Prepared by the New Zealand High Commission in Singapore

## Rāpopoto - Summary

Singapore's construction industry was heavily impacted by the COVID-9 pandemic, but has seen steady recovery in 2021, driven by rising construction demand from both the public and private sector. Construction contracts for this sector are expected to grow to between S\$23-28 billion this year, with the public sector estimated to fuel 65 percent of this growth. Four major trends, including a rising demand for green buildings and solutions, greater efficiency, widespread adoption of smart technology, and a shift towards more inclusive design, are set to shape the industry over the longer term.

## Pūrongo - Report

We provide an overview of Singapore's construction industry as it recovers from the pandemic, outlining major trends that will shape the sector moving forward.

#### **Impact of COVID-19**

The construction sector was among Singapore's worst-hit industries, accounting for 2.7 percent of the country's nominal gross domestic product in 2020, down from 3.7 percent in 2019. This drop is partially attributable to the halt in construction work (for four months) as Singapore raced to contain a COVID-19 outbreak among its migrant worker community (in mid-2020), the majority of whom are employed as construction labourers.

Singapore's heavy reliance on low cost foreign labour for its construction sector – three quarters of the sector are migrant workers from the region – has led to substantial labour shortages amid ongoing border restrictions. Although more migrant workers have been allowed to enter Singapore in recent months, most (others that those from mainland China) have to serve a quarantine period and all have to undergo regular COVID-19 testing, effectively raising labour costs.

Safety measures implemented as a result of the pandemic, including fortnightly COVID-19 testing for workers and safe distancing measures on construction sites, have also led to a general decrease in productivity and increase in costs. New waves of infections and lockdowns in neighbouring countries (particularly Malaysia) have disrupted supply chains for building materials, further compounding rising costs.

#### Future forecasts

Earlier this year, Minister for National Development Desmond Lee revealed Singapore is expecting a sustained recovery of construction demand over the next five years. Construction contracts for the built environment sector are expected to hit between \$\$23 billion and \$28 billion in 2021, up from the from the \$\$11.3 billion worth of projects estimated to have been awarded last year. Approximately \$5.7 billion worth of construction contracts have already been awarded in the first quarter of 2021.

In the medium term, the growth of the construction industry will be supported by public sector developments (such as public housing, transport and healthcare infrastructure), which is anticipated to contribute 65 percent (between S\$15-18 billion) of the overall construction demand for 2021.

Although demand for projects by the private sector is unlikely to return to pre-COVID levels over the next 1-3 years, it is projected to improve steadily, in tandem with the recovery of the global economy. Singapore's private property market has been particularly resilient, with the pace of increase in private housing prices gathering momentum since the second quarter of 2020. Current estimates for this sector are between \$\$8 billion to \$\$10 billion, but this is expected to reach between \$\$11 – 14 billion per year from 2022 to 2025 (pre-pandemic demand for this sector stood at \$\$14.5 billion in 2019).

#### Major trends

The Singaporean Government has signalled that it is preparing for COVID-19 to become endemic globally, and therefore within the country. This has accelerated the need for construction businesses to adopt digital solutions that bring flexibility, and raise efficiency and productivity, as they look to operate in an increasingly unpredictable environment. Additionally, under the recently unveiled Singapore Green Plan 2030, the Government identified sustainability as a key priority within the built environment sector.

Accordingly, there are four major sector trends that are set to shape the industry over the medium and long term. These include:

- **Rising demand for green buildings**, including through the implementation of green building solutions (e.g. smart sensors to track water/energy use).
- Increasing emphasis on efficient building, with the Government pushing for the uptake of the Design for Manufacturing and Assembly methodology which involves construction being designed for off-site manufacturing, before being assembled on-site.
- Shifting towards more inclusive designs, which ensures that the built environment is accessible to individuals with a range of needs. Meeting the design needs for an ageing population is of especial importance as more than a third of Singapore's population will be over 65 years by 2035.
- **Greater adoption of smart technology** through the use of Integrated Digital Delivery, which uses digital technologies to integrate work processes and connect stakeholders working on the same project throughout the construction and building process.

A more detailed breakdown of these sector trends, along with an analysis of future opportunities for New Zealand businesses, can be found in the attached Singapore Built Environment Sector report developed by NZTE. Responses to specific questions around consent authorities as well as building consents and processes are attached separately as an Annex.

# Frequently Asked Questions (FAQs) about Singapore's Construction Industry

#### **Building consents**

- a. Do interiors require building consents?
  - Yes, refer to <u>Building and Construction Authority</u> (BCA) guidelines for projects requiring BCA approval (i.e. a building consent).
- b. Do developers/owners want to get these consents (are they enforced by consent authorities, banks, insurers etc)?
  - Consent authorities dictate it
- c. Is there one building code for all locations with the jurisdiction?
  - Yes there is one building code
- d. Are any foreign building codes accepted also?
  - No
- e. What is the structure of consenting authorities?
  - Please refer to <u>BCA website</u>
- f. Does the consent process the same throughout the jurisdiction, or does it differ by consent authority?
  - All centralised under one authority (BCA), but consent requests differ depending on project type, scale and scope.
- g. How many consent authorities are there, what are their names, and what proportion of total building activity does each process consents for?
  - As far as we are aware there is only one consent authority, the Building and Construction Authority (BCA)
- h. What is the consent process?
  - Entirely dependent on the project and scope, size and complexity.
- i. What are the steps?
  - Steps are fairly typical involving initial submissions, including drawings and other relevant documents, followed by a sequence of inspections.
- j. How long does it take?
  - Differs as above.
- k. How much does it cost & is this a significant project cost?
  - Not known.
- I. How predictable is it?
  - It is important to distinguish between planning consent and building consent; building consent refers to adherence to building codes, which in Singapore are highly predictable and regulated. However, planning consent in Singapore is heavily controlled by central authorities and Singapore's planners do play a very active role so this can be highly unpredictable.
- m. How does it compare to other jurisdictions?
  - In the region, Singapore would be comparable to NZ, Australia as they are all modelled on the UK building code. Building in Singapore is very different to other countries in SEA. Much more

straightforward and efficient in Singapore as you would expect.

- n. Do the regulators have the ability to offer a fast-track service? This may be based on fees charged or pre-qualified materials/providers
  - Not known.
- o. Do the following segments reflect the categories requiring structural engineering designs for compliance?
  - Structural engineering requirements are similar to those in NZ and are dependent on the scope of the project. Also note, there is no requirement for seismic design (earthquakes are not a risk for Singapore) which does make structural engineering simpler.
- p. Do government/consent authorities have an interest in improving the consent process?
  - Yes
- q. Are there likely to be groups within consent authorities that would be resistant to a more streamlined/automated process?
  - No, Singapore likes efficiency and its systems are modern and often autonomous.
- r. Do developers desire shorter, lower cost & more predictable permits?
  - Yes, always
- s. Are the consent bodies public or private?
  - Public
- t. How is regulatory compliance enforced? E.g., through public/private inspectors, risk-based technology solutions or self-reporting.
  - Public and private inspectors
- u. Who are the stakeholder groups? For example, developers, financiers, insurance, regulatory authorities, materials suppliers, designers/architects, constructors, sub-contractors.
  - All of the above, same as NZ.
- v. What is the power dynamic between them?
  - Singapore development market is dominated by a handful of large companies (both Singapore and foreign)
- w. What are the typical costs associated with consenting processes?
  - Please refer to BCA website

#### **Communication**

- x. Is English commonly used by developers, designers, and consent authorities?
  - Yes

#### **Industry level trends and important features**

- y. What factors should a New Zealand company be aware of that are different and important in this jurisdiction.
  - Please refer to BCA website

#### **Sustainability**

z. What sort of policy settings (incentives or penalties) exist regarding sustainability in the building/construction sector?

Limited policies

#### **Skills Shortages**

- aa. Do any of these jurisdictions suffer from skills shortages in the construction industry?
  - Yes, Singapore's construction sector is reliant on both foreign talent and labour.
- bb. How easy is it for clients to find professionals to verify designs for compliance?
  - Easy

#### **Consultants**

- cc. Are consultants involved in the consenting process? E.g., architects and/or engineers (any other professions?) If so, what are their roles and responsibilities/liabilities?
  - Yes, but it depends on scope of the project.
- dd. What are the numbers or percentages of these professions in these jurisdictions? Is it possible to map the role they play across the construction lifecycle?
  - Possible with the right resources.
- ee. How receptive would these parties be to a platform such as Prenguin to improve efficiency, e.g., in Denmark there is a strong focus on efficiency for architects in ensuring compliant designs
  - Very receptive, there is a high demand for solutions that enhance efficiency.

#### **Technology**

- ff. How receptive to technology are the jurisdictions identified?
  - Highly receptive
- gg. Are governments and regulators accepting of digital solutions in regulatory compliance contexts? The OECD Digital Government Index may be of use.
  - Yes

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