Partners In Perfection

Creating better living environments with industry partners and residents

Living The Green Life
In Treelodge@Punggol, Singapore’s first eco-town

Little Pockets Of Heaven
Community gardens thrive in HDB estates

High-rise Harmony
Fostering good relationships among residents
Cover Story
Partners In Perfection 02-11

Living The Green Life 12

Working with the industry to promote excellence in public housing design and construction

Meet the Teos – living in Singapore’s first eco-precinct

(On the front cover, from left to right): Liow Tian Hong from HDB, with Gidgetelena Ong and Randall Gan from Surbana International Consultants Pte. Ltd.
Partnerships In Bloom

In the ‘Roadmap for Better Living in HDB Towns’ to create well-designed, sustainable, and community-centric towns, the involvement of key parties such as residents, industry, and community partners represents a strategic factor in the realisation of our plans.

In this issue, we examine how niche community gardens are helping to nurture stronger ties among residents, and survey the awards and acknowledgements that spur HDB’s industry partners to deliver excellence as they strive alongside HDB’s stable of professional and dedicated staff.

The planning and professionalism and care that go into the making of a vibrant HDB town – from the physical construction and design of the blocks and precincts, to how residents interact in the social and community spheres – are ongoing, evolving efforts.

Looking at these various flourishing initiatives, the partnerships that have sprung up promise a rosier outlook for public housing in Singapore.

About ‘Dwellings’

‘Dwellings’ is published by the Housing & Development Board (HDB), Singapore’s public housing authority and a statutory board under the Ministry of National Development.

For over 50 years, HDB has provided quality and affordable public housing for generations of Singaporeans. Currently, more than eight in 10 resident households in Singapore call an HDB flat their home. Through ‘Dwellings’, we want to share how we create the kind of public housing that is uniquely different, and also uniquely Singapore’s.

We also have a website www.dwellings.sg where you will find more images and interactive content, and where you can send in your feedback and suggestions.

22 LITTLE POCKETS OF HEAVEN
‘Community in Bloom in the Heartlands’ programme for residents – growing more than plants

30 HIGH-RISE HARMONY
HDB staff’s efforts in resolving the challenges in high-rise living
Partners in perfection
In celebrating excellence, one can inspire greatness. The HDB Awards and inaugural PEAK Forum are designed to do just that – to push to new limits the boundaries of public housing design and construction.
The environment here makes people happy,” so says retiree Anoop Singh, whose sage observation will find ready agreement with his neighbours living at Teck Ghee Vista.

A newly completed housing precinct, Teck Ghee Vista is one of the 21 winners of the HDB Awards 2012. Its design merits go beyond the observable elements, making the residents feel right at home. HDB had explored several schemes in partnership with Surbana International Consultants Pte. Ltd. before creating this pleasing urban oasis in Ang Mo Kio Town.

**Recognition**

Since 2005, HDB’s business partners who have shown excellence in architectural design and building construction have been recognised through annual awards that spur them to achieve even more. There are two main categories of awards – the Design Award and the Construction Award.

The HDB Design Award recognises design innovation and excellence in public housing for completed and to-be-built projects. The Construction Award for its part is for deserving contractors who have demonstrated outstanding project management, construction quality, public relations as well as innovation when undertaking HDB building projects.

“As HDB works with the private sector to design and build homes, the HDB Awards has become an important industry benchmark and inspired many good designs and quality construction. It has also led to higher standards of design, quality and safety to fulfil customers’ expectations for quality homes,” notes HDB Deputy Chief Executive Officer (Building), Mr Sng Cheng Keh.

Ryan Lye, Senior Architectural Associate from ADDP Architects LLP, which won the Design Award (Merit) for the Waterway Woodcress project, agrees. “HDB builds for the majority of Singaporeans, so this award encourages us to provide quality design solutions for public housing. We are very honoured to receive this recognition which will serve as a motivation to all the staff in our firm to continue to do good architecture work.”

**Constant Challenge**

Catering to diverse audience groups, HDB’s constant challenge is coming up with innovative housing choices that meet different needs, incomes and aspirations. This demands hard work, commitment and support not
The HDB Awards has become an important industry benchmark and inspired many good designs and quality construction. It has also led to higher standards of design, quality and safety to fulfil customers’ expectations.

only from within the organisation itself, but also from industry partners, to make it happen.

Senior Vice President (Architecture) Mohd Asaduz Zaman, from Surbana, sums up the prevailing sentiments of HDB’s professional partners when he explains why it is an honour to receive the HDB Award, especially for Innovative design. “Having completed numerous HDB projects over the years, we are continually exploring new ideas where public housing design can be re-defined and re-invented. This is especially challenging in an environment where the expectations of residents are continually rising.”

Acknowledging their important role, HDB Chief Executive Officer, Dr Cheong Koon Hean, says, “We congratulate all the winners who have partnered us on this journey, as we strive to develop the best homes for Singaporeans.”

“The well-designed homes and towns that Singaporeans enjoy today did not just happen by chance overnight. It has come about from the collective pool of experience that HDB has built up together with the industry over the past 50 years,” says Dr Cheong. “Going forward, we will endeavour to do even better, constantly keeping our focus on our Roadmap for Better Living in HDB Towns to develop well-designed, sustainable, and community-centric towns.”

The Roadmap is a guiding vision for how HDB intends to secure a better housing environment for Singaporeans through the quality of the built design as well as the sustainability of the towns and their impact on the physical, social and human dimensions of life.
Moving In Concert
In the past, HDB was both developer and master planner. Its responsibilities have evolved over the years, and while HDB still retains its master planner role – coming up with the plan and vision for the towns and setting out the guidelines to achieve this – there is now a lot more collaboration with the industry partners. From the iconic The Pinnacle@Duxton to the award-winning My Waterway@Punggol, the concert of partners has been a critical support for these acclaimed HDB projects.

HDB has provided a million homes for more than 80 percent of the resident population, as Singapore’s largest housing developer. The large scale of the building programme opens up opportunities to influence the way the industry designs and constructs to provide Singaporeans with quality public housing as well as meet national sustainability goals.

To this effect, the HDB Professional Engagement and Knowledge Forum, or PEAK Forum was launched in October 2012 to broaden and deepen the industry’s building knowledge through sharing of best practices. This new step forward is a visible nod to the importance HDB places on professionalism and innovation.

Explaining why the PEAK Forum is going to be a milestone marker in HDB’s journey towards design and construction excellence, Dr Cheong says, “Singapore, like many cities and countries, faces issues of rising densities, and population and climate change. However, these challenges are also opportunities to explore creative solutions to create liveable and sustainable environments.”

“We need to look into more creative urban design, new building typologies and innovative technologies that can work for us to build better homes.

It can also sharpen Singapore’s competitive edge as an urban solutions hub. The annual PEAK Forum is therefore an ideal platform towards this goal, where industry professionals and academia can gather, exchange knowledge, learn and advance together.”

Mr Sng adds, “With HDB’s new housing roadmap pointing a clear way ahead for public housing, it is only natural that a suitable platform is created to take this public and private partnership further. Hence, it is timely that we now have PEAK Forum to help facilitate more fruitful exchange and interchange of ideas among the industry collaborators.”

The well-designed homes and towns that Singaporeans enjoy today did not just happen by chance overnight. It has come about from the collective pool of experience that HDB has built up together with the industry over the past 50 years.
HDB CEO Dr Cheong reiterates the importance of industry partners to HDB’s work

Children making the most of a roof garden at the award-winning Teck Ghee Vista development

It is easy in this digital age to get caught up with email, but nothing beats face-to-face encounters when it comes to professional knowledge sharing. This is what the PEAK Forum, HDB’s new platform to bring together experts and practitioners in the building industry, aims to do.

The first PEAK Forum featured design and construction productivity as the theme, with selected keynote speakers, site visits and an exhibition as part of the two-day programme.

Group Director (Building Quality), Thomas Seow, who headed the inaugural launch, sums up the outcome of the forum which drew almost 900 industry participants: “From the feedback given, many agreed that the forum is a timely step to help focus on excellence in public housing via good design, innovative construction methodology and productivity. They also believed that it will enable the industry to make further inroads in these key areas.”

Voicing similar viewpoints, Desmond Hill, Deputy General Manager from Penta-Ocean Construction Co. Ltd says, “I am impressed with the massive turnout during the HDB PEAK Forum. I personally benefited from the other speakers who shared their project experiences, challenges faced and productivity methods adopted. While learning is part of life, which takes place at all times and at various places, I am glad that HDB has taken the initiative to facilitate an avenue for this knowledge sharing session.”

Congratulating HDB on the success of its inaugural PEAK Forum, Patrick Lee, Director (Architecture) from Surbana, adds, “Through this forum, there was lively and constructive dialogue that allowed the participants to gain more insight into the thought process and design approaches of various practitioners, and also to articulate the unique requirements of Singapore’s public housing. Indeed this has been a great platform for the industry professionals to come together and share experiences and ideas. Perhaps there could be opportunities to impart this to a wider audience. It could be in the form of video replay, on HDB websites.”
HDB Awards 2012

Featured here are three completed projects that bagged the HDB Awards in 2012.

HDB Construction Award

Ghim Moh Valley (Winner)

Completed in October 2011, this is a Selective En bloc Redevelopment Scheme (SERS) project comprising five residential blocks and 1,394 flats. The project managed to achieve a high Construction Quality Assessment System (CONQUAS) score of 88.5, even though it was built on a tight site and faced many challenges during construction. CONQUAS is an industry standard assessment system and is also a widely recognised and internationally accepted yardstick for building quality.

Looking at the blocks rising serenely from a gentle sea of green, it is clear that nature is also a big winner in this project as the green ambience of the area has been preserved despite the site challenges.

As the development is located along a strip of woody green beside a large canal, and nestled within a mature HDB estate, the project team had to manage the construction activities well. They also had to ensure that residents living nearby were updated on work schedules and disruptions, hence timely communication was important.

The constraints of the site also meant that innovative construction solutions were needed. For example, the bridge that links the development to Ghim Moh estate nearby had to be fully cast on site. This presented certain challenges because the construction had to be carried out over a canal where storm waters run through.

Project Director and HDB Executive Engineer, Tiew Siew Sien explains why the project deserved to win the Construction Award. “It has not only delivered a beautiful development for residents to enjoy, but also shows the partnership between HDB and its contractors in achieving innovative solutions.” On the advantages of such partnerships, she says, “Partnering can bring significant benefits by improving quality and achieving timeliness of completion while keeping costs steady. Its fundamental components are formalised mutual objectives, agreed problem resolution methods, and an active search for continuous measurable improvements.”

HDB Construction Award
Ghim Moh Valley (Winner)

01 Facilities on the rooftop of the multi-storey car park at Ghim Moh Valley

02 (From left to right) Project Director Leon Siow from Chip Eng Seng, and HDB Executive Engineer Tiew Siew Sien
With sea views to its south and green hills to its north, Telok Blangah Towers draws inspiration from its idyllic surrounds. Its architecture highlights clean forms and curved roof features that echo its nautical frontage and the green canopies of the rainforest trees behind. To take advantage of the scenic setting, its timeless and elegant design features full height windows in the living room and three-quarter height windows in the bedrooms, while the upper units of the tower blocks have wrap-around corner windows in the master bedroom.

Completed in 2012, Telok Blangah Towers is an integrated development with 400 flats, comprising 90 Studio Apartments, 100 units of 3-room and 210 units of 4-room Premium flats spread over three tower blocks. With the deliberate variation in building heights, the towers frame the scenic views and form a picturesque, pleasing silhouette.

Some other features of this award-winning project include the direct access from each car park level to the residential blocks, hence improving accessibility and convenience. A roof garden above the car park elevates the amenities for a safe and tranquil recreational space. Habib Ismail, a resident, says his son enjoys playing at the roof garden playground every day.

Project Coordinator for the Telok Blangah Towers, HDB Principal Architect Quek Ser Bock, who worked closely with the project consultant to give design input, points out some of the planning considerations that have made the project an architectural triumph. “You can see how the car park profile follows the curved site profile. This allows for a larger central void for more natural light and ventilation and space for trees. There are several large existing rain trees that Surbana and I made an effort to keep. These trees give good shading and lend a natural ambience to the environment.”
HDB Design Award

Teck Ghee Vista
(Merit award winner)
Consultant: Surbana International Consultants Pte. Ltd.

With its staggered, varying heights, clean vertical lines and interplay of different window fenestrations, Teck Ghee Vista at the junction of Ang Mo Kio Avenue 1, offers its residents a dream home, and views. Anoop Singh, a resident of the newly built precinct, says that the development has impacted the residents in a positive way as “every floor has a different view and some of us can see the city side, some the south side, some see the roof garden – all very nice views. I can see that the people are really happy.”

Completed in 2012 with 136 Studio Apartments, 313 3-room flats, 598 4-room flats and 174 5-room flats, Teck Ghee Vista is designed using a linear approach which provides visual and physical connectivity for all the blocks. Such a design also allows for wind and light to reach the units while minimising the east-west sun exposure.

Conceptualised as an urban oasis, the precinct offers a tranquil surround where plants and vegetation are spread out among the indoor and outdoor activity nodes, footpaths, resting places and other communal facilities. Adding to its further appeal are the bright coloured walls that integrate seamlessly with the landscape, while the separation of the service road from the communal activity areas has created a safe, vehicular-free environment.

Project Coordinator for Teck Ghee Vista, HDB Principal Architect, Liow Tian Hong, says, “We worked closely with Surbana, the consultant for this project, at the design stage and explored several schemes to create an interesting and a delightful lifestyle living environment. Overall, it was a challenging yet fulfilling experience.”

(From left to right) HDB Principal Architect Liow Tian Hong and Assistant Vice President (Architecture) Randall Gan, from Surbana

Bright hues lend a cheery look to Teck Ghee Vista

Scan to read about more award-winning projects
Residents of Treelodge@Punggol, Teo Boon Tong and Tan Geok Fang, are living the green life. In their mini-garden, sunbirds flit in and out, while outside, lush landscaping and greenery surround their high-rise apartment. This compact residential development they call home is the first public housing eco-precinct to be built in Singapore’s first eco-town.
Whenever it rains, Teo Boon Tong and his wife, Tan Geok Fang, rush out with a tub. The rainwater they collect is then used to water their mini-garden in their balcony. They grow plants that are easy to maintain and the flowers attract the nectar-seeking sunbirds. Such sightings are not commonplace in Singapore, so these colourful birds cause a stir whenever they visit. Their appearance – always in pairs – never fails to delight the young married couple.

Treelodge@Punggol, where the Teos live, is pioneering HDB’s eco-living dream to make public housing more environmentally friendly and resource-efficient. As a Green Mark Platinum Award winner, which is the highest rating given by the Building and Construction Authority for green developments in Singapore, its adoption of energy-efficient, and waste and water management technologies has made the precinct a successful test bed for environmentally friendly living.

Living Proof
Verdant greenery is the first thing that greets you as you approach the Treelodge@Punggol. The green footprint is visible everywhere – the lush plantings on the ground, on the rooftops, and up on walls and columns. Beyond this visual tapestry of green are technologies that minimise energy consumption, promote water conservation as well as effective waste management. This first eco-precinct boasts a solar photovoltaic (PV) system on the rooftops of all its seven residential blocks. It is able to achieve close to net-zero energy demand for common services and thereby reduce maintenance cost. On a conservative estimate, the total energy savings from this and other energy measures put in place is about 336 MWh a year, equivalent to powering 78 average 4-room households for one year.

Many of the pioneering green measures found at the Treelodge@Punggol are hatched at HDB’s Centre for Building Research. “Treelodge@Punggol is HDB’s demo eco-precinct which incorporates various green solutions that encourage residents to live in a green living environment,” says Alan Tan, Director (Environmental Sustainability Research).

The precinct’s higher green plot ratio has been used as a planning and design tool to achieve specific outcomes: lowering of the ambient temperature by about 1 degree Celsius and creating an aesthetically pleasing and conducive living environment for the residents. The Teos have embraced their green lifestyle readily and are grateful for the opportunity to live out their green dream in this precinct.

“We try to reuse water as much as possible and collect rainwater to water our mini-garden,” says Boon Tong. Adds Geok Fang, “See the upturned plastic bottle on the guardrail? It is for the sunbirds.” As for those plastic bottles that they have no further use for, they are quick to recycle them. “The centralised recycling chute is just outside our home, so it is very convenient. We actually have no excuse not to do it! Once every two weeks, we’ll gather them in a bundle for recycling.” The centralised chute for recyclables is an innovative green feature of the Treelodge@Punggol helping residents do their part to contribute to waste recycling and resource conservation.
The Teos are not the only ones pleased with the eco-friendly and resource-conservation features of their precinct. A survey by HDB found that 98 percent of the residents feel this way. Step into the apartment of the Teos up on the 16th floor and you will see why. A cool breeze gently greets you in the bright and airy flat, the result of a passive design strategy that helps to maximise lighting, wind flow and ventilation. And if you happen to admire the nature-inspired decals that the Teos have pasted on their walls, you may not be aware that they hide an eco-innovation underneath – the FerroLite Partition Wall that HDB developed as a sustainable alternative to concrete walls. Patented in Singapore, it uses less material than conventional partition walls and achieves better acoustic performance too.

And where the sun strikes harshest, the façade walls facing east and west have ‘Cool Walls’ that help to lower heat. These walls have in-buit thermal insulation which helps to reduce the overall thermal heat gain by up to 20 percent as compared to conventional gable-end walls. For the Teos, all this translates to a cool and comfortable home without the use of air-conditioners. Boon Tong notes that the temperature within their flat is always a shade or two lower than the temperature outside. Wife Geok Fang adds, “Because it’s already so windy, we turn on the air-conditioner maybe only once a month, just to ensure that it’s still working!”

01 Sunbirds are frequent visitors to the Teos’ home (Photo courtesy of Boon Tong)
02 Recycling is made convenient with collection points on every level
03 Checking out the digital panel showing the amount of energy generated by the solar panels
01 The Teos relaxing in their cosy balcony with their plants creating a green haven.

02 Many Treelodge@Punggol residents, like the Teos, cycle around their eco-precinct.
In fact, at every turn and corner, the Teos are constantly reminded and aided to live a green lifestyle in their Treelodge haven. “Whenever we wait for the lift, the digital panel displays the total amount of energy that has been generated by the solar panels installed on the rooftops.” The machine-roomless lifts that consume 10 percent less energy than conventional elevators are another example of innovative technology deployed at the Treelodge@Punggol. The built-in regenerative function works to recover the energy during the braking phase, thus reducing energy consumption.

Pointing to another eco-feature, Boon Tong says, “Did you also know that the staircase LED lightings include motion sensors so that light is provided only on demand? Well, these features remind us that this green concept is not just limited to our own home, but is present throughout our estate.” Cookie, their pet dog, interjects in agreement with a tiny yelp to remind them that it is time for her walk to explore the many nooks and crannies along the precinct’s Green Spine and Green Path – further reasons for the Teos to celebrate the good, green life at their Treelodge home.

- An extensive eco-deck on the roof of the podium car park straddles across the entire first storey of the precinct’s residential buildings. Housing play and fitness amenities, this is also where a dedicated spot for community gardening thrives.

- Linking up all the amenities is a Green Spine that runs through the precinct, with plantings helping to provide visual relief, and reduce temperature and heat glare.

- Around the precinct periphery, a 650 metre-long green footpath with shaded trellises and trees makes walking and jogging a very pleasant experience.

- The glass and concrete of the building roofs and façades have also been softened with greenery – balconies and planter boxes and vertical greening of selected wall columns help to green up the façade.
The first public housing project to be conferred the Green Mark Platinum Award, the Treelodge@Punggol is the first of many eco-precincts that HDB will develop. Many will be located in Punggol Town, which has been planned to be a living laboratory to test bed green technologies and urban solutions for public housing.

Punggol will play a key part in achieving Singapore’s goal to develop in a sustainable manner. It is right that public housing, where 82 percent of the resident population lives, leads the way for development that is less consumption-oriented and more self-sustaining.

HDB must be able to provide housing for an increasingly dense population while ensuring that the environment is appropriately taken care of. It has to do so in an economically competitive manner while also making certain that the overall quality of life is maintained. New and uncharted, Punggol offers the ideal opportunity for HDB to develop it into an eco-town – one that can serve as living proof that well-designed, sustainable and community-centric towns are attainable.

Guided by HDB’s sustainable development framework, Punggol is designed based on urban planning principles that encourage green living and green commuting. This has resulted in the creation of smaller, more intimate precinct settings, buildings that tap on
the elements of nature, and a well-integrated public transport system that promotes cycling and car-sharing.

In turn, the new generation of environmentally friendly public housing will pilot new green initiatives and help HDB derive good sustainable development principles for wider implementation. One example is the incorporation of solar PV panels as an alternative energy resource that aims to contribute to the reduction of common services energy consumption in Punggol.

The successful implementation led HDB to embark on a sustainable solar leasing business model, where private solar system developers will design, finance, install and maintain the systems. HDB will cover the initial start-up costs while the remaining costs will be recovered from the Town Councils through the savings generated over the leasing period.

A further aim is to fuel existing research on solar power for the tropics. Given the abundance of sunshine in the region, the development of the solar industry not only makes sound sense, but will also help Singapore and its neighbouring countries reduce its energy usage.

The completion of the 4.2 km Punggol Waterway in 2011 has also paved the way for more of the other housing and development plans for Punggol to move ahead and realise the town’s vision of ‘Green Living by the Waters’. When completed, the entire Punggol Town will house almost 100,000 homes or some 300,000 residents.

The Punggol Waterway itself is replete with green initiatives. For instance, at one end of it, HDB has introduced a freshwater-tolerant mangrove arboretum – the first of its kind here. It is an attempt to cultivate native mangroves in freshwater condition to preserve the species and enrich the biodiversity of the life-forms along the waterway.

While the technological initiatives such as the centralised refuse chute for recyclables have made it easier for the residents to adopt a greener lifestyle, the involvement of the public and the community is key to its continued sustainability. As the success of any green enterprise also depends on how well it is adopted as a lifestyle choice, HDB has roped in the local Town Council, residents and the grassroots community as active green partners – educating, involving and enabling them to go green. For some, like the Teos, going green comes more naturally.

Green Ideas

• The Prefabricated Extensive Green (PEG) Roof Tray System is a labour-saving technology for rooftop landscaping. It is a low-maintenance system that enables plants to thrive without irrigation during dry periods for about three weeks. These PEG trays make use of lightweight, durable plastic trays that are easy to install without the need for costly structural works.

• The FerroLite is an HDB-patented wall partition system. A precast internal partition made of ferro-cement, the FerroLite is formed by bolting two wall panels together to form a hollow core. This means a 30% reduction in materials used, making it eco-friendly and cost-effective. Its innovativeness is seen in its versatility in various applications and also its facility for finer adjustments to enable better alignment.

• For façade walls facing east and west, Treelodge@Punggol makes use of ‘Cool Walls’. These walls come with enhanced thermal insulation from the insulation foam that is placed between the concrete wall panels. This measure aids overall heat reduction by up to 20% compared to traditional full-concrete walls.
The global realities of demographic, population and climate changes are starker for Singapore, a small city state with a population of over five million.

Mapping out how Singapore should aim for economic growth at a sustainable pace to secure a better future is a national sustainable blueprint that was developed by a high-level Inter-Ministerial Committee on Sustainable Development (IMCSD). HDB, as the country’s largest developer of housing, plays a key role in the effort to make Singapore a liveable and lively city.

Well poised for the challenge, the organisation has already set in place its ‘Roadmap for Better Living in HDB Towns’ with its three thrusts to build well-designed towns, sustainable towns and community-centric towns.

Explaining the thinking behind the Roadmap, HDB Chief Executive Officer Dr Cheong Koon Hean says, “As the master planner, we need to be in the driver’s seat to drive the vision for the towns. HDB is not just about constructing that single flat and that single building. We create whole towns which are like microcosms of a country – a challenge demanding both macro planning and local planning insight. The Roadmap is the strategic framework upon which all these are structured.”

Punggol provides the ideal blank canvas to create a town for the future. Being the latest town that HDB is developing, it is thus easier to pioneer and test new ideas and solutions for good urban design incorporating sustainability features.

Singapore is building a reputation as an urban solutions hub. Many of its ideas are scalable, adaptable, pragmatic and practical. In the area of urban design and housing for a compact city, it is often held up as an example that other cities could emulate.
In her presentation at the biennial World Cities Summit (WCS) 2012, HDB CEO Dr Cheong (seated in the centre) shared with government leaders and industry experts gathered at the forum some useful learning points from HDB’s Punggol development into a sustainable waterfront town. She singled out these five critical success factors:

- Holistic approach balancing economic, environmental, and social considerations
- Long-term and comprehensive planning approach
- Sustainable principles cascaded from national level to local level planning and eco-town developments
- Affordable and viable urban solutions and business models which are scalable and replicable
- Partnerships with agencies, private sector and the community at large

Singapore emerged as ‘Asia’s greenest metropolis’ in the Asian Green City Index carried out in 2011 by the Economist Intelligence Unit for Siemens AG. It found that Singapore stood out for “its ambitious environmental targets and its efficient approach to achieving them”. This would come as no big surprise to those who are conversant with the integrated approach that Singapore favours. Whether it is housing, commuting, recreation, or the overall way of life, Singapore adopts a holistic approach that is governed by the sustainability blueprint. And the result of this is very clear – Singapore was the only city out of 22 to rank ‘well above average’, the highest ranking of the study.

So, what makes this top billing green city tick? The Asian Green City Index pointed towards Singapore’s strong sense of self-government, effective policy implementation, and the cohesive master planning that goes on behind the scenes. With both the grassroots and the government playing active roles, Singapore is living, breathing proof that an entire nation can live the green life.
Little green spaces that make a difference to the life and landscape of public housing estates are sprouting up in the HDB heartland. Willing hands and hearts tend to these garden plots, which have yielded more than just a delightful bounty of fruit, flowers and vegetables.
If heaven is a place on earth, then it must be any green place that brings serenity to the soul.

In the HDB heartland, greenery and landscaping have not only softened the towering residential blocks, but the numerous parks and gardens that have been planted have also reaped many benefits for the residents – not least of which is the breath of fresh air and welcoming expanse of green.

**Landscape As Social Software**

But as part of the social software to facilitate the growth of community ties, landscape plays a crucial role in creating spaces for community bonding, by establishing shared areas where residents can meet and interact.

In the earlier years, green spaces located at the precinct centre provided mainly basic recreational facilities such as children’s playgrounds and seating corners. When primary housing needs were met and the population became more affluent, landscape design helped to create different visual identities for the precincts, neighbourhoods and towns. A more diverse planting palette including flowering and fruit trees was also introduced.

Over the last 10 years or so, HDB has been experimenting with alternative ways to balance high-density living while still ensuring abundant greenery and with visible success. Rooftop gardens and vertical green walls are now a key part of the greening and landscaping efforts. They provide a welcome visual green and also aid in reducing heat absorption by the buildings. The incorporation of public access points and amenities on the roofs supply another type of public space, while on the ground level, the landscape is important in seamlessly integrating the built forms.

When suitable areas are available, community gardens are introduced in collaboration with local community groups. These projects are a way to revive the ‘kampung spirit’, where shared activities encourage neighbourly interaction.
Discovering Our Community Gardens

Community gardens are not a new urban construct. Cities across the world have long used them to overcome the sense of alienation that plagues modern living. Such urban gardens are found to have helped create more active and caring communities. For similar reasons, HDB planted the seeds for community gardening as part of a larger aim to foster social cohesion, whereby residents can come together and create little spaces that they can collectively call their own.

HDB collaborates with several government agencies such as NParks and the People’s Association, as well as the local Town Councils, to initiate community gardening in the estates. Aptly christened as ‘Community in Bloom in the Heartlands’, this initiative not only promotes green living among the residents, it also enhances intergenerational bonding when people of different ages get together to tend to the gardens and share the produce with those who need them.

Under this programme, the community gardens can also partner neighbouring schools and institutions for mutual benefit. Educational tours of the gardens allow students to learn more about the different types of plants and flowers. In turn, schools and educational institutions can render help with the planting work or assist in bringing the elderly residents from nearby blocks to visit and tour the community gardens. “Community gardening is a group hobby that is accessible to all. We see great potential in community gardens as convenient nodes where interactions between neighbours and across generations can take place and be further strengthened,” says Tan Beng Teck, HDB Director (Community Partnerships).
‘Selfless Garden’

Even before you catch sight of the sea of green plants, the scented blossoms will greet you with a perfumed whiff, and you will know for sure you are nearing ‘无我苑’ (or Wu Wo Yuan). Started in 2008 by a group of gardening enthusiasts, ‘Wu Wo Yuan’, which translates to ‘Selfless Garden’ in English, has been a constant source of delight for residents living at Hougang Avenue 8.

“The garden is named as such to signify that everyone can play a part to make it flourish,” says Iris Chua, the gardening interest group leader.

Wu Wo Yuan’s enthusiastic gardeners grow over 60 different types of plants, grouped under four categories: ornamental plants, herbal plants, fruits, and vegetables. So do not be surprised to find orchids and osmanthus, rambutans and longans, mulberry and South African Leaf, as well as winter melons and spinach all growing on a small plot not more than 716 square metres, or roughly one-tenth of a football field.

The plants are grown organically without any pesticides. Instead, self-made fruit enzymes and plant wastes are used as natural fertilisers. Every day, a group of volunteers will tend to the plants in the garden, watering, weeding, pruning and planting, and looking out for the snails and slugs that play hide-and-seek among the leafy greens.

True to its name, this community garden shares the harvest with the elderly at the nearby senior citizens’ corner. It also believes in nurturing the next generation of green thumbs and fingers by imparting basic gardening skills and tips through monthly gardening sessions for students from the nearby schools. Sustainability seeds are also being planted as the students are taught how to make interesting ornaments and flower pots from recyclable materials to beautify the garden.

In fact, Xinmin Primary, a local school, has since adopted Wu Wo Yuan and there are now more than 20 student ambassadors visiting the garden regularly to tend to the plants with help from the senior ambassadors. “It is a joy to know that this humble little space can bring so many people of different ages and cultures together,” beams Iris.
In just a few months, a bare plot of land has blossomed into a garden where orchids bloom, and basil and lemongrass scent the air with their fresh herbal bouquets.

The joint effort of 29 enthusiastic gardeners has effected this amazing transformation. “Initially, there were no materials available to build up the garden. However, all the members worked as one to source for items such as bricks, sand and soil,” says Lily Han, leader of the gardening group, “and before long, our efforts began to pay off as we witnessed our beloved garden materialising bit by bit.”

At this garden, members are given the opportunity to express their creativity by planting the kinds of plants they like. “We have divided the garden into 29 smaller plots of land, with an individual tending to their own plot. This gives us the flexibility to plant whatever we like, while adding diversity and vibrancy to the garden,” says Lily. “Though members are responsible for their own individual plots, in the event that anyone is not around, the others are also quick to help care for the plants.”

The garden now boasts a wide range of plants, such as mangoes, grapes and guavas.

The harvest period is always the happiest time as the fruit of their labour is enjoyed by the members and their families. Also, apart from their common love for gardening, the group collaborates with educational institutes to conduct nature walks, and even organises regular potluck gatherings and visits to other vegetable farms.
Golden Jasmine Community Garden

The Golden Jasmine Community Garden has been warming the hearts of many senior residents living in the Studio Apartments nearby. The garden’s members comprise mainly senior citizens who are there every evening to tend to the plants, to water, weed and get rid of any pests.

“This daily routine serves as a great bonding and exercise session for our gardeners,” says Susan Goh, who leads the gardening group. She also shares that the community garden aims not only to help promote gardening culture in Singapore, but also encourage active ageing, given the therapeutic benefits of gardening.

The bonds that bind are also carefully nurtured through other planned activities. “Every month, everyone will gather at the garden to celebrate members’ birthdays. There will also be parties during festive seasons such as the Lunar New Year or the Lantern Festival. Apart from that, we will also organise regular chit-chat sessions and craft classes, such as soap-making and creating festive decorations. Our members have grown close through these gatherings and gardening sessions, so whenever anyone is unwell or needs assistance, the others jump in to help, whether it is to accompany the sick to the doctor or take on household chores,” recounts Susan.

Since its formation more than a year ago, Golden Jasmine Community Garden has sprouted 30 different types of vegetables, fruit trees and herbs. It has also passed on gardening knowledge and nurtured a love for plants among the younger generation. It embarked on an Aquaponics project this year with some students from the National Junior College, a local tertiary institution. Aquaponics, the cultivation of both fish and plant in a combined ecosystem, utilises fish waste as a natural fertiliser to encourage plant growth. The water will be constantly re-circulated within the system so no watering of plants is required.

Notes Susan, who considers the project a success as they are beginning to enjoy the sweet harvest of vegetables grown through the system, “Through this project, we were able to interact with the students as well as encourage other residents who are not involved in this garden to join us.”

01 Lily Han, and her fellow gardeners on their gardening routine at The River Vista @ Kallang Community Garden
02 These Golden Apple fruits are ripe for the picking at Golden Jasmine Community Garden
03 College students working on the Aquaponics system with a volunteer gardener at the Golden Jasmine Community Garden
04 Susan Goh and her friends are excited to see new plants bloom
In the areas of planning, policy and design, HDB has shown a deft hand in dealing with the challenges of vertical living, and made it an attractive housing choice for Singaporeans. Ultimately, however, how nice a neighbourhood is depends very much on the community and people who grace its social spaces and places.
Living in close proximity to others is an incontrovertible fact for the average Singaporean whose home is typically a flat in a high-rise block. Singapore has a population of over five million occupying a land area of only 715.8 square kilometres, with the majority of them living in high-rise public housing built by HDB. One could be perhaps forgiven for expecting cramped spaces and quarters, but the reality is starkly different. HDB homes and towns have defied conventional ideas of public housing as slums and ghettos because of the approach it has taken to develop high-rise and high density housing of the highest possible quality.

From the macro town perspective down to the micro details of block configuration and the layout of precinct and estate facilities, and even how individual flats are oriented, careful consideration of the design and aesthetic elements has given a very human scale and a perspective to the towering structures and built-up mass. This multi-dimensional approach that takes into full account the needs of those who will live and inhabit these spaces and places is now encoded in the organisation’s professional blueprint for the future, the ‘Roadmap for Better Living in HDB Towns’.

While Singaporeans have taken to high-rise living like duck to water, sharing common areas and spaces with others – neighbours whom one rarely gets the chance to choose – could still be daunting, and can give rise to disputes and disagreements.
The Roadmap has carved out three strategic thrusts to achieve well-designed, sustainable, and community-centric towns as HDB moves forward to plan and provide for a larger population mass. Among these three thrusts, the third poses what could be perhaps the greatest challenge of all. As it aims to build up a vibrant community from the different threads and weaves of Singapore's multi-cultural society, it will have to confront the issues that living in close proximity brings. While Singaporeans have taken to high-rise living like duck to water, sharing common areas and spaces with others – neighbours whom one rarely gets the chance to choose – could still be daunting, and can give rise to disputes and disagreements.

In this regard, with more than 50 years of public housing experience, HDB has built up quite a slate of tools and skills to help it navigate the terrain. Not least among these is the pool of experienced ground staff trained to handle both petty and serious conflicts. And when necessary, they will rope in third party help such as grassroots organisations and mediation centres to work towards re-building peace and harmony.

01 Corridors in HDB blocks are good places for neighbours to mingle

02 Children chatting at the void decks of HDB blocks where seats are built for residents

03 Open areas with communal facilities are popular with residents for meet-ups or just to relax
Chickens, Curries And Clutter

When HDB first built high-rise homes for Singaporeans in the 1960s, the complaints it received from residents were mainly over neighbours who had not yet adjusted fully to high-rise living. With many of them resettled from their kampong (village) homes, they continued to rear chickens in their flats causing consternation all round – the birds were found skittering along the common corridors while the roosters crowed at odd hours of the mornings.

We may chuckle over such antics today but the grievances being reported to HDB are no less ‘strange’, 50 years on. In a case that caught public attention in 2011, an immigrant Chinese family complained about the smells from their Indian neighbour’s curry pot which they had found unbearable. Understanding the need for the immigrant family to adjust to life in multi-cultural Singapore, the Indian family volunteered to cook curry on days that their neighbour would not be home. This was widely misunderstood as an ill-conceived resolution and led to remonstrations. A ‘Cook a Pot of Curry Day’ to register support for Singapore’s beloved national dish and way of life also flamed into being spontaneously.

The main causes of friction among neighbours actually stem from the daily routines of life, like the curry pot case. The smells, the clutter that obstructs the walkways and spaces, the loud music and incense smoke as well as dripping laundry and wet mops hung to dry are the common irritations that can set off a chain of unhappy and unpleasant reactions and create high-rise disharmony.

Bridge Over Troubled Waters

Most times, however, there are no outright conflicts. Residents generally turn to HDB to help put things right with their neighbours as they feel that it is more effective this way, rather than confronting their neighbours face-to-face. Thus, HDB staff find themselves being the link person between unhappy neighbours.

HDB Senior Estate Executive at Sims Drive Branch, Tan Lye Teck, recalls mediating a case between two families over a noise issue that could have been easily resolved had the parties just talked to each other. They would then have discovered that their neighbour was not out to make life miserable for them, but the noise was something that could not be helped. It was made by a family member with Tourette’s Syndrome who was staying over temporarily. It seemed stamping his feet and shouting loudly helped to clear his throat and prevent choking.

“In fact, he was very considerate,” Lye Teck says. “He wore thick slippers to absorb the sound whenever he had to stamp his feet.” Lye Teck managed to get the neighbour’s understanding to bear with the noise for a while.

HDB Estate Executive Mohamed Nurhazwan from Punggol Branch also managed to settle amicably the case of an elderly lady who was upsetting her neighbours upstairs. No one knew why she was constantly hitting the ceiling of her flat, which was her neighbour’s floor, with a bamboo stick. It took several visits and a chat with her husband before he could settle the case as she had refused to speak to him.
01, 03 The planned, open spaces and facilities make high-rise living more pleasant and are also fun places for children to play.

02 (From left to right) HDB Branch staff Mohamed Nurhazwan, Tan Lye Teck and Mohamed Rashid meet different residents each day and go the extra mile to help them.
Mediation And Manoeuvres

However, not every case has a happy ending, especially if strong resistance is encountered. Lye Teck recounts a conflict that escalated into a full-blown court order after talks and mediation efforts failed. An expectant mother, believing that the smoke from her neighbours’ burning joss-sticks was harmful to her developing foetus, retaliated by dumping their joss-sticks and verbally abusing their children whenever they walked past her flat.

Despite attempts by HDB and subsequent mediation efforts by the Residents’ Committee Chairman and the Community Centre manager, the situation persisted. The neighbours then sought legal redress. The couple was fined for causing disturbances and a month later, they moved out – much to their neighbours’ relief.
In the resident’s own flat, however, Lye Teck observes that “there were also joss-sticks being burnt, so her objection to the smoke was something I could not understand. I could only guess that maybe she was suffering from some form of depression.”

While HDB’s Branch staff will render all possible help, trained mediators are needed for more intractable, prickly or long-standing issues in order to get to the root of the problem. Observes Lye Teck, “As HDB staff, we can conduct checks and investigate upon receiving feedback but it would not be easy to find out for example, if a resident’s anti-social behaviour is the result of depression or not.”

This is where mediation can help, but it is not always the magic panacea. Mohamed Rashid, Estate Executive at Bukit Batok Branch, relates a case where mediation helped only to a certain extent to ease tensions between two neighbours. A family’s weekend gatherings had prompted a complaint from a neighbour suffering from bad migraine, but Rashid’s attempts did not go very far as both parties were not fully cooperative.

“I could only advise them to manage their children when they are out playing along the corridor, and to have a time limit for their gatherings,” Rashid recounts. “However, even though both parties were polite when we spoke to them, they couldn’t speak cordially to each other and often quarrelled. The complainant even went to see her Member of Parliament but her neighbours continued to have guests over the weekend. HDB cannot stop residents from having gatherings, so in the end we offered the disputing neighbours mediation at the Community Mediation Centre (CMC).”

The CMC is usually called upon to provide expert third-party intervention if an issue persists and cannot be satisfactorily resolved by HDB and the grassroots leaders. The CMC has mediated a few hundred cases last year involving neighbour disputes, including those living in private housing. Although this is not a large number, it takes a lot of patience and sensitive handling to unravel the knots that people find themselves in.

For many of these residents, their level of tolerance is easily affected by the actions of others, whether these actions are intentional or not. That is when HDB staff step in to assist and offer advice and mediation to ensure the best possible solution for both parties. Ultimately, reaching a mutually acceptable solution depends on residents’ willingness to communicate, compromise and make the effort to be the kind of neighbour they themselves wish to have.
Angels And Neighbours

Fortunately, for every neighbour dispute case that requires mediation, there are many more heart-warming examples of residents who get along well, and who go the extra mile for their neighbours.

In the eyes of her neighbours, Iruthayamary is an angel in their midst. She accompanies her neighbours for their medical check-ups and even sings lullabies to coax their children to sleep. ‘Mary’ as she is affectionately known, was nominated for the Good Neighbour Award in 2011 by her appreciative neighbours who describe her as “always cheerful and jolly, having a lot of admirable qualities and always putting others before her.”

Her neighbour Puspa, says that Mary deserved to win the award. She recounts how Mary, an ex-cancer patient herself, had helped another neighbour afflicted by cancer and cooked and cared for her just as she had done for Puspa’s late mother-in-law. Puspa feels that Mary’s good qualities have also rubbed off on her as she has now learnt to smile and help others more. “Some people might think only of themselves, but Mary has gone through so much in life and gives so much to others. She is very strong – I call her the Potong Pasir Iron Lady!”

As for Mary, it is the frailty of being human that spurs her to help others, “Helping others is second nature to me. We are all human beings, and we should help one another. Don’t wait for others to ask for your help, just go and give of yourself.”

Likewise, another angel has been going the extra mile to look after her elderly neighbour. After Teoh Guan Lai’s godson passed away, there was no one to look after him but Yam Othman took it upon her shoulders to care for him, although she is sickly herself. She cooks him simple meals such as porridge and noodles, and makes sure the food is cut into bite-sized pieces for easier eating and digestion.

“He lives just nearby, so after his godson passed away I just try to do what I can,” Yam says. She has an extra set of Guan Lai’s house keys to his 1-room flat for emergency reasons. She also gets help in caring for him from another concerned neighbour, Doh Tong Kiok, for which Guan Lai is grateful. “They are very nice and take care of me, and I’m very thankful,” he says.

As the population in HDB towns and estates increases, living in close proximity will become a greater reality and a way of life. While the majority adjust to it well and exercise enough tolerance and sensitivity to keep the peace, selfless acts like these hold the secret to continuing harmony.
Editorial Adviser
Lim Yuin Chien

Editor
Florence Keh

Print & Online team
Priya Shandhini (Assistant Editor),
Daniel Lim, Grace Chen, Phyllis Tan,
Nur Raihana, Deborah Chua,
Jane Chang, Benjamin Chew

Special thanks to the following Groups
Building Quality
Building Research Institute
Community Relations
Development and Procurement
Housing Management

Contributions
We envision ‘Dwellings’ to be a platform for the sharing of ideas, works and projects that promote and advance quality and sustainable housing. We welcome written contributions from all who share a keen interest in housing and habitats, whether you are an academic, industry practitioner or professional.

Contact
For feedback and contributions, please email the ‘Dwellings’ editorial team at dwellings@hdb.gov.sg. Please also let us know if you wish to receive a print magazine.

Published by
HDB Hub 480 Lorong 6 Toa Payoh
Singapore 310480
Tel: 6490 1111
www.hdb.gov.sg

Copyright terms
The copyright of the materials contained in this magazine belongs to HDB. Nothing in this magazine shall be reproduced in whole or in part and in any form or by any means for any purpose whatsoever without prior written consent of HDB. Views expressed in this magazine are not necessarily those of HDB and no liabilities shall be attached thereto. All rights reserved.

While HDB endeavours to ensure that all information is correct at the time of printing, HDB makes no representations or warranties with respect to the accuracy, adequacy, timeliness or completeness of the contents of this magazine and specifically disclaims all warranties and any liability for errors or omissions. HDB does not endorse any product(s), person(s), place(s) or receive any benefits for featuring any third party articles/stories/contents in this magazine.

All information is correct at the time of printing.

‘Dwellings’ is printed on environmentally friendly paper.
Dwellings is a publication by the Housing & Development Board.
www.dwellings.sg