

1 dwellings

HARMONIOUS LIVING AT ITS BEST

ISSUE OCT/ NOV 2021



Health District @ Queenstown

Pilot health district to support residents in leading healthy and purposeful lives

Reimagining What's Possible

Punggol Northshore provides a glimpse of how future HDB living could look like

Building Amidst a Pandemic

Keeping BTO projects on track, while ensuring safety and quality are not compromised

Meet the Dwellers

Team Strong Silvers inspires fellow seniors to stay active in their golden years



Photo by Juan Chan

contents

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Health District @ Queenstown Pilot health district to support residents in leading healthy and purposeful lives **02**

Reimagining What's Possible Punggol Northshore provides a glimpse of how future HDB living could look like **12**

Building Amidst a Pandemic Working to keep BTO projects on track, while ensuring safety and quality are not compromised **20**

Meet the Dwellers Team Strong Silvers inspires fellow seniors to stay active in their golden years **29**

a word about this issue

Age is But a Number

Big changes are afoot in Queenstown. As part of HDB's 'Designing for Life' roadmap, the pioneer town is now set to be the site of Singapore's first health district. This issue dives into this first-of-its-kind multi-stakeholder collaboration, where initiatives to enhance the health and wellness of Singaporeans of all ages will be piloted. As the Singapore population ages rapidly, compounded by health issues stemming from an increased lifespan and a COVID-19 world, public housing — where most of the population live — can play an important role to support residents in living active and fulfilling lives well into their advanced years.

The impact of continual renewal and rejuvenation can also be felt in younger towns such as Punggol, with the completion of the first two smart-enabled Build-to-Order (BTO) projects — Northshore Residences I and II. Catch an exciting glimpse of the future of HDB living, and take a look at the smart technologies that have been deployed to make daily living more convenient and comfortable for residents.

The pursuit of delivering quality homes and living environments for HDB residents is ever constant. However, manpower shortages and disruptions to supply chains worldwide have affected many construction projects, including BTO developments. HDB has been finding ways to expedite construction work without compromising the built quality and safety of the workers. We will also continue to do our utmost to assist affected flat buyers.

There is perhaps no greater embodiment of the adage "age is but a number" than a group of fit and active seniors in the heartland who call themselves Team Strong Silvers. With members in their 60s, 70s and even 80s, they seek to inspire others to keep moving and stay active during their golden years.

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 60 years, HDB has provided quality and affordable public housing for generations of Singaporeans. Currently, 8 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.



Health District @ Queenstown

In Queenstown, the groundwork has been laid for a future where initiatives to enhance the health and wellness for Singaporeans of all ages are seamlessly built into daily living.

(Left) One of HDB's oldest estates, Dawson estate of Queenstown, has undergone large-scale rejuvenation

Queenstown is an artful blend of old and new. In the 7 decades since the town was developed — first by the Singapore Improvement Trust, and subsequently by HDB — new community spaces, commercial facilities, and Build-to-Order (BTO) precincts have sprung up, injecting renewed vibrancy to the area. Amid the orderly flux, older residents will best remember Queenstown as the site of many ‘firsts’.

After all, Queenstown is Singapore’s first satellite town, and its Dawson estate is amongst the first to undergo HDB’s large-scale rejuvenation programme, Remaking Our Heartland (ROH). The town is also home to Singapore’s first technical school — Queenstown Secondary Technical School, first polyclinic, and first community library. Today, Queenstown, which has been earmarked for the fourth series of ROH, will once again pave the way forward as the location for an ambitious pilot health district.

Dedicated to Wellness

Health District @ Queenstown will be a first-of-its-kind multi-stakeholder collaboration, where science-backed initiatives are piloted to support residents in leading healthy and purposeful lives. The health district will draw from a broad range of expertise, and leverage research and technology to drive efforts in the built environment, preventive health and care delivery programmes, as well as social research and technology partnerships with academia and the industry. Successful initiatives piloted in the health district can be included in future rejuvenation plans, and scaled to other towns and estates.

In the long run, the aims are healthier adults with more years of good health, more residents who are purposefully engaged through employment or volunteerism, better social support and intergenerational bonding, and a safer environment for the elderly to age-in-place.

Health District @ Queenstown is a multi-stakeholder collaboration by HDB, the National University Health System (NUHS), and the National University of Singapore (NUS), together with many other agencies and partners. The development of Queenstown as a health district is also aligned with HDB’s broader ‘Designing for Life’ roadmap, which was introduced late 2020. Under the roadmap’s ‘Live Well’ pillar, HDB will work to create ‘Healthy Towns for All Ages’, as part of a holistic approach to enhance residents’ physical, social, and mental well-being.

“As Singapore’s master planner and developer, HDB is in an excellent position to enhance our residents’ well-being through the homes and towns that we create,” says HDB CEO Mr Tan Meng Dui.

“The Health District @ Queenstown collaboration with NUHS, one of Singapore’s three Regional Health Systems, and NUS, Singapore’s flagship university — together with many other agencies in the private and public sectors — is a great opportunity to testbed cross-cutting science-based initiatives in the built environment, to help our residents live healthily within our community.”

(Right) The pilot health district will support residents, young and old, in leading healthier lives





01

Galvanising Collective Efforts

The proportion of citizens aged 65 years and above has risen steadily over the past decade, and with increased life expectancy, more Singaporeans are spending their advanced years in poor health. One of the goals of the health district is to help residents enjoy more years in good health, allowing them to remain in and actively participate in the community and economy. Queenstown makes an ideal candidate for the pilot health district as the town currently has one of the oldest populations in

Singapore, thus presenting the opportunity to test interventions that can address the well-being of residents.

Besides addressing the challenges of an ageing population, Health District @ Queenstown also aims to tackle other issues common in urban cities, such as obesity and poorer mental health. Developing effective solutions to these health issues would, however, require an integrated approach.

- 01 HDB is planning and designing homes to meet residents' current and future needs
- 02 Perspective of upgrading at Clarence Lane, where residents can relax and recharge amidst greenery

As NUHS Senior Advisor and NUS Senior Vice President Professor John Wong explains, no organisation has all the expertise or resources to address the multiple determinants of health: "With residents at the core, we will co-create solutions for the health district with the Queenstown community, in line with the Singapore Together movement. And beyond NUS, NUHS and HDB, our collaborators will also involve multiple government agencies and private organisations."

The plans for the health district have far-reaching impact and are necessarily ambitious. "We will be a super-aged society by 2026, where more than 20% of our population are 65 years and older," Professor Wong says. "If we can create a Singapore where people live long, live well, and with cohesion across all members of our community, we will have a Singapore that everyone will want to be a part of, now and for generations to come."



02



Professor John Wong and HDB Group Director of Research & Planning, Dr Chong Fook Loong, share their thoughts on the development of Health District @ Queenstown.

Interview with Professor John Wong

Q. Can you share how you envision Health District @ Queenstown to be?

Professor Wong: Our vision for Health District @ Queenstown is an inclusive community that leads healthy, active and productive lives across their life course in a quality living environment, which

{Above} The pilot health district is envisioned as a healthy and active community, supported by a quality living environment

sustainably addresses the determinants of health (social, economic, behavioural and structural) and enables ageing-in-place. We hope to work with the residents, and the public, social, and private sectors to develop scalable and sustainable programmes. If this can be done sustainably in Queenstown, similar programmes can be adopted across Singapore.

Q. How will the initiatives rolled out in Health District @ Queenstown impact residents' overall health and well-being?

Professor Wong: By focusing our programmes in the community, harnessing a multi-stakeholder approach, and addressing the determinants of health, there is strong evidence that our 4 themes of increasing healthy longevity, enabling purposeful longevity, promoting intergenerational cohesion, and helping people remain in the community where they have spent a significant part of their lives, will improve the overall health and well-being of residents.

The co-development of sustainable, scalable programmes that residents, organisations, and policymakers find meaningful, such that they can be adopted by the rest of Singapore, will be one of the best ways that we can ensure that Singapore will continue to thrive as a super-aged society.

Q. An ageing population will have profound impact on our society, and Queenstown is the first-ever health district in Singapore that will help address some of these issues. How do you feel about being involved in this project?

Professor Wong: There are many like-minded people from across the public, social and private sectors who want to enable residents of Singapore to have every opportunity to live and enjoy 100-year lives. Singapore's only resource is its people. If Singapore can fully benefit from the extra 20-30 years of life span since we became an independent nation, we will all be the better for it.

Interview with Dr Chong Fook Loong

Q. Tell us more about HDB's role in contributing to residents' well-being?

Dr Chong: Beyond building affordable and quality homes, we want to be able to address residents' needs across different life stages, better anticipate the future needs of the population, and develop initiatives that are supported by science to enhance residents' physical, social and mental well-being. Since the launch of the Designing for Life roadmap in 2020, HDB has been introducing new and enhanced well-being facilities and features in our new BTO and upgrading projects where feasible. These include creating more exercise opportunities in our residents' everyday life by introducing street furniture with exercise elements, and the co-location of childcare, elderly and precinct facilities to promote intergenerational social bonding.

Q. How will the partnership with NUS and NUHS complement HDB's existing capabilities and expertise?

Dr Chong: This collaboration has formed new cross-sectoral partnerships, resulting in a new paradigm of synergies that can be explored. By bringing NUHS, NUS and other experts with a knowledge in medical and social science to the table, HDB and other agencies will be in a stronger position to implement science-based solutions for the built environment, anticipate future needs, and address residents' functional requirements.

For example, the medical science experts can share how residents' sight, hearing, and other senses would change at different stages of their life, and how this would affect their needs, and correspondingly the support they would need in the built environment to help them in their daily living. This could enable HDB to introduce targeted initiatives for the different demographics in a town.



Q. What kind of new programmes or initiatives can residents expect to see around their homes?

Dr Chong: Even at this early stage of collaboration, there are already many ideas being discussed. For example, we are looking to enhance the built environment

in Queenstown after synthesising new knowledge from medical and social science, explore delivering preventive health interventions closer to residents' homes, and experiment with various ways to enable meaningful and purposeful engagement. We will roll out successful initiatives to the rest of Singapore's public housing.

We will be engaging Queenstown residents to co-create solutions with us, and I am looking forward to having them be part of this multi-stakeholder effort. As the stakeholders work closely together, we hope to collectively explore innovative science-based solutions that will bring benefits to our residents' well-being. ^d

(Above) The built environment in Queenstown will be enhanced to benefit residents' well-being

Reimagining What's Possible

As the first public housing district to holistically incorporate smart features, Punggol Northshore offers an exciting glimpse into the future of HDB living.

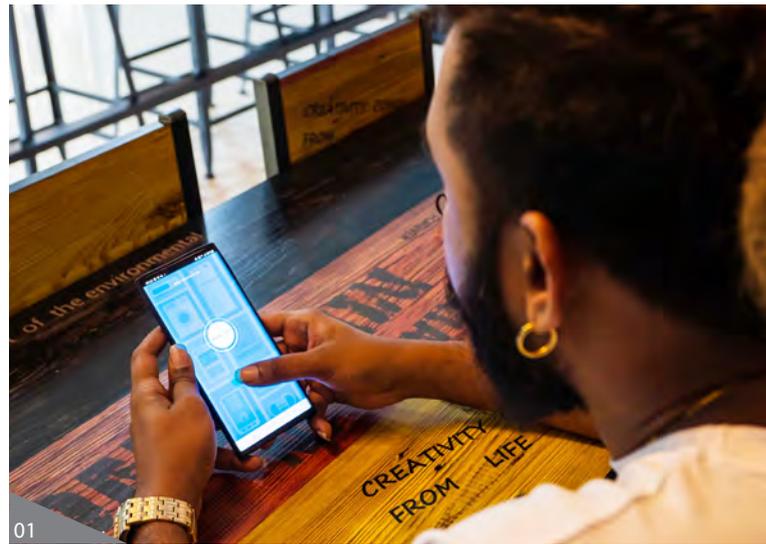
(Right) Punggol Northshore is the first smart and sustainable housing district where HDB has test-bedded smart technologies to create a more liveable, efficient, sustainable and safe living environment for residents



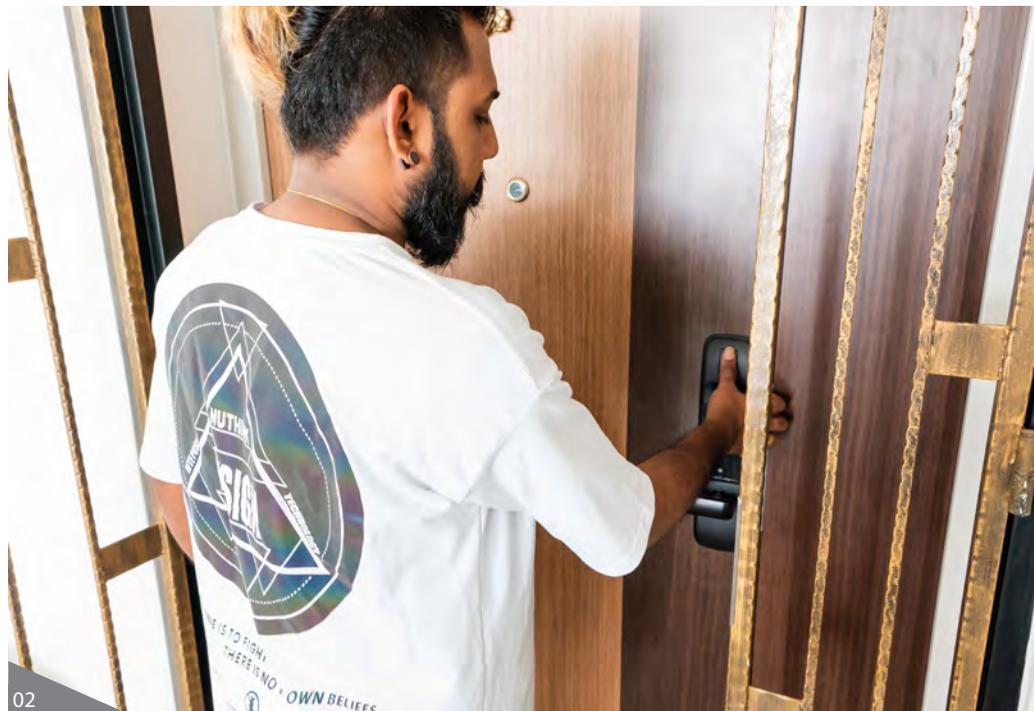
“Living in a ‘smart’ home has been life changing,” says Satya Saravanan, who has just moved into Northshore Residences I with his wife. “We no longer need to bring our home keys out as our smart lock lets us unlock our door with a fingerprint scan or via a keypad,” he explains. “My phone doubles up as a remote control and I can turn on my entertainment system without leaving the couch. Also, lights, such as those in the balcony, are controlled by sensors so we reduce the chances of leaving them on unnecessarily.”

About 1,400 other families are set to live in similarly smart-enabled flats, which are pre-equipped with data points and high-tech distribution boards — the ‘brains’ that make homes smart from the start. Not only do they support easy installation of commercially available smart solutions, these help residents monitor their energy use and facilitate changes to usage patterns for a more sustainable and eco-friendly lifestyle.

Satya is also a Smart Home Ambassador, a group of volunteer households who provide feedback on the smart-enabled home provisions and smart devices, and help facilitate the adoption of smart home solutions among Northshore residents.



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01-02 Northshore Residences I resident Satya Saravanan enjoys the convenience of a smart-enabled home

03 More greenery has been planted in potential hotspots around the estate to lower the ambient temperature

04-05 Residents can conveniently dispose their waste and recyclables in separate chutes, which will then travel through the pipes of the smart PWCS



03

The Internet of (HDB) Things

In Punggol Northshore, the common areas are windy and pleasant. This is the result of computer simulations conducted during the planning stage, which identified well-shaded locations for playgrounds and outdoor amenities, and also highlighted potential hotspots that could be mitigated with greenery.

Some of the other technologies used in the district are almost as invisible, given how seamlessly integrated they are. A big giveaway is the comfort and convenience that residents enjoy. Waste disposal is clean and fuss-free, as rubbish travels through the covered pipes of the smart Pneumatic Waste Conveyance System (PWCS). Additionally, real-time data on the performance of services from the sensors can predict issues with common amenities, such as lifts and lights, thus enhancing the reliability of estate maintenance services. At night, smart lighting along common corridors adjust illumination levels based on human traffic patterns to reduce energy consumption.



04



05

New-Generation Smart Car Parks

A series of sheltered walkways directly connect the residential blocks in Northshore Residences I and II to the precinct car park, which extends across the length of the development. Powering its operations is HDB's new-generation smart parking system, Parking@HDB, which offers motorists an improved parking experience.

"As vehicle plates are registered by cameras, there are no gantries. This will help eliminate the bottleneck that could happen at car park entrances and exits during peak hours," explains Senior Estate Manager Joyce Ke.



06



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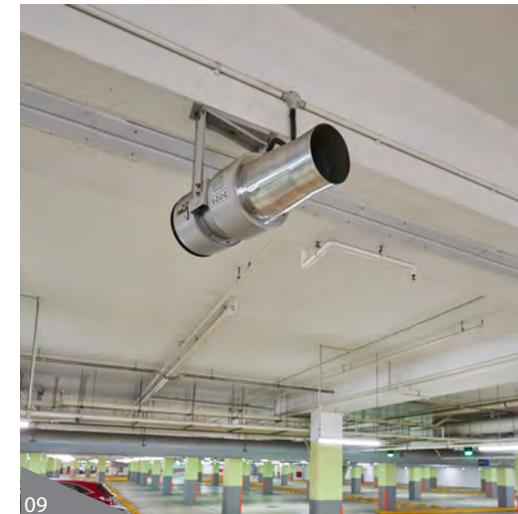


07

- 06 Car park users can opt for automatic payment via the Parking@HDB app
- 07 Barrier-free car park entrance and exit at the smart HDB car park in Northshore Residences

Motorists can locate available lots easily with overhead light indicators, and be alerted if they erroneously park in reserved lots. The Parking@HDB app can also automatically deduct parking charges, providing ease of payment.

Design-wise, roof openings that allow natural light to enter, and sloping greenery along the perimeter provide visual relief and keep the car park from looking drab. A vent monitoring system outfitted with jet fans automatically injects fresh air into the area when carbon monoxide levels are deemed too high, keeping air quality in check.



09

- 08 Sloping greenery helps absorb and reduce noise for residents living near the car parks
- 09 A vent monitoring system at smart HDB car parks keeps air quality in check



10

Seafront and Smart

The precinct's sheltered walkways also lead to HDB's first seafront neighbourhood centre, Northshore Plaza, as well as the park connector beyond. When the neighbourhood centre opens its doors early next year, it will offer residents an array of dining, retail, and recreational options close to home. There, artificial intelligence will be applied to optimise comfort, such as lighting that is adjusted based on human and

vehicular traffic, and fans that are triggered when certain thresholds of temperature and humidity are reached, to keep visitors cool.

Similar to the residential blocks, community spaces in the neighbourhood centre are located and designed to capitalise on the wind direction and maximise air flow, and greenery is purposefully planted in potential hotspots to lower the ambient temperature.

Bigger, Better, and Smarter

HDB is not the only player contributing to realising the vision of Punggol as a smart and sustainable town. At Northshore Plaza, the Infocomm Media Development Authority (IMDA) will deploy an Autonomous Mobile Vehicle with smart navigation sensors to pick up and deliver goods from the loading bays to tenant stores, thereby reducing the need for manual deliveries.

In Punggol's Waterway East district, IMDA is also leading a year-long trial to use robot couriers to deliver groceries and shopping to about 700 households in Waterway Woodcross. The robots can easily navigate the estate's pathways and ramps to reach the lift lobbies, where the items will be delivered at a pre-arranged time.

Separately, SingPost will trial PostPal, a smart letter box for residents. It is able to store mail for an entire housing block and automatically sort items into storage slots. Residents can scan a QR code to retrieve their items.

Punggol Town is the embodiment of how HDB incorporates technology, data, and heart into homes through infrastructure, applications, and services. It demonstrates how future living in Singapore could look like. Designated as a Strategic National Project for Smart Nation — the trials conducted in Punggol will be scaled to guide the development of new towns and districts, as well as the redevelopment of existing towns. [d](#)

10 The aerofoil fin façade design at Northshore Plaza maximises air flow while preventing rain from coming in

11 Smart fans in Northshore Plaza that help keep visitors cool



11



Building Amidst a Pandemic

Amidst manpower shortages caused by the tightening of border controls, disruptions to material supply and stringent safe management measures imposed on worksites, HDB and its partners have been working tirelessly to deliver BTO flats for Singaporeans.

(Left) HDB continues to deliver homes to Singaporeans amidst disruptions brought on by the COVID-19 pandemic

In April 2020, construction sites across Singapore fell silent, as the country imposed strict restrictions to control the COVID-19 outbreak. More than a year later, the construction industry is still looking to regain its footing, as tight border

controls continue to impact labour and supply chains on an unprecedented scale. This has resulted in delays to some Build-to-Order (BTO) projects.



01



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01 SkyParc @ Dawson

02 Annabel Lim and Jasper Wong are among home owners who collected the keys to their new homes in 2021

“Although we were mentally prepared for a delay, we couldn’t help but feel disappointed when we were told that the key collection date for our new flat would be pushed back,” says Annabel Lim. She and her husband, Jasper Wong, finally collected the keys to their Dawson flat in February 2021 after a 9-month delay.

The keys to their flat were one of approximately 16,700 keys that have been handed over to home owners since January 2020, when the pandemic set in. The rate of keys delivery for HDB flats has since returned to, and exceeded, the pre-pandemic levels in 2018 and 2019.



Expediting Flat Completion

Recognising the severe challenges faced by the construction industry, the Government rolled out a slew of support measures to keep construction works on track. This includes the \$1.36 billion Construction Support Package that helps share the increase in both manpower and non-manpower costs brought about by the pandemic.

Likewise, HDB has been supporting its contractors to minimise delays to BTO projects. For instance, HDB is extending the period of protection against steel price fluctuation by 9 months, as well as providing additional supply of concreting materials at protected prices, to ensure construction work can progress.

Lack of labour remains a huge obstacle for many construction companies, some of whom have had to scale down operations as a result of manpower issues and supply chain disruptions. Approximately half of BTO sites today are operating with less than 80% of the required workforce.

In addressing the manpower crunch, HDB supported various industry partners to bring in migrant workers from source countries, while subjecting them to stringent safety and test protocols.

(Left) HDB has been able to continue delivering BTO projects, such as Bedok North Vale, by working closely with its partners to expedite construction works as much as possible

HDB also works with its contractors and consultants to optimise and redeploy existing resources. At Bedok North Vale, with only 60% of the usual manpower available on site, works within the flat such as painting, were prioritised over those in the common areas, so flats could be handed over to buyers earlier. HDB has also applied for exemptions to allow less noisy works to be carried out on Sundays and Public Holidays.

Together with the Ministry of Manpower and Building and Construction Authority, HDB is also working with its contractors to bring in more migrant workers in a safe and controlled manner to help ramp up construction.

Tapping into New Supply Chains

Apart from limiting the inflow of foreign workers, tighter border restrictions have also affected the import of essential building materials from countries such as China, Indonesia, Malaysia and Thailand. To prevent complete work stoppage, HDB worked with its contractors to diversify the supply of major architectural and landscaping materials, and relocate some of their precast production from Malaysia back to Singapore.

Keeping Worksites Safe

Vaccination, as well as safe management measures such as automated temperature-taking and Safe Entry check-ins at site entrances, have been key enablers to a safe reopening of construction sites. HDB had implemented additional stringent measures as another layer of safeguards — for example, workers are segregated into zones, each with dedicated rest areas and toilet facilities to minimise interaction and reduce risk of COVID-19 transmission.

Workers at the construction sites also have to go through Rostered Routing Testing (RRT) every 14 days, to quickly detect possible cases and prevent clusters from forming. A pilot trial of Antigen Rapid Tests at 35 BTO sites for visitors and workers not staying in dormitories — an additional test on top of the RRT — also augment community surveillance efforts.

HDB also worked with contractors to build Temporary Living Quarters (TLQs) to house healthy workers from the same project in a safe environment on-site. Relocating them from off-site dormitories helps cut down the risk of infection and reduces the number of workers who need to commute to site daily.

Supporting Affected Flat Buyers

The continued delivery of flats amidst the pandemic goes beyond the construction sites. After the circuit breaker was lifted, key collection appointments for new flats resumed in full swing. The increased workload also meant that the frontline counters had to be kept open on Sundays for other housing appointments, such as for new flat buyers to sign their Agreement for Lease. Flat buyers were also kept updated on the construction progress of their new homes and revised completion dates.

“Our officer was patient in explaining the circumstances to us, which we appreciated,” Annabel says.

To facilitate home owners’ advance planning, HDB adjusted its procedures to keep affected buyers informed as early as possible about any delays. This is done as early as the 18-month mark, and again at the 12-, 6- and 3-month marks before the Probable Completion Date. Annabel recalls being kept informed of developments, and agrees that the engagement helped them better adjust their plans.

(Right) Stringent measures help keep our worksites safe

Photo by Dr David Sing/Shutterstock.com





“The original plan was for Jasper to move in with my family for three months. He ended up living with us for a year due to the unexpected circumstances. We are glad that we had the support of our family and the arrangement worked out.”

While moving in with family is an option for some home owners, others may require alternative accommodation in the interim. HDB is ramping up the supply of flats for rental under the Parenthood Provisional Housing Scheme — even securing new sources of supply, such as polytechnic apartments — to support families in need of temporary housing as they await the

(Above) Annabel and Jasper are looking forward to building their future together in their new home

completion of their flats. The eligibility criteria and allocation process have also been fine-tuned to channel the limited resources to those who need it most.

Reflecting on their housing journey, Annabel says, “On hindsight, the delay turned out to be a blessing in disguise when it came to our home renovation. With the extra time, we could do more research and refine our designs, so it was ultimately not time wasted.” [d](#)



(From left)

Members of Team Strong Silvers: 62-year-old Qian Hong, 76-year-old Ng Bee Kia, 81-year-old Peng Ling Hua, 69-year-old Victor Chan

Age is Just a Number

Behind the neat, ordered facades of HDB blocks is a living compendium of lives, people and stories; some more colourful than others, but all unique and interesting in their own special way. Living by the motto “Never Too Old”, a group of seniors passionate about health and fitness seeks to inspire fellow seniors to keep on moving and age actively in their golden years.



01

They may look like your regular seniors gathering at the neighbourhood fitness corner to do some exercises — but gasps of awe and admiration from onlookers are bound to follow the moment this particular group of seniors begin their routine.

With effortless ease, they execute impressive push-ups, pull-ups, burpees, and an assortment of other calisthenics exercises — a form of strength training using one’s body weight for resistance — that would be a struggle for even people half their age. They are Team Strong Silvers. At 60, 70, and even 80 years old, they are probably some of the strongest people of their age you will ever meet.

Old is Gold (and Silver)

Team Strong Silvers was born out of a passion for health and fitness, shares pioneering member Mr Ng Bee Kia, 76. Since young, Mr Ng has always dedicated himself to keeping fit, even representing Singapore in regional weightlifting competitions from the late 1960s to the late 1970s.

While he and his fellow team members may be getting on in years, their love of exercise has not diminished and is, in fact, growing stronger as they get older. When they

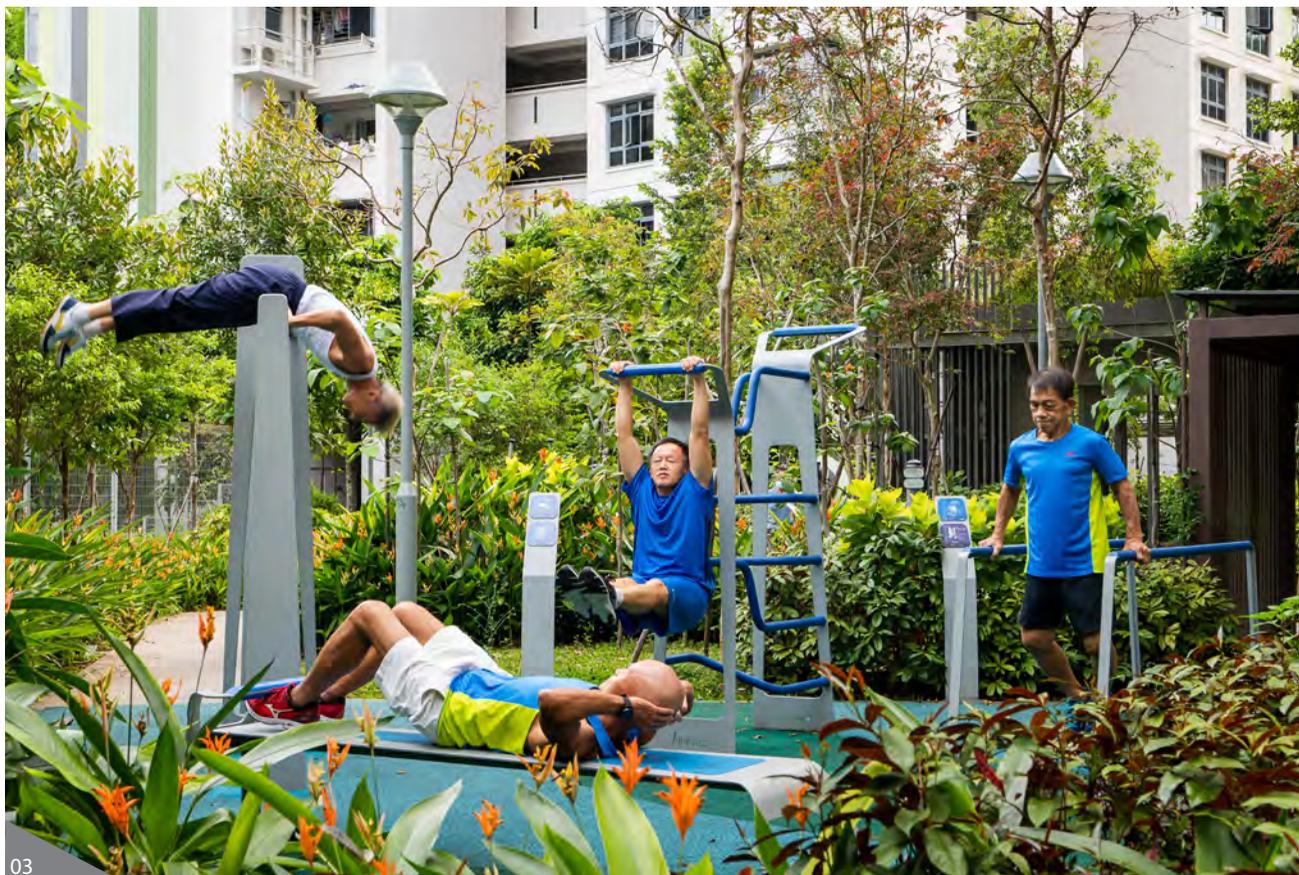
gather to exercise as a group, they spur each other on to push their bodies as far as they can take it.

“If we don’t exercise even for a day, we will feel uneasy. There is just something wonderful about sweating it out that makes us feel alive,” says Mr Ng. This sentiment is echoed by Mr Peng Ling Hua, who, at 81, is the oldest member of the group. “The last time I fell sick was 10 years ago,” Mr Peng says proudly.

01-02 Exercises range from stretches and handstands to spinning cartwheels on pull-up bars



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The seniors exercising at the fitness corner in Dawson

Just Keep Moving

Beyond staying active for their own benefit, Team Strong Silvers has a bigger purpose to fulfil. As a group, they would go around to conduct workshops and exercise demonstrations at hospitals and Senior Activity Centres to show fellow seniors that they can be active and keep fit even in old age.

“They do not have to go to the gym or need fancy equipment to exercise,” says Mr Peng, who works out at his neighbourhood fitness corner every day. Mr Victor Chan, 69, also uses the environment to his advantage. “Instead of

taking the lift, I walk up and down the stairs of my HDB block. Or I will walk along the corridor outside my flat. You do not have to travel far to exercise and keep fit; you can do so easily from the comfort of your home,” he says.

“This is the message we want to share with our fellow seniors: you are never too old to start exercising. As long as you keep moving and stay active, even simple exercises, such as light push-ups against the wall, is good enough,” says Mr Ng. “In doing so, you can truly enjoy your golden years.” d

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HARMONIOUS LIVING AT ITS BEST

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

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