## JOINT MEDIA RELEASE

# FIRST LANDED HOUSING ESTATE TO GO PLATINUM

*- HAUS@SERANGOON GARDEN is the first landed residential estate in Singapore to achieve the BCA Green Mark Platinum award for incorporating green designs and technologies into every house.*

**22 May 2012** – Since the BCA Green Mark scheme was introduced in 2005, over 1,000 buildings in Singapore have met the Green Mark standards. This year, another new milestone in sustainable development has been achieved in Singapore with the first landed residential estate joining the fold of BCA Green Mark Platinum buildings – HAUS@SERANGOON GARDEN.

Jointly developed by City Developments Limited (CDL) and Hong Realty (Private) Limited, HAUS@SERANGOON GARDEN comprises 96 landed terrace houses located at Serangoon Garden Way. Slated for launch around mid-2012, this is the first landed housing estate in Singapore to achieve the top-tier Green Mark Platinum award.

HAUS@SERANGOON GARDEN is designed with environmental sustainability in mind. The development embraces an extensive use of both passive and active green building approaches to ensure that a comprehensive sustainable design is incorporated from the beginning. These include:

**1 Comprehensive passive design for the whole development and individual units**

The layout and orientation of the 96 units were designed to minimise heat gain and maximise natural ventilation from the sun-path and wind directions. For individual units, passive designs were incorporated to facilitate good air flow and circulation including a uniquely designed car porch and ample window openings to enhance natural day-lighting.

Each house also comes with a roof sky-light and open riser staircase that brings in more natural light into the centre of the house.

**2 Photovoltaic (PV) system using solar panels to convert sunlight into electricity**

Every house comes with a 1 kilowatt-peak PV system installed on its roof to generate solar electricity. Known to be one of the cleanest and greenest renewable energy sources, the solar power generated by the PV system will off-set the grid electricity consumed by the refrigerator provided for each house and house owners will benefit from direct cost savings on their electricity bills.

**3 Air-conditioner heat recovery system**

Another first-of-its-kind innovation for a landed housing estate here is the implementation of an air-conditioner heat recovery system where the waste heat generated from the operation of the air-conditioners will be used to provide homeowners with hot water in their bathrooms. This is a unique add-on innovation to the air-conditioning system which is of the highest energy efficiency “4-ticks” rating provided for each house.

**4 Rainwater harvesting system**

Every house will have a rainwater harvesting system to allow for the collection of rainwater for gardening use, hence reducing the use of potable water and also helps in the reduction in water bills.

Homeowners of HAUS@SERANGOON GARDEN can benefit up to 40% utility savings for each typical terrace house, depending on their individual lifestyle and utility usage pattern.

In line with CDL’s ethos of conserving as it constructs, beyond the green features, this sterling green residential enclave will also be built with sustainable construction methodology. From the outset, a carbon footprint study will be conducted to identify ways to mitigate the environmental footprint of the development during the construction phase. HAUS@SERANGOON GARDEN will feature an extensive use of sustainable quality materials, including green concrete and recycled raw materials, in the building structure and road works. To improve buildability, resource efficiency and site productivity, pre-cast and

pre-fabricated components will also be used widely during construction. All in, the developers invested approximately 4% of the total construction cost of the development in green infrastructure.

Mr Kwek Leng Joo, Managing Director of CDL said: “HAUS@SERANGOON GARDEN is a landmark residential development for us as we are able to deliver significant measurable and direct cost benefits to individual homebuyers over a long-term period. Beyond being mindful of reducing the environmental impact during the development phase, this eco landed housing estate will also have a lower carbon footprint throughout its entire life-cycle. Through the extensive ‘greening’ of each and every house within HAUS@SERANGOON GARDEN, we seek to create an integrated community of green homes that will inspire greater eco-consciousness across the larger Serangoon Garden residential enclave.”

Commenting on the HAUS@SERANGOON GARDEN, Dr John Keung, Chief Executive Officer of BCA said, “This is a first time we have awarded the Green Mark Platinum rating to a landed housing estate in Singapore, and we are indeed encouraged to see developers like CDL and Hong Realty making the effort to bring environmentally sustainable designs to not only high-rise buildings but individual landed homes. This project would serve as a good prototype for green landed housing in future and even for reference by existing homeowners who are looking to retrofit and improve the energy efficiency of their landed homes.”

*Refer to Annex A for details on the green features for HAUS@SERANGOON GARDEN.*

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**Issued by the Building and Construction Authority and City Developments Limited on 22 May 2012.**

## About Building and Construction Authority

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. At BCA, our mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, we aim to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, our vision is to have "the best built environment for Singapore, our distinctive global city". BCA works closely with its education hub, the BCA Academy of the Built Environment, and industry partners to develop skills and expertise that help shape the best built environment for Singapore.

For more information, visit www.bca.gov.sg.

## About City Developments Limited

As Singapore's property pioneer, City Developments Limited (CDL) is a listed international property and hotel conglomerate with over 22,000 luxurious and quality homes to its name. CDL has been leading the industry with green building innovation since the 1990s and awarded the Green Mark Platinum Champion Award in 2011 and the Built Environment Leadership Platinum Award in 2009 by BCA for its commitment to sustainable development and Singapore's built environment. Globally, CDL is the only Singapore corporation to be listed on all three Dow Jones Sustainability Indexes, FTSE4Good Index Series and the Global 100 Most Sustainable Corporations in the World.

For more information, visit www.cdl.com.sg.

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**ANNEX A: FACT SHEET**

# HAUS@SERANGOON GARDEN


*Artist's Impression*

Nestled within the tranquil low-rise Serangoon Garden residential enclave, HAUS@SERANGOON GARDEN is an exclusive terrace housing development with 96 units.

Conceptualised as a green sanctuary, HAUS@SERANGOON GARDEN is designed with environmental sustainability in mind and is the first landed housing estate in Singapore to receive the BCA Green Mark Platinum Award.

Each house is equipped with state-of-the art green technology for energy and water efficiency – it is the first landed housing development in Singapore to have a 1 kilowatt-peak Photovoltaic (PV) system that helps to offset the grid electricity consumption by the refrigerator and reduces utility bills. In addition, there is a rainwater harvesting system to collect rainwater for gardening use. The project also boasts an innovative air-conditioner heat recovery system whereby the waste heat generated by switching on the air-conditioner is used to provide house owners with hot water in the bathrooms. This is an add-on innovation to the air-conditioning system which is of the highest energy efficiency 4-ticks rating provided for each house.

Approximately 4% of the total construction cost was invested into the development of the estate's green innovations which is expected to result in up to 40% energy savings for each house.

| GREEN FEATURES | BENEFITS |
|---|---|
| **Designed for Energy Efficiency**<br>▪ First landed housing estate in Singapore to be equipped with a Photovoltaic (PV) system (using solar panels to convert sunlight into electricity) installed on the roof of the houses. The solar energy generated will help to offset the consumption of grid electricity by the refrigerator.<br>▪ Passive and Low Energy Architectural design and good overall layout orientation (North-South Orientation)<br>▪ Usage of cool roof and hardscape materials which reflect more sunlight<br>▪ Installation of energy efficient inverter air-conditioning (with 4 Green Ticks Energy Label) with heat recovery capability<br>▪ Innovative air-conditioner heat recovery system to convert waste heat generated by the air-conditioning unit to provide hot water in the bathrooms | ▪ Estimated energy savings of up to 40% savings per month for each typical terrace house, depending on their individual lifestyle and utility usage pattern.<br>▪ Minimise external heat gain and achieve maximum daylight harvesting<br>▪ Allow for energy conservation and achieving low Residential Envelope Transmittance Value (RETV)<br>▪ Reduce urban heat island effect and heat gain on façade<br>▪ Enjoy energy savings from the highest "4 ticks" energy-efficient air-conditioners |

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| **Designed for Water Efficiency**<br>▪ First landed housing estate in Singapore to incorporate a rainwater harvesting system on a project-ready basis<br>▪ Installation of water efficient sanitary fixtures and fittings (certified under PUB's Water Efficiency Labelling Scheme) such as tap fittings and water closets | ▪ Minimise water wastage and increase the overall water usage efficiency of each house<br>▪ Total estimated water savings of up to 40% for each house, depending on individual consumption pattern. |
| **Implementation of Sustainable Construction Methodology and Good Indoor Environmental Quality**<br>▪ Extensive use of sustainable materials for construction, including eco-friendly cement in place of ordinary Portland cement in concrete production, green concrete (Recycled Concrete Aggregates and Washed Copper Slag), eco-friendly materials (certified under the Singapore Green Label or Singapore Green Building Product schemes)<br>▪ 30% recycled content in ceiling board, road pavements and pre-cast concrete drain and road kerbs<br>▪ Utilisation of non-chemical termite treatment system<br>▪ Extensive use of pre-cast / pre-fabricated components in construction<br>▪ Carbon footprint study conducted for project to identify ways to mitigate the environmental impact of the development<br>▪ Ample window openings to ensure good air flow and circulation and natural day-lighting<br>▪ Air-conditioner has Titanium Apatite Photocatalytic Air-Purifying Filter to absorb and decompose bacteria | ▪ Utilisation of materials with recycled content to minimise impact on the environment<br>▪ Reduce toxicity levels of emissions to the environment during the treatment<br>▪ Improves buildability, resource efficiency and productivity<br>▪ Improve environmental performance during construction phase<br>▪ Maximise fresh air entry to interiors and treat air-conditioned air to optimise occupants' comfort at all times |
| **Other Green Features or Eco-Initiatives**<br>▪ Fan points provided at living and dining areas of each house to allow owners to install their own fans<br>▪ Installation of eco-plugs to inform residents on the energy consumption of their electrical appliances<br>▪ Lush green landscaping incorporated in the surrounding public park, which is equipped with modern play equipment & 3G exercise station<br>▪ Provide easy access to recycling facilities with recycling bins located around estate | ▪ Encourage the use of less energy intensive air cooling appliances<br>▪ Allow monitoring of energy usage and encourage reduction in energy use by occupants<br>▪ Promote recycling amongst occupants |