

## Annex B: BCA Green Mark Champion

The **BCA Green Mark Champion Award** was launched at BCA Awards 2008. This award recognises developers with strong commitment towards corporate social responsibility and outstanding achievements in environmental sustainability. It is given to developers who have a substantial number of Green Mark buildings at Gold level and higher.

Besides demonstrating a strong commitment towards corporate social responsibility and environmental sustainability, developers must meet these criteria to qualify:

Total no. of buildings rated	BCA Green Mark Champion	BCA Green Mark Platinum Champion	
		Platinum Champion	Platinum <sup>STAR</sup> Champion
Green Mark Gold & above	At least 10	At least 50	-
Green Mark Gold <sup>PLUS</sup> & above	At least 6	At least 30	-
Green Mark Platinum	At least 3	At least 15	At least 50

### Green Mark Champion: Land Transport Authority

The Land Transport Authority is dedicated to building a sustainable future for Singaporeans. LTA's facilities not only serve operational requirements but are also environmentally sustainable.

In 2018, LTA's Kim Chuan Depot Extension and the East Coast Integrated Depot (Rail) was awarded with the Building and Construction Authority's (BCA) BCA Green Mark Platinum for their environmentally-friendly features. LTA's Stabling Yard at Gali Batu Depot and Bus Depot also won BCA Green Mark Gold Award.

#### *Kim Chuan Depot*

To cater to future needs, Kim Chuan Depot's capacity will be expanded to be able to hold up to 140 trains from its current 70. The integrated depot will also house 550 buses, which will allow land use to be optimised. The depot expansion will be completed in 2025, when the CCL6 is expected to complete too.

Various sustainable design strategies for energy efficiency, such as energy efficient air-conditioning, mechanical ventilation and lighting, have been integrated into the Kim Chuan Depot Extension. In addition, sustainable products certified under Singapore Green Labelled Scheme (SGLS) will be extensively used in the development such as the ceiling board, tiles, timber doors and external paints.

#### *East Coast Integrated Depot*

The East Coast Integrated Depot's integration of four depots in one is unprecedented. The depot will comprise three train depots and a bus depot. The entire depot will be housed within a single site of 36 hectares, thus saving 44 hectares of land, about the size of 60 football fields. The main train depot building will span over one kilometre and consist of 18,000 precast beams, each up to 20 metres long and weighing up to 45 tonnes.

To reduce energy use, natural ventilation is a key design approach that is widely applied within this depot. Workshop spaces are also designed with dedicated ventilation shafts and supplemented with overhead circulation fans to improve comfort. The energy efficient lighting

system will improve energy use by 45%. A treatment system will also be in place to recycle up to 70% used water from train wash and reuse for train wash. The East Coast Integrated Depot will be completed in 2024.

### *Downtown Line (DTL)*

In 2017, BCA awarded the Downtown Line (DTL) the BCA Green Mark Gold<sup>PLUS</sup> certification, the highest tier achieved for a rail line to date, for its environmentally-friendly features. The DTL is the second rail line to achieve the BCA Green Mark certification, after the Circle Line (CCL) was presented with the BCA Green Mark Gold award in 2010. The assessment and grading were based on the Green Mark for Rapid Transit System (RTS) framework, jointly developed by the Land Transport Authority (LTA) and BCA.

The DTL is the longest underground rail line in Singapore, spanning 42km, with 34 stations, of which 11 are interchange stations. Similar to the CCL, the DTL adopts a regenerative braking system, which channels the energy produced by the train during braking to power a nearby train or train station. The upgraded system on the DTL shaves off close to 2 per cent of its energy consumption a year, which is equivalent to more than three times the energy saving achieved by CCL, and is enough to provide power to about 370 HDB 5-room flats for an entire year.

The DTL stations are also fitted with air-conditioning systems with energy savings features to minimise energy usage. These features will help save 6300 MWh of energy consumption per year, enough to provide power to about 1080 HDB 5-room flats for a year.