

# Task Force on Water-Land Interface

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For discussion  
on 2 March 2015

TFWL/01/2015

## Strategic Development Plan for Hong Kong Port 2030

### PURPOSE

This paper provides an overview of the *Strategic Development Plan for Hong Kong Port 2030* created by BMT Asia Pacific Ltd. (BMT) for the Transport and Housing Bureau (THB). The Study's main focus is the containerised cargo handled at Hong Kong Port (HKP).

### BACKGROUND

2. HKP acts as both a gateway port for South China cargo and as a transshipment hub. South China cargo and international transshipment are two markets that HKP serves.

3. HKP's competitive strengths are:

- A geographic location that is attractive for transshipment;
- High frequency of sailings and good connectivity;
- Quality of service: reliability, security and low likelihood of damage to cargo;
- Shorter lead time;
- Freeport status; and
- Status as the only port along the China coast where foreign owned carriers can tranship China-related cargo.

4. However, HKP is less competitive in terms of cost (Terminal Handling Charge (THC) and inland transport cost by road for South China cargo), and there is diminishing distinction between HKP and competitors in terms of quality or capacity.

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5. A boom in the port sector saw the number of berths suitable for ocean-going container vessels in the Pearl River Delta grow by 141% from 2001-2011.

### **LOOKING AHEAD**

6. It is forecast that total container throughput (including throughput related to South China and international transshipment) may expand to 31.5 million Twenty-foot Equivalent Units (TEUs) in 2030, at a rate of 1.5% per annum. International transshipment is forecast to constitute the major growth in throughput, while throughput related to South China is forecast to have a slight negative growth. Non-containerised cargo is forecast to slightly decrease from 67.6 million tonnes in 2015 to 66.5 million tonnes in 2030.

7. Anticipated future trends in the shipping industry relevant to Hong Kong include:

- Growth of the South China cargo base but a diminishing share of South China cargo routed via HKP;
- A greater amount of inland transport undertaken by river which is creating additional river-to-ocean transshipment throughput;
- An increase in transshipment within the global shipping industry;
- An increase in the amount and proportion of throughput at HKP accounted for by international transshipment;
- More frequent calls from 'mega vessels'; and
- Handling of containerised cargo will continue to be concentrated at Kwai Tsing Container Terminals (KTCT).

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### **ISSUES FACING HKP**

8. There are various issues facing HKP, to which a number of measures are proposed:

#### **Market issues**

- Broadening range of trading partners and greater growth opportunities in Asia and other regions – the need for different levels of service and cost.
- A potential increase in calls by mega-vessels.

#### **Issues of Competitiveness**

- Higher THC than competing South China ports.
- Higher trucking costs.

#### **Barriers to Growth**

- Difficulty of implementing port development projects – such as time taken and difficulty of dealing with multiple Government departments.

#### **Operational Issues**

- Uneven utilisation of facilities.
- Increasing demand for barge berths.
- A growing trend of international transshipment.
- Need to accommodate forecast growth in throughput.

Throughput is forecast to exceed the capacity of container handling facilities as follows if no measures to enhance capacity are implemented:

- Kwai Tsing Container Terminals (KTCT) – by 2028.
- Berths and Wharves outside KTCT – Not before 2030.
- Buoys and Anchorages – Not before 2030.

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### RECOMMENDED MEASURES

9. A range of feasible measures are recommended to address the issues facing HKP, in particular the need to accommodate forecast throughput growth:

1. Upgrade Stonecutters Island Public Cargo Working Area (PCWA);
2. Dual ocean and river facilities (at Tuen Mun River Trade Terminal (RTT));
3. Provide additional barge berths at KTCT;
4. Better use of land around terminals;
6. Establish an HKP Development and Promotion Team; and
7. Expedite development of proposed logistics facilities.

10. Measures 2, 6 and 7 are administrative measures and will not involve any construction works. Measures 1, 3 and 4 involve various construction works, some at the waterfront. These measures are spread across several sites as illustrated in **Figure 1**.

11. All of the construction works are confined to KTCT and immediately adjacent sites. If the recommendations could be fully implemented, possible works at the waterfront consist of:

- Construction of new barge berths recommended by measure 3; and
- Upgrading the existing barge berths at Stonecutters Island PCWA to be able to accept barges or ocean vessels.

12. No reclamation is proposed.

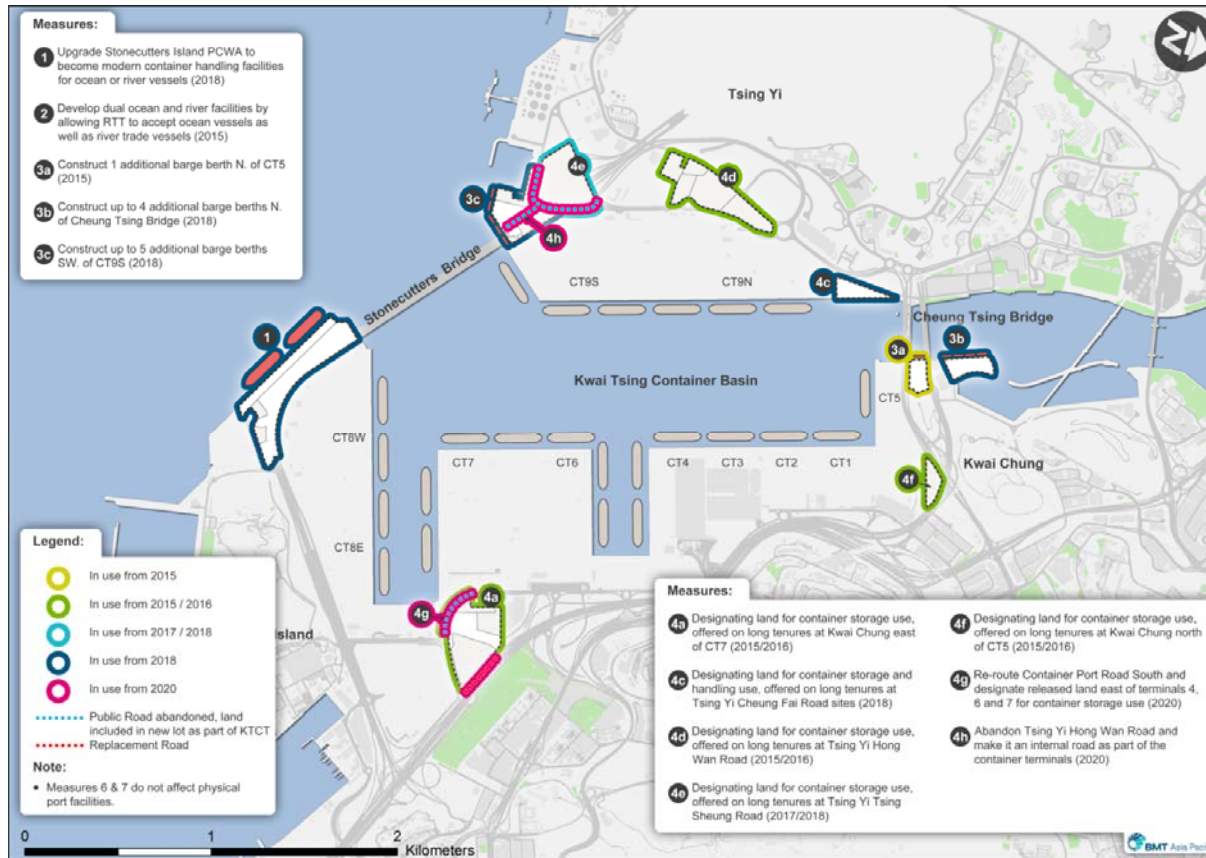
13. A complete list of recommended measures and their preferred implementation timeframe is shown in **Table 1**.

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**Figure 1 Map Showing Recommended Measures to be Implemented**



Source: BMT

Note: Measure 4b on land at Kwai Chung east of container terminal 8 (CT8) for permanent container storage use is not recommended as no need is identified prior to 2030.

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**Table 1 Recommended Measures for the Strategic Development Plan**

| Measures and Details   | Preferred timeframe <sup>1</sup>        |
|--|---|
| 1 Upgrade Stonecutters Island PCWA to become a modern container handling facility for ocean or river vessels with a view to improving operational efficiency.  | <i>In phases from 2018<sup>2</sup>.</i> |
| 2 At sites that can physically accommodate ocean vessels today, develop them as dual ocean and river facilities - RTT to be allowed to accept ocean vessels as well as river trade vessels (subject to lease modification with premium implication). | 2015                                    |
| Provide additional barge berths at KTCT to relieve congestion affecting river throughput.  |   |
| 3a - Construct 1 additional barge berth N. of CT5, as soon as possible.  | 2015                                    |
| 3b - Construct up to 4 additional barge berths N. of Cheung Tsing Bridge subject to physical constraint and rezoning, as soon as possible.   | <i>In phases by 2018.</i>               |
| 3c - Construct up to 5 additional barge berths SW. of CT9S, marine traffic impact assessment to be conducted as soon as possible to ascertain feasibility.   | <i>In phases by 2018.</i>               |

<sup>1</sup> The preferred timeframe best meets the development needs of HKP, however this may be subject to change after taking into consideration various detailed constraints and factors during implementation.

<sup>2</sup> The Public Cargo Working Area Berth Licence Agreement for Stonecutters Island PCWA will be expired in July 2016. Then, it takes about another year to install handling equipment at the site for terminal operations.

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| Measures and Details   | Preferred timeframe <sup>3</sup>                 |
|--|--|
| <p>Make better use of land around terminal boundaries and other facilities to accommodate growth in transshipment and allow efficient operation<sup>4</sup>. Land to be offered on long term tenures.</p>  |  |
| <p><i>4f - Assign land at Kwai Chung north of CT5 for permanent container storage use.</i></p>   | <p>2015/16</p>                                   |
| <p><i>4a &amp; 4g - Assign land east of CT7 for permanent container storage use. Extend Tat Mei Rd to connect with Mei Ching Rd, and abandon Container Port Rd South between Kwai Chung Customs House and roundabout with Mei Ching Rd. Abandoned section of Container Port Rd South to be part of the container yard.</i></p>         | <p>2015/16 for 4a;<br/>2020 or after for 4g.</p> |
| <p><b>4</b> <i>4e &amp; 4h - Assign land at Tsing Sheung Road for permanent container storage use. Abandon Hong Wan Road and make it an internal road as part of the container yard to maximise the benefit of 4e Tsing Sheung Road. This measure will complement the addition of up to 5 additional barge berths SW. of CT9S.</i></p> | <p>2017/18 for 4e;<br/>2020 or after for 4h.</p> |
| <p><i>4c - Assign land at Tsing Yi Cheung Fai Road and vacant land nearby for permanent container storage and handling use, with barge berths.</i></p>   | <p>2018</p>                                      |
| <p><i>4d - Assign land at Tsing Yi Hong Wan Road for permanent container storage use.</i></p>  | <p>2015/16</p>                                   |
| <p><b>6</b> HKP Development and Promotion Team – to be established as soon as possible within the context of the new statutory body for maritime.</p>  | <p>Hopefully in the next 3-5 years.</p>          |
| <p><b>7</b> Expedite development of proposed logistics facilities e.g. in New Territories</p>  | <p>In phases from 2015.</p>                      |

Source: BMT

<sup>3</sup> The preferred timeframe best meets the development needs of HKP, however this may be subject to change after taking into consideration various detailed constraints and factors during implementation.

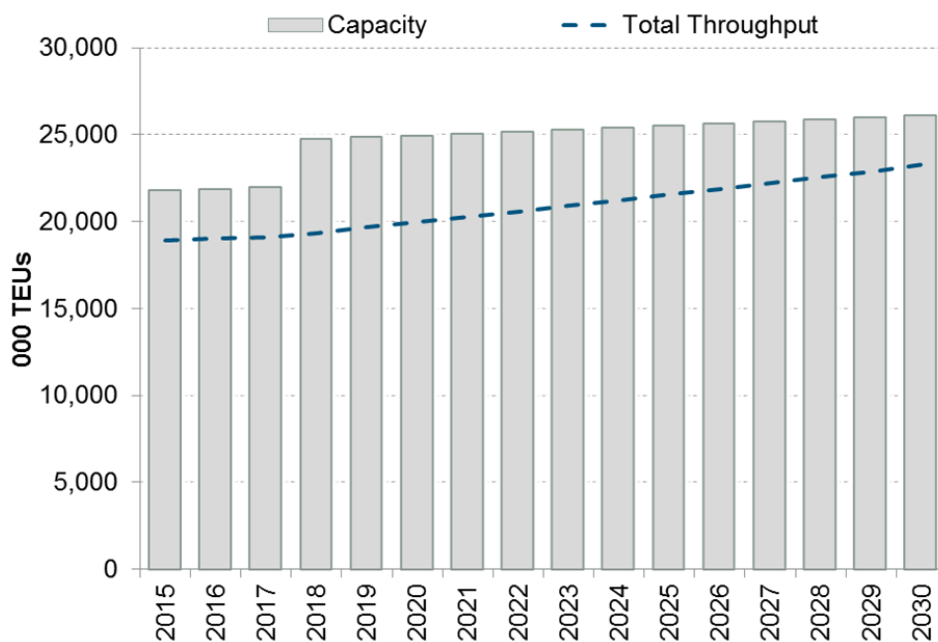
<sup>4</sup> The additional container storage area that could be created using all of the proposed measures is greater than the shortfall in yard capacity up to 2030. Recommended changes to land use have been selected from the proposed measures based on: the additional capacity required up to 2030, future availability of sites currently occupied, proximity to berths with lower yard-area-to-berth-length ratios, locations that would reduce the need for trucking via public roads, and the complexity of traffic engineering needed where changes to the road network are proposed. No need for measure 4b has been identified prior to 2030.

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14. Implementation of the recommended measures will maintain sufficient capacity at KTCT throughout the Study timeframe to 2030. The projection of throughput and capacity of KTCT with measures to enhance capacity in effect to 2030 is shown in **Figure 2**.

**Figure 2** Throughput and Capacity of KTCT with Measures to Enhance Capacity in Effect to 2030<sup>5</sup>



Source: BMT

15. There is inherent variability in forecast throughput, and therefore some spare capacity is desirable. The measures proposed for KTCT provide approximately 10% - 20% spare capacity based on the forecast throughput, which is consistent with the provisions of the previous few years. Spare capacity provides flexibility, and can help accommodate changes or events that are difficult to predict.

<sup>5</sup> This assessment is based on mixed-mode operation, i.e. ocean berths are used to serve both ocean and river vessels as required.



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16. Given that adequate capacity can be provided by increasing the utilisation of existing container handling facilities, and land around KTCT, it is not recommended to pursue the planning of container terminal 10 (CT10) for operation prior to 2030.

17. Additionally, analysis has identified that CT10 is not considered financially or economically viable within the timeframe of this study.

**BMT Asia Pacific Ltd  
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February 2015**