off-site.

ASSESSMENT

The listed building elements (pre-cast concrete) includes:

- facades;
- staircases;
- slabs;
- balcony/utility platform;
- parapet;
- partition walls;
- bridge-decks; and
- footbridges.

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Additional or alternative elements may be included, which the Client believes to demonstrate a significant contribution to the assessment criteria. However, the curtain wall/windows shall be excluded from the assessment.

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In order to avoid long-distant transportation, the manufacturing factory shall be located within 800 km of the site. The Client shall demonstrate through the submission of contract specifications, drawings and other supporting documents that the quantities (by weight or volume) of those building elements fabricated off-site are in accordance with the Code of Practice for Pre-cast Construction 2003. The assessment shall take into account the number and quantities of building elements in the building development that was fabricated off-site and credits will be awarded where the assessment criteria have been met.

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BACKGROUND

Prefabrication is the manufacture of sections of a building at the factory so they can be easily and rapidly assembled at the building site, improving the buildability of the building. Since the factory fabrication of building elements is conducted under controlled conditions, it allows for more efficient disposal of debris and waste. Noise, dust, site traffic and other environmental nuisances can also be reduced. Interior millwork and custom metalwork should be detailed to be shop-finished and installed to the highest degree to limit the need for on-site painting and finishing work.

The Hong Kong construction industry is continuously under pressure to raise productivity, reduce costs and improve the quality levels of constructed facilities. All these requirements are the key drivers for